THE

FARRIER

AND

NATURALIST.

VOL. I.

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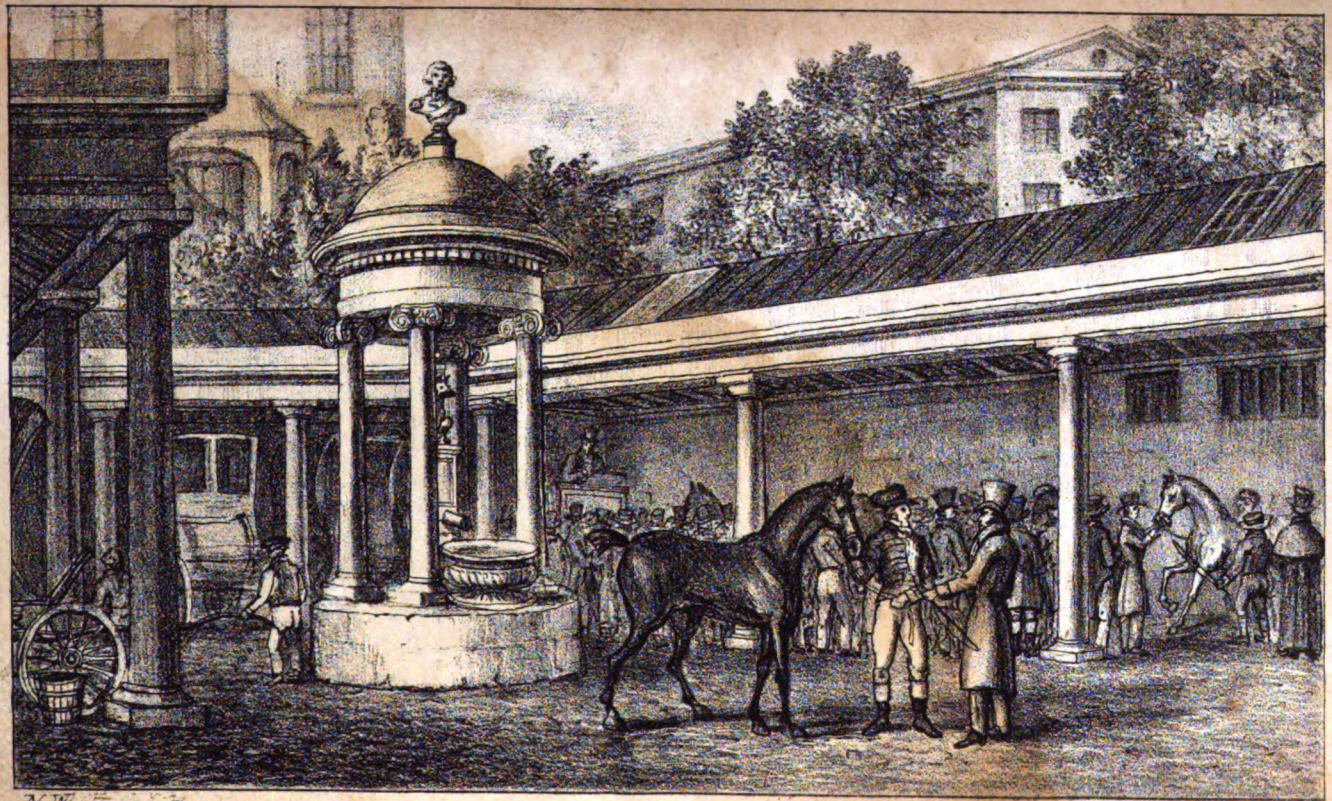

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THE

FARRIER

AND

NATURALIST.

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ROYAL VETERINARY COLLEGE, LONDON.

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4. 4. Lecture Room.
5. 5. 5. Museum.
6. 6. Stables.

THE

FARRIER AND NATURALIST.

No. I.] JANUARY [1828.

PREFACE.

THE title which we have adopted for our Work, is a plain but a significant one. The word FERRIER, or FARRIER, originally implied no more than the Latin or Norman term *Ferrarius*, from which it was derived, viz. a smith, or a worker of iron. The manufacturer of the horse-shoe was the person obviously employed to apply it to the foot; hence his attention was naturally attracted to the diseases of that perfect and beautiful example of living mechanism. Of these diseases his own unskilful labours were the most frequent cause; yet, in process of time, he undertook the cure of such affections, in addition to his other occupations. Pretending to a knowledge of the maladies of the *foot*, it is not surprising that he was required to treat diseases occurring in other parts of the body. Hence the individual, whose province was at first confined to the humble occupation of "*shoeing*," became a LEECH, or PHYSICIAN;* and the word "Farriery," in its more extended signification, has since been applied to the science of discriminating and treating the diseases of domestic animals generally. Notwithstanding this extended signification, however, the term has never been regarded as one of much dignity; and the more intelligent but fastidious practitioners of modern times, anxious to dissolve all connexion with ignorant and unscientific pretenders to the art, have assumed the more recondite, but not more significant, and perhaps less classical, designation of Veterinarians. The Latin word *Veterinarius*, from which this latter term is derived, is one of doubtful etymology, though it is sanctioned by the authority of COLUMELLA, who wrote his treatise *De Re Rustică* at no very distant period from the Augustan age. Upon the whole, we have given the preference to the ancient,

* Chaucer.

intelligible, and universally understood, title of "FARRIER:" but, as it is not intended to limit our inquiries to the *morbid phenomena* of animal life, we have added the word "NATURALIST," as best indicative of the other important objects to which our researches will be directed. We are aware that these appellations are here associated almost for the first time; still there is nothing incongruous in the connexion,—indeed, it will soon be seen that the Farrier cannot practise his profession, either scientifically or successfully, unless he labour, and industriously too, in the same field of science as the NATURALIST. Under the designation, therefore, of FARRIER and NATURALIST, this Journal will be devoted to the investigation of the best methods of breeding and rearing all our important domestic animals, and to the most approved and efficacious means of curing their diseases. Our views, however, will not be confined to the animals immediately connected with our dwellings, or those which inhabit our own country; but, taking a comprehensive survey of animated nature, we shall carefully record every circumstance that its multitudinous and interesting objects may furnish, whether calculated for the improvement of men of learning, or for the instruction and amusement of agriculturists and sportsmen.

The *diseases* of the noble and generous horse will engage our constant attention; and we shall regularly publish REPORTS of the most interesting CASES as they may occur at the Royal Veterinary College.

Copious *translations* of the valuable Essays and Reports which occasionally appear in the *Foreign Veterinary Periodicals* will form a prominent feature of our Journal.

All subjects requiring graphic illustration will be accompanied with ENGRAVINGS, executed by artists of acknowledged excellence.

Such is our plan—such are our intentions—such is the fertile field on which we have entered. Whether we shall guide our vehicle steadily and prudently, or whether those who may watch its course will be either instructed or gratified, TIME must alone determine.

THE RISE AND PROGRESS OF THE VETERINARY COLLEGE OF LONDON.

The veterinary art in this country is, as it were, connected or identified with the establishment and erection of the building before us; but it seems necessary that we should furnish some account, both of the causes which led to that event, and of the state of the art prior to that period.

England was almost the last among the nations of Europe to encourage the scientific study of this useful profession.

For many successive centuries the ignorant blacksmith had been permitted to trifle with the diseases of our domestic animals, or add to their sufferings by the infliction of unnecessary torments; and although the public were constantly feeling the ruinous consequences of these measures, they were far from being anxious to promote and foster a better system. It is rather difficult to give a satisfactory reason for this seeming apathy; an Englishman can never be justly charged with want of interest in his horse or his dog, or of indifference to their wants or comfort; but, in case of accident or disease, he has ever been but too credulous in surrendering his most valuable animal to the hands of the first pretender to knowledge, without stopping to inquire whether the treatment likely to be pursued was in consonance, or in opposition, to the plain laws of common sense.

There has always existed, in the common practice of horse medicine, and in all that concerns the management of horses, a sort of apprehension of trick and mystery, which appears to have had its origin, or to have been supported by the exclusive and overbearing manners of the votaries of the turf, their jockies, and dependents; who, making pretensions to unusual depth and knowledge in these affairs, and deriding the opinions of reasonable men, have deterred the scientific from attempting the study of an art, apparently so fraught and fenced with mysteries and difficulties.

To the prevalence of this feeling we must chiefly attribute the remarkable backwardness which was at first exhibited by the British public in supporting an institution so eminently useful in its object as the Veterinary College.

On the continent, as well as in Britain, the medical care of animals had been engrossed by the operative smiths alone, from a period which commenced soon after the dismemberment of the Roman empire, when the art of shoeing horses with iron was first had recourse to, as it is supposed, by some of the barbarian nations who at that time overran Europe, and who were well acquainted with the properties of this valuable metal, and skilful in its use.

The system of these ancient horse-leeches scarcely admitted of improvement: it might be wholly supplanted, but not partially altered, since it was based in superstition, and supported by credulity. Indeed we shall find more correct views and more rational principles of treatment in the works of the Roman veterinarians than in the miserable writers of the middle ages.

True veterinary science, therefore, is a plant of recent growth.

France has taken a decided lead in the cultivation of this department of knowledge, perhaps from the comparative absence of those causes which have retarded its progress in this country; and, many years ago, before the art could be said to have advanced a step in England, they had writers and practitioners of skill among them. Many of the technical terms now in use, and almost the whole vocabulary of the Manége, we have derived from the French language. Greatly to the honour of this enlightened nation, the first veterinary school was established at Lyons, by royal mandate, in 1761; and M. Bourgelat, a gentleman of that city, conversant with horses, and subsequently a voluminous writer, was the first appointed professor.

Four years afterwards, another school was opened at Alfort, near Paris; and in a short time the profession assumed a regular character in France, where it has also a higher rank in public estimation than, from various causes, it has attained in this kingdom.

Similar establishments succeeded in Vienna, Berlin, Copenhagen, Stutgard, Wirtemberg, and Utrecht, in Holland.

There is an annual *procès verbal* from the French schools, and the professional publications and treatises are uncommonly numerous; but either they are really devoid of interest, or we have hitherto neglected to profit by their labours; for, certain it is, nothing of importance which they have written or discovered has been adopted in this country.

Notwithstanding these encouraging examples on the continent, we do not find that any public attempt was made to improve the ancient system of farriery in England till a much later period, even though

that system had been much and justly inveighed against by various writers; and while other sciences had shaken off the superstitious observances and ignorant quackeries of the dark ages, and were making real progress in the paths of true knowledge, the medical treatment of domestic animals was overlooked, and permitted to remain most lamentably in arrear.

It was in the year 1788 that the first proposals for establishing a Veterinary School were published in London, by Monsieur Vial de St. Bel, who had received a professional education at the Royal College of Lyons, and subsequently held the office of junior assistant in that of Paris. It seems that he was constrained to resign that situation, having rendered himself obnoxious to the seniors, by his free and bold manners. He used to say, that he had many enemies, which induced him, in this country, to add the name of his native village, St. Bel, to his real patronymic surname of Vial; and also, as he has been heard to avow, because it gave him an air of noble descent. But the plan had at first no supporters, and met with so little encouragement, that he returned to France, where, being again disappointed in his object of regaining his old situation, he revisited this country in 1790, and attempted once more to attract public attention to his views. For some months he met with no success, and was on the point of giving up the attempt, when some unexpected and influential patrons arose, in Earl Grosvenor and Mr. Granville Penn, who, having returned from the continent, where they had inspected the Veterinary establishments, and seen their utility, determined to give St. Bel their utmost support. It happened also, just at this juncture, that the death of the celebrated race-horse, Eclipse, furnished him with an opportunity of displaying his anatomical skill in the opening and dissection of his body, which served to bring him into public notice in a very favourable manner. He soon opened a communication with the Odiham Agricultural Society, which had been on the point of sending two young men to the French colleges, in order to introduce the Veterinary art into this country: but now, seeing the importance of St. Bel's object, they formed a committee with some noblemen and gentlemen in London, by whose influence and assistance the plan for founding a College soon acquired stability, and subscribers began to come in from every quarter.

Among its earliest and warmest friends, besides Earl Grosvenor and Mr. Penn, were Earl Morton, Sir J. C. Bunbury, Dr. Crawford, and that distinguished surgeon, JOHN HUNTER, who saw its im-

portance in a strong point of view, as a field for the cultivation of Comparative Anatomy, which led him to render it every assistance, both professional and pecuniary, in his power. The Duke of Northumberland also generously contributed 500 guineas, and many other noblemen and gentlemen came forward with proportionate donations.

In February, 1791, the infant Society held its first meeting at the Blenheim Coffee-house, Bond-street; and, at a subsequent general meeting, when the number of subscribers was much increased, the Duke of Northumberland was elected President, and a most respectable Committee of Directors chosen.

The constitution of the proposed College, with its rules and regulations, which were very different from those now in force, were quickly settled and published; and in March 1792, it was resolved that a range of stables and a forge should be erected on a piece of ground at St. Pancras, which had been previously taken for the use of the Institution. This, with some later additions, forms the simple quadrangle, a view of which is given in our frontispiece. It requires but little description, being a low unpretending series of brick buildings, in which economy and utility have triumphed over all affectation and pride of outside show, in a greater degree than is common with public edifices, in this age of pretended refinement.

Before Monsieur St. Bel's instalment, and in order, it was said, to remove all doubt respecting his qualifications for the office of Professor, he was examined, *pro formâ*, by a committee appointed for that purpose, of which were John Hunter and the late Mr. Cline. It is known that this investigation was conducted with considerable mildness, as much reliance was placed upon his practical knowledge and zeal for the promotion of the art; for his physiology and therapeutics were certainly not of that profound order, as his writings testify, fully to warrant the learned committee in their report, that "it is perfectly satisfied that M. St. Bel is in every respect qualified for the office of Veterinary Professor to the College of London." However, there was no competition; and, had it been otherwise, his practical tact and sincere ardour were alone sufficient to justify their choice and commendation.

From this time the Institution gained ground most rapidly; and no sooner was the building ready for the reception of patients, than it was attended by a number of ardent and inquiring pupils, some of whom are the most distinguished in the profession at this day,—Messrs.

Bloxam, Blaine, R. Lawrence, Field, and Mr. Bracy Clark, who, in the Professor's presence, led in the first horse that ever regularly entered the College stables. St. Bel was indefatigable in his attentions, and succeeded in gaining the confidence of the pupils, and also of the subscribers, in no small degree. Meanwhile the unavoidable first expenses of building, and an indiscreet and speculative system adopted in the management of its funds, began to involve the infant establishment in pecuniary difficulties.

At this critical period, when the Professor had scarcely occupied his new situation a year, and his exertions were most needed to support the incipient school, his death cast a cloud over the prospects of the College, which almost threatened to obscure it for ever; and had it at that time been held together by no better bond than the interest and patronage of the subscribers, it might not have survived this event.

St. Bel's complaint was a fever of a very remarkable description, having boils and buboes in various parts of his body; and Dr. Crawford, who attended him, observed, that in this country he had never seen any fever that so strongly resembled the plague. His body was interred at the expense of the College, as a tribute of respect to his memory, in the vault of the Savoy Chapel, in the Strand.

In figure, he was a tall, stout, bony man, of a very dark, swarthy complexion, and prominent cheek bones; the lower jaw large, with dark eyes.

The frontispiece to his Works bears no resemblance to the man; but there is a plaster cast of his countenance in existence, taken after death, at considerable risk of contagion, by a zealous and grateful pupil. His manners were polite, open, and insinuating; but he was exceedingly jealous and vindictive to any one offending him. In his profession, he had real practical knowledge as an anatomist of the horse, especially of the bones and muscles; but his doctrines in physiology and therapeutics were quite of the ancient French school. His best work was on the Proportions of the celebrated Eclipse, in which he takes a comparative view of this horse with the ideal medium standard horse of the French schools; and, measured by such a rule, Eclipse was found strangely different. These differences from the perfect horse, as St. Bel's was called, were humorously termed "defects" by the reviewers, but very erroneously; and excited a smile, at St. Bel's expense, that Eclipse, so perfect, should be so very *defective*. They were, in fact, the variations of a perfect race-horse from this ideal standard; and it would appear necessary, for useful com-

parison, that there should not be one medium horse, but a standard for each particular breed, or purpose for which the horse is used, and then the parallel becomes both easy and useful.

St. Bel's doctrines on shoeing were far from successful in practice, and did not long survive him; though they have lately revived again, and sunk, under a new name. His Lectures on Farriery, and Essays on various Diseases of the Horse, have been much surpassed by later writers; but they cannot be perused, without exciting a strong conviction in the reader's mind, that he felt a real interest and pleasure in his profession, and a laudable anxiety for its welfare. His posthumous Works were much indebted to the elegant pen of one of the members of the Committee, without which they would have been but indifferently suited to an English taste.

Deprived now of its main support, by the loss of it lamented Professor, the College was for some time without a leader.

During this interval, its affairs were chiefly conducted by two or three praiseworthy members of the Committee, without whose exertions it would probably have been overwhelmed, by the weight of pecuniary embarrassments, the low state of public confidence, and also of the subscription fund, which was immediately consequent upon the decease of the Professor.

The professional duties of the Infirmary, also, were well and zealously executed by some of the most active and intelligent pupils, who alternately undertook the task, and met the difficulties of the case with so much skill and attention, as left little or no ground of complaint among those who still adhered to the Institution.

There arose no small difficulty in obtaining a new Professor. Choice was out of the question; for no practitioner in a good business would leave it, to undertake the management of so unpromising a concern as the new College then appeared to be.

The Committee first applied to Mr. Moorcroft, at that time almost the only regular Veterinary surgeon in London—an excellent practitioner, and a good anatomist; but they found him, at first, unwilling to quit his extensive practice in Oxford-street, to accept the troublesome honours and doubtful rewards of their Professorship.

Mr. James Clark, of Edinburgh, who styles himself "Farrier to His Majesty for Scotland," was next resorted to; but he returned for answer, with thanks for the intended honour, that he could not give up his posting concerns in the North, to take a situation for which he was moreover but indifferently qualified. His work on the Foot and Shoeing was then in high repute; but it is probable, being a

plain, unpretending man, that he felt some diffidence in assuming an office of so great responsibility. And it must be observed, that, at this juncture, professional talent was not the commodity in greatest request: a leader was required, who should possess a considerable share of address, with easy and agreeable manners,—likely to conciliate the public and all parties, and obtain for the tottering Institution that support which is often denied to simple, unassuming merit. Were such an event to happen now, we presume there would not be quite so much backwardness in gentlemen to become candidates, as existed thirty years ago.

But the interregnum had now lasted nearly a year; and while the Professorship was thus going a begging, the creditors of the College became so troublesome,—threatening to make the Committee refund, from their private purses, the debt it had contracted as a public body,—that, in order to carry on an appearance of business, and prevent this unpleasant result, they found it absolutely necessary to support the credit of the establishment to the utmost of their power, and to obtain a new Professor, whether well or indifferently qualified. It was actually under the serious contemplation of these gentlemen to take the buildings, and appropriate them to some other public purpose; and it was thought that they might be convertible into a workhouse or an hospital!

In this dilemma, and finding no qualified Veterinarian who would accept the vacant chair, the Committee turned their attention to the medical profession, and from its overflowing ranks a candidate soon arose.

Mr. Edward Coleman, then a young man, had brought himself into notice by some experiments on Suspended Animation, and also on the Anatomy and Diseases of the Horse's Eye; but was otherwise no further acquainted with the Veterinary art than as an amateur.

He had attended the Borough hospitals with Messrs. Cline and Cooper; and, backed by their powerful interest and recommendation, presented himself to the notice of the Committee, who were not at that time disposed to reject a devoted candidate. However, that something like appearances might be preserved, and the weight of practical information be blended with zeal and theory in the Professor's chair, Mr. Moorcroft undertook to be his joint associate in office; and this arrangement appears to have met with the concurrence of all parties: like his predecessor, he passed a *pro formâ* examination, before a Committee composed solely of physicians and surgeons,—though the

extent of his practical qualifications was generally understood, and that he came, in great measure, to *learn* the art over which he was about to preside.

The new Professors managed, conjointly, the duties of the office for a short time; but Mr. Moorcroft soon found it incompatible with his private practice, and resigned the chair wholly to his junior colleague.

Left now to the exercise of his own resources, Mr. Coleman appears to have fully justified the expectations which were entertained from his polite and conciliatory address and pleasing manners; for, in a short period, the confidence of the subscribers and the public was very much restored; and many noblemen and gentlemen, who had withdrawn their names on seeing the former unpromising state of the Institution, rejoined it,—and better measures were taken by the Committee for its future regulation.

Professor Coleman soon afterwards succeeded in procuring the patronage of Government; and, for several successive years, a considerable sum was voted by Parliament to aid the College finances, in consideration of anticipated benefits accruing to the army service by the employment of Veterinarians, on whom his late Majesty was also pleased to confer the rank of commissioned officers, which has placed them on a footing of respectability, and induced many young men of talent and character to embark in the profession.

We need add but little of its subsequent history, except that, from a low and precarious beginning, it has become an establishment of considerable notoriety and influence; and the revenues, which would not at first tempt a farrier to become its principal, have doubtless proceeded in a proportionate and increasing ratio.

A large number of young men have studied within its walls, and disseminated all over England the knowledge they have gained,—placing this new profession in the road to improvement, and extending the bounds of the Hippiatric art; though we must not be understood to mean that every possible exertion has been made for its improvement, or that the whole of the doctrines which have been promulgated by the present Professor are either rational or worthy of adoption.

ON THE

GENERAL PRINCIPLE OF ELASTICITY IN THE FEET OF ANIMALS, PARTICULARLY THE HORSE,

On an extended survey of animal nature, it will be found that there is a principle pervading the construction of feet, in quadrupeds in general, which has not received that separate attention from naturalists which its importance appears to merit. Although the peculiar elasticity of the feet in some animals is an object of daily observation, yet we are far from being generally aware that this principle exists in a greater or less degree in every species hitherto described.

As the neglect of this principle has led to a very serious error in the management of the horse, our most useful animal—an error which ages have sanctioned and custom has rendered obscure, and which has been the cause of more animal suffering, and greater public loss, than all other calamities united which art has tyrannically entailed on the brute creation; so we consider its importance demands our earliest attention.

There are many constructions by which various degrees of elasticity are communicated to the extremities of animals, and by which their bodies are prevented from receiving that violent shock or jar which necessarily ensues when a solid unyielding body meets the ground.

The light bodied animals in general, more particularly those which climb trees, have digitated or fingered extremities, while most of the more weighty quadrupeds have the bones of the feet defended by elastic pads or cushions; others again by hoofs or claws variously divided, which mode of construction is found in a large proportion of quadrupeds.

To begin with the most remarkable and apparent example of this principle—in the light and active Squirrel, a solid resistance to the ground would be unnecessary, accordingly we see simple digitations or fingers, of considerable length and sharpness, which enable them to grasp the boughs of trees, and stick into the bark and rind of the trunk, and they approach in respect to structure very much to the claws of a bird, giving them a peculiar advantage in their agile bounds, which may almost be compared to flying.

In the Dog and Cat is found a large triangular ball or pad near the middle of the foot, and one also at the base or termination of each toe, composed of a tendino-cartilaginous material, which forms an elastic defence and medium for the purpose of meeting the

ground; the tarsus also is divided into four parts or separate joints, which farther contribute to the general effect of yielding to the impression of the weight.

In Cats, more particularly, the claws are forced out and extended on meeting the ground from any height, and by this means break the force of the fall.

These observations apply to a very great variety of animals, among which are included some of considerable weight and size, as the Lion, Tiger, Leopard, &c., also the Wolf, Hyæna, and others. The graceful action of the Lion and Tiger depends, in great measure, on the peculiar and beautiful expansion of their feet.

The Camel has the lower termination or extremity of the limb deeply cloven into two parts, defended by two strong horny claws, which, being flexible, yield to the weight, and bend to the motion and pressure, of the animal's body. Besides this, each claw is provided beneath with a cartilaginous pad or cushion to assist in the support and defence of the foot, and which farther contributes to its yielding and elasticity, and is well fitted for the dry and sandy deserts which this animal inhabits.

The ponderous Elephant has also a high degree of this requisite quality in his foot. His immense body, in figure like a tun, is elevated upon four nearly perpendicular columns; for, where support is chiefly required, we have the limbs upright; on the contrary, where great activity and motion, they are bent at angles, as we see in the leg of the dog, "*crooked to a proverb.*" At its base or inferior termination, the limb is divided into phalanges of bones, which are reposing on a vast cushion of elastic corneo-cartilaginous material, which central pad or cushion resembles a flat sole of untanned leather. The external circumference of the foot is deeply notched or divided into five parts, each also provided with a horny hoof or claw; these claws, under very strong exertion of the animal, may assist in moving the weight by grappling with the ground.

In the Ox we have a cloven foot, which is very frequent among graminivorous quadrupeds, and by far the greater number have it. The change of figure and elastic yielding in these are accomplished in the most simple manner, by a complete division of the bones of the foot up to the fetlock joint; which division into two members, connected only by ligament, renders this part weak to such a point, that it is made readily to yield and bend to the weight of the load, and thus to destroy, by its flexibility, any undue concussion or jar. The two claws also, on meeting the ground, divide, and separate

considerably, permitting the soil when soft to pass up between them, and thus farther diminish the resistance and too sudden impression from the exertion or weight. This dilatation is very visible and familiar to every eye; indeed, the degree of flexibility thus imparted to the feet of this tribe of animals almost savours of weakness and debility, and has sometimes an unsightly appearance; but this very property, though it must impede their velocity of motion, is peculiarly well adapted to their general structure, and in a particular manner to the gentle domestic habits for which a kind Providence appears to have ordained them.

The human foot, when pressed upon the ground, is seen to dilate in all directions which the upper leather of the shoe, being thinner than the rest, admits of; and by this change of form, also, the hollow or arch of the foot, which we call the sole or *planta*, sinks and is flattened, thereby preventing condensation, and maintaining the liberty of its various parts.

Having shown the importance and prevalence of this principle in various degrees among animals, we come now to consider the wonderful provisions for elasticity in the Foot of the Horse, and observe that this property exists in a less degree in his tribe or family than in any other species of quadrupeds, and which appears to be accounted for on the following grounds: That with him is found accomplished a difficult proposition in mechanics, viz. the moving a large and heavy body with an extraordinary speed; and we may perceive, that in order to surmount this difficulty, a greater share of solidity is imparted by an undivided hoof, and it is this apparent solidity in its structure which appears to have been the cause of this general and important principle of elasticity being so much overlooked and disregarded in his treatment.

From a minute examination of the horse's foot, according to modern discoveries, it will be found that the extremities of the wall of the hoof are inflected or bent inwards at the heels, forming the bars, which extend and terminate at the point of the frog; and if we imagine the frog to be drawn out from between them, it would leave a spacious triangular cavity. Thus the hoof is actually cleft to its centre posteriorly, and possesses the power and inclination to expand and dilate itself, in the manner of a bow, at every step or exertion of the animal. The frog, formed of soft thin horn, of the consistence of India rubber, and cleft into arches which can all extend themselves laterally, fills up this chasm or cavity, and may be compared to an elastic bowstring, with its ends passing round the inflection of the wall, permitting the

expansion of the hoof, and restraining its undue action. In its minor provisions, as well as in its fundamental construction, the foot of the horse is essentially elastic; the bone of the foot is connected with the hoof by means of numerous elastic processes, which permit it to descend under the weight of the animal, and press upon the concave sole, which then flattens and expands with the other parts.

It appears, then, notwithstanding its solid appearance to the eye, that it is not far removed, in point of principle, from the cloven foot of the ox; but as to the horse is given greater speed and strength, with higher powers and a more noble form, so his foot also is constructed with more complex mechanism, and admirable contrivances to combine the requisite elastic yielding with sufficient stability and firmness. It follows, as a natural consequence of this construction, that our treatment of this organ is erroneous and improper; by the application of a rigid unyielding shoe, we oppose and totally prevent the expansion from taking place: suffering, contraction, lameness, and early death, is the fate of our noble and willing slave; while vexation, loss, and difficulty, are the invariable attendants of this unnatural system.

ON THE DISEASES OF THE EYE OF THE HORSE.

[Copied, by permission of Mr. WARDROP, from his "Essay," published in the year 1819.]

WHEN the healing art was in its infancy, the dissection of animals greatly contributed to its advancement; but since the diseases of the human frame have been very successfully investigated, and medicine assumed a rank among the sciences, that knowledge may be advantageously employed to illustrate the diseases of animals. In the same manner, therefore, as the natural philosopher has contributed to the improvement of the arts and the different branches of agriculture, so it is reasonable to expect, that if the attention were duly directed to the economy and diseases of animals, this useful branch of knowledge would be established on the solid basis of scientific prinoiples. Hence such rules would be laid down as must serve to guide those, on whom the practical part may devolve. A taste for pursuits of this kind, among medical men, might lead to still more important results, as any addition to our knowledge of the diseases of animals must serve to illustrate the diseases of the human body; and the frequent opportunities of dissection and experiment on animals, and the facility in conducting

such inquiries would, if zealously pursued, materially promote such an object. From these researches the agriculturist might also derive some useful hints, to guide him in improving the breeds of domestic animals; a subject to which the pursuits of scientific men are likely materially to contribute.*

The diseases of all the organs of the lower animals are not only less numerous, but they are more uniform in their progress and symptoms, than those of the human body. The Eye of the Horse is subject to much fewer diseases than that of man, and these diseases do not assume that almost infinite variety of character which is met with in the human eye, and which is, in man, produced from the habits of society, and the various modes of life to which he is exposed. Thus the uniformity in the appearances of diseases in the Eye of the Horse makes their treatment the more simple, less of that nice discrimination being required in treating individual cases, which is so essentially requisite in the practice of human medicine.

Before considering the different Diseases to which the Eye of the Horse is subject, it ought to be observed, that not only the progress of the diseases, but their treatment, must vary according to the different circumstances under which the animal is placed, or, as it is in common language called, the "Condition of the Horse." It may therefore be proper to observe, that there are four different states of condition, in either of which the horse is usually found.

The *first* is, when he is at grass, or living on green food, exposed to all the vicissitudes of weather.

The *second*, when his food is more nutritious, in which state of condition he is usually kept by the agriculturist.

The *third*, when he is living on dry food, and kept in a warm stable; as most horses are for the purposes of riding and driving.

The *fourth*, in the highest possible state of condition, when the food is in the least bulk, the body warmly clothed, the horse confined in a hot stable, and exposed to the most violent bodily exertions, for the purpose of the field or turf.

In these different states of condition, it is reasonable to suppose that though the same kind of treatment be always applicable to the same disease, yet that treatment must be pursued in a very different degree in animals whose condition is not similar. Thus, if the eye of a race horse receive a blow, the quantity of blood necessary to be taken away, in order to prevent or allay the subsequent inflammation, ought to be much greater than what it would be advisable to take from a horse at grass, who had received a wound of equal severity.

The value of horses in this country, both for the useful purposes which they serve, and the gratification of amusement, having made

* See Mr. Clift's excellent paper "On the Form of Animals," in the communications to the Board of Agriculture, vol. iv. p. 440.

the breeding of that noble animal a source of considerable profit to the agriculturist, it becomes of great importance, not only to improve his strength and beauty, but the treatment and management of all the diseases to which he is subject, and by which his utility or appearance might be injured. Next to the vital organs, a healthy state of the eyes of the horse is perhaps of the greatest importance, as, for most purposes in which he is employed, much depends on the safety of his movements; and in these, the eyes have an important share. In man, a great deal of the character of the countenance arises from the brilliancy and expression of the eyes; so also in the horse, the form, colour, and position of the eyes have the principle share in giving expression to the head.

From the position of the eyes in the head of man, an imperfection in one of these organs produces little or no defect in vision, the two eyes being always employed to look at the same object. But in the horse, the eyes are so placed, that he at the same time observes different objects with each eye; when, therefore, one eye is imperfect, the horse is apt to shy and start, whereas, when one eye is completely destroyed, he generally seems to suffer little inconvenience. Many very safe and valuable hunters have only one eye.

In man, there is frequently an original or congenital difference in the two eyes. This, however, is not easily ascertained in the horse, though it appears very probable, from the difference to be almost universally observed in the two sides of the face—a difference which has even been closely imitated by ancient sculptors.

It is a common observation, that when one eye is attacked with any disease, the other is very apt to become affected with the same complaint. This sympathy, observed between the two eyes, has been noticed in all those organs of animals of which there are a pair; and, as shall afterwards be observed, a knowledge of this fact leads to important practical conclusions.

Another question, worthy of attention in considering the diseases of the eye of the horse, is to ascertain how far any of these affections are *hereditary*. There is no doubt, but that every race of animals inherits the bad as well as the good qualities of the parents; and that, in breeding, imperfection and deformity may be as successfully propagated as perfection and beauty. This has been established beyond all controversy; and it is well known, that in mankind, families are not only subject to particular diseases, but in every race, one or more organs of the body are less perfect in structure and functions, and more liable to disease. Numerous facts may be brought forward to establish the truth of this observation; but it is sufficient for the present purpose to remark, how often it happens, that in one family many of its branches are affected either with diseases of the lungs, or brain, or liver, or stomach. Some diseases of the human eye are also known to be hereditary; it is, therefore, to be expected, that the eye of the horse shall be defective, and more liable to diseases in particular races, or, as it is usually denominated, in certain "Lines

of Blood." Breeders of horses are familiar with this observation, and its coincidence with similar facts, in other organs, makes it worthy of attention.* In corroboration of this opinion it may here be mentioned, that a mare of the Mercury blood, belonging to the Royal stud at Hampton Court, who had lost one eye, had, last season, a dead foal, which had a single eye; scarcely any vestige of the other being perceptible. Several of the produce of Treasurer, a son of this mare, have been foaled with defective eyes.

As has already been observed, the diseases of the horse s eye are not numerous, and it is here proposed chiefly to consider those causes of blindness which are most frequent, and on which medical treatment has the most powerful influence. But before describing the diseases, it may be proper to make some general remarks on the anatomical structure of the eye of the horse in its healthy state, which may perhaps render the subsequent observations more clearly understood.

Of the Structure of the Eye of the Horse.

The eye of the horse, in its structure, resembles very much that organ in the human body.

Its form is nearly spherical, and would be so exactly, were not the anterior part a little more convex than the posterior.

The humours of the eye are contained in a firm coat, called the sclerotic; the more convex and interior part of which is transparent, and, from its consistency and horny appearance, it is called the Cornea.

Within the sclerotica is a second coat, called the Choroides. This is much thinner than the sclerotic coat, and is composed of numerous blood-vessels, which are often the seat of disease, and its interior surface is covered with a black pigment, which serves an important purpose in vision. At the back part of the globe, the optic nerve enters, and it expands within the eye-ball, spreading itself over the whole surface of the choroides like a delicate web, and is called the Retina.

At the junction of the choroides and cornea arises the Iris, a flat opaque membrane, which transversely divides the eye into the anterior and posterior chambers, and in the middle of which is a perforation, called the Pupil. In man, the pupil is circular, but in the horse and all graminivorous animals, it is of an oblong form, placed horizontally to extend the sphere of sight on the surface of the earth; and this opening is capable of contracting and dilating, according to the degree of light to which the eye is exposed. From the upper part of its edge there hangs a fringe or curtain, which is peculiar to the horse, and probably intended for the more complete closing of this aperture.

The cavity of the eye-ball is filled with three different humours.

* It is well known, that some particular lines of blood are subject to spavins; others to curbs; and others to diseases and imperfections in the form of the feet.

The first, from its fluidity, is called the aqueous humour, and fills the space between the cornea and iris.

A little behind the pupil is situated the lens, or crystalline humour, which, when it becomes opaque, forms what is called a cataract. It is nearly of the consistence of firm jelly, decreasing in density from the centre to the circumference, and having the form of a double convex lens.

The cavity between the crystalline humour and back part of the eye, is filled with a transparent fluid, rather more viscid than the aqueous humour, and called the vitreous humour.

The three humours serve for the purpose of refracting the rays of light within the eye, and painting on the retina pictures of external objects.

The eye-lids, with the tears, serve to protect and preserve the transparency of the cornea. These are lined by a very delicate membrane, similar to that which covers the interior surface of the nose and mouth; and this thin skin, called the Conjunctiva, not only covers the internal surface of the eye-lids, but is reflected over the whole anterior portion of the globe of the eye.

[*To be continued in our next.*]

MANGE IN DOGS.

The following ointment will be found very useful in curing the mange, a disease to which dogs are particularly subject:—

Sulphur, (Roll, or vivum), two ounces,
White Hellebore, half an ounce; both in fine powder.
Soft Soap, one ounce.
Palm Oil or Lard, three ounces.
Oil of Tar or Oil of Turpentine, (Rectified) a quarter of an ounce.

Mix into an ointment: to be applied to the dog once every day till cured; washing him with soft soap and warm water before applying the ointment.

The dog ought to be muzzled, to prevent his licking the parts.

ON THE

USE OF DIFFERENT DRUGS EMPLOYED IN THE DISEASES OF HORSES AND OTHER ANIMALS,

THEIR EFFECTS, AND THE BEST MODE OF ADMINISTERING THEM.

As one of the objects connected with this Work will be to give an account of the different drugs used as horse and animal medicines, so have we commenced this task with the most useful and generally employed class, viz. purgatives; and as the drug Aloes is commonly used for that purpose, we shall endeavour to give a comprehensive description of the different sorts of that article that are met with in the druggists' shops, and employed in horse and cattle practice.

The names under which we usually find them, are Socotrine aloes, Cape aloes, and Barbadoes aloes.

But there is generally found, particularly in large drug concerns, another article of aloes known by the name of Hepatic aloes, from its light brown colour, very nearly resembling that of animal liver; it is sometimes called also Bombay aloes: this latter name is likewise a common or general name for the whole of that drug which comes to this country from the East Indies.

It not unfrequently happens that aloes are re-melted in this country, and adulterated by mixing them in different proportions as the prices happen to vary in the drug market; and sometimes by mixing other articles with them, and for this purpose common resin has been used, and where improvement in its tint or colour is required, the addition of powdered charcoal, ivory black, lamp black, and sometimes black writing ink, is occasionally resorted to; the odour or smell is likewise attended to, and supposed to be improved by mixing them together in proper proportions.

These adulterations are of serious consequence to the veterinary practitioner, inasmuch as he is ever at a loss to know what quantity he has really given in a dose; and after having waited the usual time, that is from twelve to twenty-four hours after its exhibition, is entirely disappointed by the medicine not operating, which is often a serious occurrence in case of disease, and otherwise occasions a double loss of time, depriving the owner of the animal's services.

An effectual plan will be here given, with a view to prevent such disappointments taking place, by simply purifying the aloes, thus separating the pure and useful purgative part from the impurities and irritating or griping parts; but we shall first describe the

different sorts, their relative strength and proportionate prices, as well as their common and proper names.

Aloes is an inspissated juice prepared from different plants bearing the name of the genus to which they belong: it was formerly considered a gum resin, (that is, a substance, a part of which, the gum, is soluble in water, and the resin soluble in recitified spirit); modern chemists describe its composition rather differently, as a mixture of gum, extractive, and resin; and as the gum will be found to be the best and most useful part, so should that sort of aloes be selected which contains the greatest portion.

In order to place the subject in as comprehensive a view as possible, we shall make the following division of the article:

First, The gum, the best purging and least irritating or griping part.

Next, The extractive, the most irritating or griping, but also possessing purging qualities, though very uncertain.

Lastly, The resin, likewise irritating, but very uncertain as a purgative.

We shall next describe the different sorts of aloes usually met with; first, the Socotrine aloes of the old shops, so called from that species being originally brought from the Island of Socotora in the Indian Ocean, but it is now named Spiked aloe, (*aloe spikata*), being generally understood to be made from the plant so named. This sort, in point of price, is mostly the second; and though it has been strongly recommended by some of the veterinary writers, is not much used. This varies much in quality, and a mixture is very often sold under this name, of equal parts of Hepatic or Bombay aloes and that called Cape aloes, coloured to the shade wanted. This, then, being an uncertain article, by its liability to adulteration, is rendered unfit for veterinary purposes.

This sort of aloe was formerly supposed to exude from the wounded leaves of the plant, and to be hardened by the heat of the sun, which in all probability was the case; but it appears, at the present time, to be prepared from the expressed juice evaporated in flat vessels.

The next sort to be described, is that known by the name of Cape aloes, from its being brought to this country from the Cape of Good Hope. This sort is prepared, in all probability, from a variety of plants growing in that country, as the aloe is a large family or genus. This sort contains a large portion of gum, generally more than two-thirds, and the residue consists of extractive resin, and impurities. Samples differ in their proportions, but will

average about the quantities above stated; this, therefore, will be a much better sort to use than the preceding one, and as being also the cheapest. This is the aloes used by some veterinary practitioners at the Veterinary College, and in the Cavalry; but as it requires a larger dose, generally one-fourth or fifth more, and often containing impurities, it frequently gives place to the next sort of aloes which we are about to describe. It is prepared at the Cape by pressing out the juice from the leaves, and evaporating it to a proper consistence by boiling.

The third and last sort is that known by the name of Barbadoes aloes, from its coming from the island of that name in the West Indies. This is the strongest and most violent in its operation of all; it is made from a different plant, the common aloe *(aloe vulgaris)*, and the manner of preparing it is also different, by boiling the leaves in water, straining the decoction, and boiling it down to a proper thickness; it is then poured into large gourd shells and left to harden, and in that state it is mostly imported into this country; and it is not unfrequently (from the high price it has long brought, though now rather cheaper) melted out and remixed with Cape aloes and common resin, and then returned to the shell, so that this article cannot always be depended upon as a purgative. Many veterinary practitioners and writers contend that the last described sort is the only one which ought to be used for horses; but as it contains a large quantity of the resinous and irritating portion, as well as being dearer, we consider the Cape aloes to be preferable, being a better purgative; and when prepared in the manner hereafter directed, it rarely, if ever, produces inflammation of the intestines, which, from the uncertain strength of the drug, and the administration of too large a dose, has been a fatal consequence.

The plan now to be recommended as being a great improvement in the use of aloes, as well as insuring a greater degree of certainty in its operation, will be to purify the drug by separating the gummy part from the residue, which is best effected as follows:—

Let any quantity of Cape aloes be reduced to a coarse powder, and put into an earthen vessel, in the proportion of one pound of aloes to two or three pints of water; the water while boiling hot is to be poured on the aloes, a little at a time, and kept stirred till the whole is completely dissolved; it is then to be well stirred every ten minutes or quarter of an hour till quite cold, when it is to be set aside from twelve to twenty-four hours; the clear liquor, which will contain the pure gum, the most certain and best purgative, is now to be poured off from the part which has settled at the

bottom; which last part, or sediment, should be rejected as unfit for use.

The pure liquor is now to be reduced to the consistence of the aloes before they were dissolved in the water. This can easily be accomplished, by placing the liquor in an earthen, stoneware, or tin vessel, (and the broader it is at the top in proportion to the quantity, the better), and setting this in a large saucepan or small boiler containing sufficient water; but not so much as that, in boiling, it may get into the vessel placed within it. This process is to be continued till the water is evaporated or carried off by the heat applied under it, and when reduced to the proper consistence, and while hot, it is to be poured out on a smooth stone or oiled board. Water must be added to the outer vessel, as it is evaporated or boiled away.]

As some veterinarians are in the habit of using and recommending an alkali to be added to the aloes, those who wish to adopt or try this plan, can do so by adding in the proportion of from half an ounce to an ounce of subcarbonate of potass (commonly called salt of tartar) to each pound of aloes. This can be either added to the liquor containing the gum, or mixed with the aloes before the hot water is put to it; if this latter mode is adopted, double the quantity of alkali should be used, and in this way also a larger quantity of the aloes will be dissolved, and less loss be sustained.

The advantages to be derived from this prepared or purified aloes, will be as follows:—a smaller dose will be found to operate, and in a shorter time, with greater certainty; and a large or full dose, when given, will not be liable to produce inflammation of the intestines, as most of the generally employed preparations of aloes so frequently do; the pain and griping will also, in a great measure, be prevented, and in many instances entirely.

Of course, in the case of this purified aloes being given, it will make a difference in the quantity to be used if the horse has been previously prepared by mashes, when a smaller dose will be found to have the effect of purging.

The breed, make, and condition of the horse should always be attended to in the quantity used: thus the dose will vary according to circumstances, from two drachms to one ounce and a half, allowing eight drachms to the ounce; but six or seven drachms will generally suffice for a full dose for a middle-sized horse.

Another great advantage in this prepared aloes, is its complete solubility in water, so that it can very easily be given in a drench, where time is an object and a quicker operation required.

The best general way of giving this drug, will be in balls; and the mode of making aloes into that form, as recommended by the Veterinary College in their Pharmacopœia, is by melting it with treacle and olive oil.

Mr. B. Clark, in his "Reformed Pharmacopœia," has described an useful apparatus for melting the aloes with a portion of treacle, and then pouring it into paper tubes for use.

But this purified aloes will want little or no additions, as it can be easily softened by the heat of the hand or fire, rolled into balls, and covered with paper.

If any addition be thought necessary, five or six drachms can easily be beat up in a mortar with one drachm of soap and the same quantity of powdered ginger or pimento, and made into a ball.

Those persons who have not the convenience or the time for purifying their own aloes, can get it prepared by a druggist, and those will prepare it best who have a steam apparatus for so doing, as the heat ought never to exceed that of boiling water; and it would be still much better to have it prepared, if possible, by the new mode of making extracts *in vacuo* as recommended by Mr. Barry.

Aloes are sometimes given to neat cattle as a purgative; they require a larger dose than horses; but there is not that nicety requisite in preparing it. The best form is that of solution.

This prepared aloes is likewise an excellent purgative for dogs, in the dose of from twenty grains to one drachm, according to the size and breed of the dog, made into a ball with a few grains or an equal quantity of soap.

The precise period of the first use of aloes, as a purgative, appears uncertain; but the earliest regular account is given of it by Blundeville, in his work on "*Horsemanship*," published in the year 1609.

ON THE FLUKE* WORM IN SHEEP.

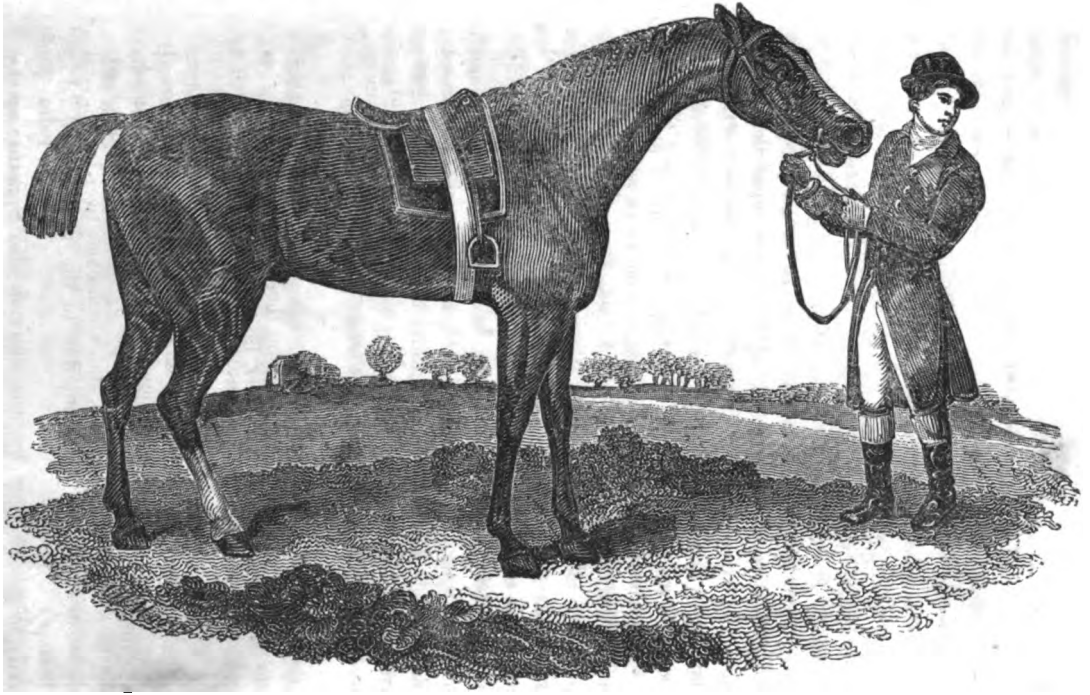
NOTWITHSTANDING the numerous inquiries that have been made on this singular production, it appears that the subject is still involved in great obscurity, both as to the cause which produces the disease

* We use this term, although incorrect, because it is so well understood by Agriculturists.

in which we find these worms—viz. Rot, as well as whether they are self-generated, or conveyed to the part in which we find them through the stomach of the animal, either in the shape of ova, or eggs, or in a perfectly formed state. It has been asserted by several writers and agriculturists, that these worms are occasioned by the disease; others, on the contrary, contend that they are the cause of the disease. But those who have given this subject the most extensive, diligent, and patient investigation, have clearly shown that they are the *effect* and not the *cause* of disease: but the most remarkable and wonderful part of the subject, is the fact of the worms being found alive in the liver. And a very important question then follows, as to the power, in deranged animal substance, of forming other bodies, and those endowed with vitality; or, in other words, whether there be such a power as a creative one established in nature, distinct from the power of regeneration. If such a power as the former does exist, then we are not at a loss to readily account for their existing in such situations as these animalculi are frequently found in. But, on the contrary, if such a power does not exist, then we can only consider the ova, or the animalculi themselves, as being conveyed to the part in which we find them through the stomach. But, as the ova and animalculi are not to be found unless taken from the body, by those persons who have well examined the subject, we may therefore infer that they are generated in the liver itself; and the late observations that have been made on tuberculous diseases by Dr. Barron, lead us more strongly to conclude that such will be found to be the fact.

That eminent agriculturist and political writer, Mr. Cobbett, in some hints thrown out a few months since in his "Register," on the flukes in the liver of the sheep, appears to entertain the idea of their being self-generated; and as this gentleman is a man of great and acute observation, we doubt not but he had well investigated the subject, before he alluded to it in so marked a manner.

The animals which appear to suffer from the disease in which flukes are to be found, are sheep, deer, hares, pigs, together with many other animals, which become thus diseased if exposed to the same cause; which, though attributed to a variety of circumstances by various writers and investigators, we doubt not we shall be enabled to show, invariably arises from one; but as it is a subject of great importance to the agriculturist, we shall leave the discussion for another opportunity, when it will be fully entered into, and all its points and bearings examined.



ECLIPSE.

A SHORT HISTORY

OF THE

CELEBRATED RACE-HORSE ECLIPSE.

NEITHER the ancient Hippodrome nor modern race-course can furnish perhaps so splend.d an example of superior powers, as do the annals of the famous race-horse *Eclipse*, whose performances were of a description that rendered competition useless with the horses of his day; and such was his pre-eminence, that he at last was suffered quietly to receive his laurels by walking over the ground, where no rival appeared to dispute his matchless claim. The bones of this famous horse would form a valuable acquisition to any public school, or to the hall or hunting stables of any nobleman or gentlemen desirous of making so curious an appendage to his establishment, as they must ever obtain, from the celebrity of the animal, a share of interest and curiosity. They may be securely referred to as an unexceptionable model on which to calculate speed in horses; and from them may also be seen, at any period, if there be an increase or falling off hereafter of bone in length or size, in our breeds of race horses, which may be readily ascertained, and in what degree, by his remains. The peculiar make and exact *tournure* of his bones may also be known, which no pencil, however skilfully handled, could convey so accurate a knowledge of.

The following is a brief record of the interesting circumstances which attended his life, and of the chief of his exploits on the turf.

He was foaled in Sussex, in the stud of the Duke of Cumberland, our late revered King's uncle, and the hero of Culloden; his sire was *Marsk*, his grandsire *Squirt*, his great grandsire *Bartlett's Childers*, which was full brother* to *Flying Childers* of Devonshire supposed to have been the fleetest horse, for a moderate weight and distance, that ever took the field. These Childers' breed can readily traced in their descent from the *Darley Arabian*, imported into this country from Aleppo by this spirited merchant, early in the reign of Queen Anne, and which came over to England certificated with all the ceremony due to the very best blood of the desert.

On the side of his dam he was descended of Spiletta, got by Regulus, the son of the Godolphin Arabian, whose pedigree is very well understood.

On the death of the Duke of Cumberland, his stud in Sussex was sold off, and the Eclipse colt, then a yearling, was purchased

* By full brother is understood the same mare and horse.

by a sporting Smithfield salesman, for the sum of seventy-five guineas.* An incident attended his sale which is worth relating, as his life might have been, in other hands, of perhaps quite another description, and with none of that splendour which followed him; so much depends upon the characters of men and opportunities, as well as on the things themselves. Mr. Wildman (for that was the name of this Smithfield amateur), having the young colt in view, arrived at the place of sale some minutes after the auction had commenced, and the Eclipse colt, being placed among the early lots, had been actually knocked down for seventy guineas, and sold. This spirited lover of the sport was not, however, to be daunted by this untoward circumstance from an attempt to gain him; and, referring immediately to his stop-watch of trusty workmanship, he declared, in the face of the company and of the auctioneer, that the time the bills had stated for the commencement of the sale had not then arrived, and insisted boldly that every lot should be put up again. The auctioneer, well knowing the stiffness of his man, and unable to disprove the allegation, thought proper to comply; and, to save the trouble and time of the company, it was finally agreed that such lots as he required should be put up again; and Eclipse was once more put up, and a second time knocked down, at the sum of seventy-five guineas, being an advance of five on his former sale.

This remarkable horse was also not without portentous events on the day of his birth, for he was foaled on the very day of the great Eclipse of the sun, on the 1st of April, 1764, and hence he very naturally acquired his name, which from this accidental circumstance is now become in our language almost synonymous to swiftness and speed; as coaches, ships, steam-boats, and all other sorts of vehicles having any pretensions to velocity, are all now called *Eclipses*, arising out of this casual circumstance.

After the period of his sale, he was kept chiefly in the neighbourhood of Epsom; and, from some cause or other not now exactly known, was not brought into public notice till he had attained his fifth year, which, no question, was attended with many advantages to his general strength and the state of his feet; and for the first time, he was started on the sweet-scented turf of Epsom Downs, on May 3, 1769: he was matched against some reputed clever horses; Gower, Chance, Trial, and Plume, were his opponents; and he distanced them every one, winning for his owner a considerable sum of money.

John Oakley, they say, had the honour of riding him on this occasion, and in general, or perhaps always, afterwards,† and to whom it

* From this probably originated the vulgar notion that Eclipse was once sold in Smithfield at the open market.

† It is stated that he was broken in by a daring character of the name of George Elton or Elkins, who was afterwards transported for poaching, and that he often rode him into the thickest of the forest, to overcome his intractable impetuosity, having previously defended his thighs and legs with stout leathers.

is said this generous animal was much attached: but, although this jockey was deemed a skilful and powerful man, yet this brave animal did not require, they tell us, much of the aids of jockeyship, nor would permit in any way the use of the whip or spur, or much directing; the sole business of the rider was to keep his seat and pull in, the rest was done by the horse. In a race that was expected to be sharply contested at York, O'Kelly placed several persons across the line of the course, beyond the coming-in post, in order that, if he broke away after winning, he might be stopt; but it was a needless precaution; for, after the race was won, he seemed to understand it, and readily obeyed the rein.

On this occasion at Epsom, they say, "*he was pulled*" the whole of the last mile with all the might of his rider, yet he distanced the whole notwithstanding; since, for certain obvious political reasons, it was not desirable to his owner that his prodigious powers should be at once disclosed.

It was after this race that Captain O'Kelly purchased the half of him of Wildman for the sum of 450 guineas; and after a subsequent race at Winchester he purchased the remaining half for 1100 guineas; yet, for all this, he was the cheapest horse ever sold in England, having, by his valuable properties of one kind or other, netted for his master the prodigious sum, it is said, of 30,000*l.*

Among other bets on this race, one was made, which was rather singular, by Dennis O'Kelly himself, "that he would undertake to place the horses;" after the bet was made, he was called upon to declare, and he said, "Eclipse first, the rest nowhere;" which was true, in a sporting sense, for a horse distanced might be said to be nowhere, or in no place.*

His next race was on Ascot Heath, on May the 29th of the same year, 1769, where he beat Fettyplace's *Créme de Barbade*. The betting here was eight to one on Eclipse, and though only five, he carried away the king's plate for the six-year-old horses.

At Guildford, June 5th of this or the next year, he walked over for the king's plate.

His next contest was at Winchester, on June 13th following, of

* His being backed four to one at starting in this race, for his superiority, though endeavoured to be concealed, had got abroad among the turf people, and the manner this happened has been related as follows:—Some persons engaged in the fancy were dispatched from London for the purpose of taking a sly peep at a private trial that was to be made between Eclipse and some other horses before his starting for the race; but they arrived too late, for it was just over; but an old woman, as it happened, was found toddling along, and of her they inquired if she had seen any thing of the trial: she told them she did not much understand what they meant: but if it was the two horses they were talking about that were running, she could tell them that white legs was a long way first, and that t'other, she was sure, run as fast as he could, would never overtake him. This was sufficient; they returned to town, and the owner was surprised, on his arrival, to find the betting so high in his favour; he, however, took the odds, and won much money.

the particulars of which nothing more is known than his beating Turner's *Slouch*, who had won the king's plate at Guildford just before: ten to one was betted on Eclipse after the first heat. He carried away also the 50*l.* purse, beating the Duke of Grafton's *Chigger*, Gott's *Julia*, O'Kelly's *Caliban*, and Bailey's *Clanville*. On the 15th he walked over the course at the same place, for 50*l.* weight for age.

At Salisbury, June 28th, no horse meeting him, he walked over the course for the king's plate for six years old, carrying twelve stone; and the next day he won the city silver bowl, with thirty guineas added, for any horse carrying ten stone, beating Fettyplace's *Sulphur*, and Taylor's *Forrester*, distancing the first.

At Nottingham, July 3, he walked over for the king's plate.

At Canterbury, July 25, he walked over for the king's plate for six years old, twelve stone.

At Lewes, July 27th, he won the king's plate for six years old, beating Strode's *Kingston*: ten to one on Eclipse.*

At Litchfield, September 19, he won the king's plate for five years old, beating Freeth's *Tardy* by Matchless: twenty to one on Eclipse.

At Newmarket first spring meeting, (Tuesday, April 17th, 1770,) Eclipse beat Bucephalus, got by Regulus, of his own lineage on the dam side; this was run for on the Beacon course. Wildman staked 600 to 400 guineas on this race: six to four on Eclipse.

On Thursday, April 19th, he won the king's plate for twelve stone, beating Strode's Pensioner, Fenwick's Diana, and the Duke of Grafton's Chigger, Pensioner being distanced at starting: ten to one on Eclipse.

At the close of this year no horse would start against him, and he received the forfeit of 600 guineas at Newmarket, the king's 100 guineas at Guildford; the king's 100 guineas at Nottingham, and 317*l.* 10*s.* beside.

At York races in this year, 1770, August 20, two horses were brought against him, Wentworth's Tortoise and Bellario, bred by the noted Sir Charles Bunbury. Eclipse was more than a distance at the end of two miles, and won the race with the utmost ease: twenty to one on Eclipse.

At Lincoln, September 3, he carried away 150 guineas, and again at Newmarket, October 3, 150 guineas, beating Sir C. Bunbury's Corsican; and the next day he walked over the round course for the king's plate. *Turf Reg. p.* 15.

He was then put out of training, and covered mares at Clay

* The writer of this is, however, credibly informed by some old people, who were eye-witnesses of this race, that he was on this occasion certainly ridden by one John Whiting; that Oakley appears to have been his constant groom, but whether he generally rode him, as Lawrence asserts, is not certain.

Hill, near Epsom, at 50 guineas each, afterwards at 25, till near his death.

They relate also an anecdote of this jockey, John Oakley, and his horse, which we ought not to omit. It was several years afterwards, and when he had done racing, being very decreped and foundered in his feet, from the joint effects of shoeing and of racing, it being required that he should be conveyed from Epsom to Canons, in Hertfordshire, the seat of his master, O'Kelly, a four-wheeled car was made on purpose for him. In this car rode John also, and baited with him at the stopping places on the road; so that, in the words of the poet, he had almost become "*demi-natured with the brave beast.*"

Eleven king's plates, in all, were won by Eclipse; and the weight he carried was twelve stone, except for one which was ten stone.

His colour was a light chesnut, or sorrel chesnut, the off hind leg white from near the top of the shank to the foot, a white blaze also from his forehead to his nose. His exact height has nowhere been stated, that I have seen; but those who have seen him living, guessed his height to have been fifteen hands and a half. The best portrait of him is done by the masterly hand of Stubbs, to whose extraordinary merits, and undeserved neglect, we have to bear a sad testimony.

This famous horse was not only the best that ever this country saw as a racer, but he was no less so as a stallion; for his progeny, by their feats upon the course, in 23 years won 344 races, producing to their owners the extraordinary sum of one hundred and fifty-eight thousand pounds, various smaller sums and forfeits not included.

His exact speed was never known, as no horse could be found to call forth his extreme pace. His collateral ancestor, Flying Childers, was supposed to have done a mile in a minute; if this be admitted, and it were possible he could continue such a pace without intermission, he would in seventeen days and nights and a few hours, measure the circumference of the whole earth, and arrive at his stable again, if no obstacle opposed him, before the eighteenth night. The circumference of the globe, from the most correct computation, being stated at 24,855 miles.

If we examine his make in the portrait, as well as in the skeleton, the most marked difference is in his croup, which stands particularly high, owing to the length of his hind limbs; and his thigh bones are, for a blood horse, of an enormous size, which, if provided with proportionate muscle and energy, must give him great superiority. It was also remarked in his gallop, that his hind legs were very wide and separated; the width of the haunch bones and pelvis, which also partook of this increased volume, would account sufficiently for this appearance, the hind legs being parallel columns from the haunch, and not approaching upwards as do the fore limbs.

His fore legs are remarkable for good symmetry, and their exact perpendicularity of direction.

His fore feet were dropped in the hoofs and foundered, and his coffin bones were very much rounded and diminished by absorption from undue pressure upon the sole. He was thick winded, probably from some error or exposure in his bringing up. He died at Canons on the 28th of February, 1789, of the gripes, at the age of twenty-five years; and cakes and ale were given at the funeral of his flesh, after the manner of the Godolphin Arabian; for his skin was preserved, and his bones were nicely cleared of every covering but the ligaments that held them together, by the masterly hand of St. Bel, the first professor of the Veterinary College, and an excellent anatomist, in which, more than in any thing else, he excelled. St. Bel has stated, in his work on Eclipse, that his heart weighed fourteen pounds,—a remarkable size for a blood horse.

Sixty guineas were offered by the College of Surgeons for this remarkable skeleton, it being intended to be placed in their museum; but was refused. A hundred being the price fixed for the bones of this king among horses.

PHRENOLOGY*—ITS UTILITY AND IMPORTANCE IN ANIMALS.

The science of Phrenology has been many years before the public, through the indefatigable labours of Drs. Gall and Spurzheim, but more particularly the latter; and being now approved of and encouraged by men of the highest talents and abilities, and its utility in insanity, and more especially in education, having been duly appreciated, and fully proved in almost numberless instances, we therefore wish to call the attention of our readers to its very great importance and usefulness in judging of the *character*, *habits*, and *capacities*, of different animals, but more particularly with a view to improvements in breeding,—whether it be horses for the turf, hunting, or general use; dogs for the chase, shooting, fighting, or for their sagacity.

We shall constantly find that a knowledge of Phrenology is of vast importance, as in all cases it will be found that an animal's *courage* particularly, as well as sagacity, shyness, meekness, and general temper, will depend entirely on the *brain;* and as this organ is more or less developed, in particular parts, so will the character be found invariably to correspond to the outward indications of the skull.

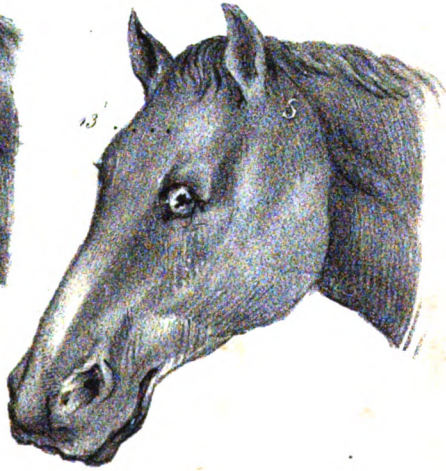
* The name Phrenology is derived from two Greek words—Phren, mind, and Logos, discourse—and is intended to designate the doctrine of the special manifestations of the brain, whether in man or in animals.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.



ANIMAL PHRENOLOGY.

Pub.d by Knight & Lacey, London Feb.y 1.st 1828.

It will also be found highly useful to the naturalist, in examining the skulls of animals, to ascertain whether they belong to the carnivorous or herbivorous classes; in the former, the organ of destructiveness will be found large, and in the latter, small: so with regard to the shy and timid animal, will cautiousness be found large and combativeness small, as in the deer; but on the contrary, when they are bold and fierce, will the opposite be seen, as in the bull-dog.

There are many other propensities peculiar to different animals; in the dog we find *adhesiveness*, or attachment, and in the cat *inhabitiveness;* others again possess particular intellectual qualities. The horse is susceptible of *pride*, and eminent for *locality;* and the dog is noted for its general sagacity or intellect, in various degrees,—all indicated by the brain.

As the science of Phrenology rests principally on facts, we have subjoined the following, as being a very strong one in support of the utility and the great necessity of this study in attaining a correct knowledge of the character, as well as the powers, of animals:—

The skull of the celebrated race-horse Eclipse was shown to Dr. Spurzheim, and his phrenological observations requested, as to the powers and character of that animal; this was most readily complied with, and with that liberality and kindness which ever distinguish the man of science. The correctness with which these remarks were made must strike the unprejudiced and inquiring mind with more than ordinary force, when we state that our learned phrenological friend, of course no sportsman, was quite unacquainted even with the name of this matchless horse.

The leading characteristics, he observed, were a remarkably large brain, not only in proportion to the size of the animal, but to horses in general; strongly indicating great and high courage, unusual sagacity, but deficiency in meekness, or rather a vicious temper: and it was further remarked that considerable difficulty must have been experienced in rendering such an animal subservient to his rider; but that when subdued, he could best be governed by gentle treatment, and would prove docile under proper authority. These peculiarities in his character and disposition will be immediately seen on referring to his history; and the remarkable correctness of the Dr.'s observations may serve to show that this science will hereafter prove eminently useful in judging of the living animal.

A COPY OF THE PHARMACOPŒIA IN USE AT THE ROYAL VETERINARY COLLEGE.

BALLS.

Cathartic or Purging Mass.

Cape Aloes, ... 4 lb.
Treacle, ... 1½ lb.
Soft Soap,
Olive Oil, each ..... ½ lb.
Melt together in a water bath, and stir till well mixed.—Dose from one to two ounces.

Cordial Mass.

Ginger and Liquorice root, in powder, each equal parts;
Treacle, sufficient to form a mass.
—Dose from one to two ounces.

Diuretic Mass.

Yellow Resin in powder, ... 1 lb.
Soft Soap, sufficient to form a mass.
—Dose an ounce to an ounce and a half.

Alterative Balls (No. 1.)

Cape Aloes in powder, ... 4 oz.
Linseed Meal, ... 12 oz.
Treacle, sufficient to form a mass; divide into 32 balls.

Alterative Balls (No. 2.)

Cape Aloes in powder, and Linseed Meal, each, ... 8 oz.
Treacle, sufficient to form a mass; divide into 32 balls.

Alterative Balls (No. 3.)

Cape Aloes in powder, ... 12 oz.
Linseed Meal, ... 4 oz.
Treacle, sufficient to form a mass; divide into 32 balls.

Alterative Balls (Diuretic.)

Cape Aloes in powder, ... 4 oz.
Yellow Resin do. .... 6 oz.
Oil of Turpentine (Rectified) 2 oz.
Linseed Meal, sufficient to form a mass; divide into 32 balls.

Tonic Balls.

Sulphate of Iron, from one drachm to four;
Powdered Ginger, two drachms;
Linseed Meal and Treacle, sufficient to form a ball.

OR,

Sulphate of Copper, from one drachm to four;
Powdered Ginger, two drachms;
Linseed Meal and Treacle, sufficient to form a ball.

Worm Balls.

Submuriate of Mercury (Calomel), ... 4 oz.
Linseed Meal, ... 12 oz.
Treacle, sufficient to form a mass; divide into 32 balls.

INFUSIONS.

Infusion of Cantharides (Liquid Blister).

Cantharides, in powder, .. 2 oz.
Vinegar, two pints.
Macerate a week, frequently shaking it, pour off the liquor, grind the flies with a handful of fine sand, return the whole into the bottle, macerate a week, then strain.

Infusion of Tobacco.

Tobacco, ... 1 lb.
Boiling Water, one gallon: Infuse twenty-four hours, and strain.

Compound Infusion of Tobacco.

Infusion of Tobacco, two pints;
Oxymuriate of Mercury, one drachm;
Muriatic Acid, two drachms.
Dissolve the oxymuriate in the acid in a glass mortar, and add it to the infusion of tobacco.

LINIMENTS.

Liniment of Ammonia.

Solution of Ammonia, Olive Oil, each equal parts: Mix.

Liniment for the Feet (or Slopping).

Liquid Tar, ... 4 oz.
Oil of Tar, or Oil of Turpentine, (rectified), ... 2 oz.
Mix.

Soap Liniment (Compound).

Hard Soap, ... 3 oz.
Camphor, ... 1 oz.
Spirit of Rosemary, a pint; Dissolve the Camphor in the spirit, then add the Soap, and macerate, until the Soap is melted.

Tar Liniment.

Oil of Tar (rectified), Common Olive or Sperm Oil, each equal parts: Mix.

Thrush Liniment.

Liquid Tar, ... 4 oz.
Sulphuric Acid, 1½ drachm: Mix.

Turpentine Liniment.

Oil of Turpentine, and Olive Oil, each equal parts: Mix.

Liniment of Verdigris, or Ægyptiacum.

Verdigris (Subacetate of Copper) in powder, ... 9 oz.
Vinegar, ... 12 oz.
Dissolve, and add
Alum in powder, ... 6 oz.
Treacle, ... 1½ lb.
Boil gently until they acquire a proper consistence.

OINTMENTS.

Alum Ointment.

Common Turpentine, Lard, or Palm Oil, each one pound;
Alum in fine powder, ... 1½ lb.
Melt the Turpentine with the Lard or Palm Oil; then add the Alum powder, and stir till cold.

Blistering or Cantharides Ointment (strong).

Common Turpentine, ... ½ lb.
Lard or Palm Oil, ... 1½ lb.
Melt together, and when nearly cold, add
Cantharides in fine powder, 10 oz.
Euphorbium do. 2 oz.
Stir well together.

Blistering or Cantharides Ointment (mild).

Lard, ... 4 oz.
Melt, and add
Oil of Turpentine, and Cantharides in powder, each one ounce: Stir till cold.

Quicksilver Ointment (strong).

Quicksilver, ... 1 lb.
Balsam of Sulphur, ... ½ oz.
Rub well together, and add Lard, one pound.

Quicksilver Ointment (Nitrate).

Quicksilver, ... 3 oz.
Nitric Acid, ... 6 oz.
Dissolve;
Lard, ... 6 oz.
Olive Oil, ... 14 oz.
Melt together, add the acid, &c., and stir till cold.

Quicksilver Ointment (Nitrate Diluted).

Equal parts of the Nitrate Ointment and Lard, well mixed.

Tar Ointment.

Liquid Tar, ... 2 lb.
Oil of Tar (rectified), ... 4 oz.
Mix.

Tar Ointment (Compound).

Liquid Tar and Lard, each two pounds;
Sulphuric Acid, ... 1 or 2 oz.
Mix.

Turpentine Ointment.

Common Turpentine, ... 1 lb.
Lard, ... 3 lb.
Melt together.
N. B. In summer, use tallow for the lard, or one-fourth oil with tallow in winter.

POWDERS.

Astringent Powder (strong).

Sulphate of Copper,
Armenian Bole, in powder, each one pound: Mix.

Astringent Powder (mild).

Alum, (dried),
Armenian Bole, in powder, each one pound: Mix.

Resin Powder (Compound).

Sulphate of Copper,
Yellow Resin, both in powder, equal parts: Mix.

SOLUTIONS FOR LOTIONS.

Solution of Alum.

Alum, ... ½ lb.
Boiling Water, seven pints and a half: Stir till dissolved, then filter through paper.

Solution of Sulphate of Copper.

Sulphate of Copper, ... 2 lb.
Boiling Water, one gallon: stir till dissolved, and filter through paper.

Solution of Subacetate of Lead.

Semi-vitreous Oxyde of Lead (Litharge), two pounds;
Vinegar one gallon.—Boil to six pints, and strain.

Solution of Subacetate of Lead. (Dilute).

Solution of Subacetate of Lead,
Rectified Spirit, each, ... 2 oz.
Water, one gallon.—Mix.

Solution of Oxymuriate of Mercury, or Injection for Fistulous Sores.

Oxymuriate of Mercury, .. 1 oz.
Muriatic Acid, ... 2 oz.
Dissolve, and add
Rectified Spirits or Water, 5 oz.

Solution of Oxymuriate of Mercury (Compound), or Scalding Mixture for Poll Evil.

Oxymuriate of Mercury, .. 1 dr.
Muriatic Acid, ... 2 dr.
Olive Oil, (boiling), one pint.
Dissolve the oxymuriate in the acid, add it to the boiling oil, and inject as soon as possible.

Solution of Muriate of Soda.

Water, one gallon;
Muriate of Soda, ... 1 lb.
Or as much as the water will dissolve.

Solution of Sulphate of Zinc.

Sulphate of Zinc, ... 2 lb.
Boiling Water, six pints: Stir till dissolved, and filter through paper.
N.B. These are saturated, and may be used alone or diluted.

SPIRITS.

Spirit of Camphor.

Camphor, ... 4 oz.
Rectified Spirit, 2 pints.
Mix, that the Camphor may be dissolved.

Spirit of Lavender (Compound).

Oil of Lavender and Rosemary, each, ... 1 oz.
Rectified Spirit, 2½ pints;
Cinnamon Bark, and Nutmegs bruised, each, ... ½ oz.
Red Launders Wood sliced, 1 oz.
Water, 1½ pint.
Macerate for fourteen days, and strain.

Spirit of Rosemary.

Oil of Rosemary, ... 1 oz.
Rectified Spirit, one gallon;
Water, six pints.—Mix.
Filter through paper.

TINCTURES.

Compound Tincture of Myrrh.

Gum Resin of Myrrh, and Aloes, in powder, each one pound;
Rectified Spirit, one gallon.
Macerate fourteen days, often shaking it up, then pour it off for use.

Tincture of Opium.

Opium, in powder, 2½ oz.
Proof Spirit, two pints.
Macerate fourteen days, and strain.

Common Poultice.

Bran, a sufficient quantity; pour boiling water over it, and when at a proper heat, to be applied to the part.

A portion of Linseed Meal may be mixed with the Bran before the water is added, or a small quantity of Lard after it is made, when required.

Full Diet, as allowed the Horses at the Veterinary College.

Hay, twelve pounds a day, "4 lb. in the morning, and 8 lb. in the evening."

Three half-pecks of mixed food in the day, made as follows:

Four bushels of Chaff, five do. bruised Oats, mixed.

Chaff made by cutting up together, 2 trusses of Straw (36 lb). and five trusses of Clover Hay (56 lb.), well mixed.

Water in the Summer three times a day; in the Winter twice.

THE LATE PROFESSOR PEAL'S COMPOSITION

FOR THE

"FOOT ROT" IN SHEEP.

Blue Vitriol (Sulphate of Copper),
Roche Alum, both in powder, each two ounces;
Verdigris (Subacetate of Copper), one ounce;
Corrosive Sublimate (Oxymuriate of Mercury), two drachms;
Best brown Vinegar, two pints.—To be mixed together: put in a warm place till dissolved; shaking often, after which it will be fit for use. To be applied to the foot by means of a small brush, every third or fourth day.

PROOF OF THE NATURAL AGE OF THE HORSE.

That the horse is naturally a much longer lived animal than is generally supposed, from the several facts recorded, there can be little doubt; but the abuse and unnatural treatment he experiences shorten that period generally one half, and frequently two thirds.

The period at which animals renew their teeth will give a good date on which to found a calculation: Sheep renew their first teeth soon after they are one year old; neat cattle, not until after they are two; and horses, not until they are near three years old. This is perfectly consistent with the works of nature, because the horse-tribe live the longest, and are evidently meant to bear the greatest hardships; the bull-tribe, the next longest, and though very useful as a beast of draught, yet not at all equal to the horse in firmness and hardiness; and the innocent sheep live the shortest time, and increase the fastest, not being intended as a beast of burden or draught, but to feed and clothe the lords of the creation.

The horse appears to attain his full height at about the fifth o. nearer the sixth year, but increases in bulk or laterally until near eight, and at this period he generally arrives at his greatest strength and full maturity. If, therefore, we multiply this period by four, according to the general rule that animals attain their maturity at about one fourth of their natural lives, we shall arrive at something like a fair judgment of the age of the horse, which may be from thirty to forty years, and well-authenticated instances are upon record, in this country, of horses which have lived much beyond that period. Pliny, it may be observed, one of the most correct of the ancient writers, rates it at fifty years; and as in those days, from various reasons, these animals were much better treated by man than they generally now are, we may suppose this statement to be true.

In particular, they dispensed with our ruinous practice of shoeing, or rather were happily ignorant of it. Is it to this, or to what cause is it attributable, that our poor hacks are brought to the slaughter-house to end a miserable life, usually before they have attained their twelfth, or, at farthest, sixteenth year? Mr. Culley, in his observations on live stock, mentions a horse which he knew, the property of Mr. Rain, of Snow-hall, near Gainford, in the county of Durham, that lived to the age of forty-seven years.

This horse had a ball lodged in his neck at the battle of Proud

Preston, in the rebellion of the year 1715, and the ball was extracted, when the horse died in 1758. This horse was supposed to be four years old in the year 1715, consequently would be forty-seven in the year 1758.

OSTRICH HUNTING AND HORSE BREAKING IN SOUTH AMERICA.

THE following sketch of an ostrich hunt, and the manner in which the Gauchos break in their horses, is communicated to us by a friend:—

As soon as my horse was saddled, I purchased the bridle of the Gaucho who had stolen mine, and then galloped on. The country, which from Memdoza is covered with wood, now changes to the long brown and yellow grass, which, excepting a few straggling trees, is the sole produce of the remainder of the province of San Luis, and of the two adjoining provinces of Cordova and Santa Fé. In the whole of this immense region, there is not a weed to be seen. The coarse grass is its sole produce; and in the summer, when it is high, it is beautiful to see the effect which the wind has in passing over this wild expanse of waving grass—the shades between the brown and yellow are beautiful. The scene is placid beyond description; no habitation or human being is to be seen, unless occasionally the wild and picturesque outline of the Gaucho on the horizon, his scarlet poucho streaming horizontally behind him, his balls flying round his head, and, as he bends forward toward his prey, his horse straining every nerve. Before him is the ostrich he is pursuing—the distance between them gradually diminishing, his neck stretched out, and striding over the ground in the most magnificent style; but the latter is soon lost in the distance, and the Gaucho's horse is often below the horizon, while his head shows that the chase is not yet decided. This pursuit is really attended with considerable danger, for the ground is always undermined by the biscachos, and the Gaucho often falls at full speed. If he break a limb, his horse probably gallops away, and there he is left in the long grass, until one of his comrades or children come to his assistance; but if they are unsuccessful in their search, he has nothing left but to look up to the sky, and, while he lives, drive from his bed the wild eagles, who are always ready to attack a fallen animal.

On arriving at the Corral, you very soon make friends with the Gauchos, who are always polite, and on horseback possess many estimable qualities, which, at the door of their hut, they appear to be devoid of. The Corral is generally quite full of horses, most of which are young ones, about three and four years old. The Capataz,

mounted on a strong steady horse, rides into the Corral, and throws his lasso over the neck of a young horse, and drags him to the gate. For some time he is very unwilling to leave his comrades, but the moment he is forced out of the Corral, his first idea is to gallop away; however, the jerk of the lasso checks him in a most effectual manner. The peons now run after him on foot, and throw the lasso over his fore legs, just above the fetlocks, and twitching it, they pull his legs from under him so suddenly, that in falling it gives him the appearance of being dead. In an instant a Gaucho is seated upon his head, and with a long knife, in a few seconds, cuts off the whole of the horse's mane, while another cuts the hair from the end of his tail. This they do as a mark that the horse has been once mounted. They then put a piece of hide into his mouth, to serve as a bit, and a strong hide halter on his head. The Gaucho, who is to mount, arranges his spurs, which are unusually long and sharp, and while two men hold the animal by his ears, he puts on the saddle, which he girts extremely tight; he then catches hold of the horse's ear, and, in an instant, vaults into the saddle; upon which the man who is holding the horse by the halter, throws the end of it to the rider, and from that moment no one seems to take any further notice of him. The horse instantly begins to jump, in a manner which makes it very difficult for the rider to keep his seat, and quite different from the kick or plunge of an English horse: however, the Gaucho's spurs soon set him going, and off he gallops, doing every thing in his power to throw his rider. Another horse is immediately brought from the Corral; and so quick is the operation, that twelve Gauchos are mounted in a space which hardly exceeds an hour.

It is wonderful to see the different manner in which the different horses behave. Some actually scream while the Gauchos are girting the saddle on their backs; some instantly lie down and roll upon it; while some stand without being held, their legs stiff, and in unnatural directions, their necks half bent towards their tails, and looking vicious and obstinate; these latter are invariably the most difficult to subdue.

It is now curious to look round and see the Gauchos on the horizon in different directions, trying to bring their horses back to the Corral, which is the most difficult part of their work; for the poor creatures have been so scared there, that they are unwilling to return to the place. It is amusing to see the antics of the horses: they are jumping and dancing in different ways, while the right arms of the Gauchos are seen flogging them. At last they bring the horses back, apparently completely subdued and broken in. The saddles and bridles are taken off, and the young horses immediately trotted towards the Corral to join their companions, neighing one to the other. Another set is now brought out; and as the horses are kept out a very short time, you may soon see forty or fifty of them mounted. As they return to the Corral, it is interesting to see the great contrast which the loss of the mane and the end of the tail makes between the horses which have commenced their career of servitude, and those which are still free.

see forty or fifty of them mounted. As they return to the Corral, it is interesting to see the great contrast which the loss of the mane, and the end of the tail, makes between the horses which have commenced their career of servitude, and those which are still free.

The horses of the Pampas are like the common description of the Spanish horse, but rather stronger. They are all colours, and a great number are pie-bald. When caught, they will always kick at any person who goes behind them; and it is often with great difficulty that they can be bridled and saddled: however, they are not vicious, and when properly broken in, will allow the children to mount by climbing up their tails. In mounting, it is necessary to be very quick; and previous to dismounting, it is proper to throw the bridle over one side of the head, as the horses almost always run backwards if one attempts to hold them by the bridle when it is over the head as in England.

ON THE

GRIPES, FRET, OR SPASMODIC COLIC, IN HORSES.

As this is a very common, and not unfrequently fatal, complaint, we have given the most approved and successful remedies, and which will be found in all stables extremely useful.

At the Veterinary College the following drink is recommended:---

Four ounces, or a quarter of a pint, of rectified Oil of Turpentine, with a sufficient quantity of warm Gruel or Water, is to be given as soon after the horse is seized as possible.

This dose may be repeated in three quarters of an hour, should it be required.

Mr. BRACY CLARK has written an excellent treatise on this disease, and recommends the following tincture as a specific:---

Pimento, or *Allspice*, ground, ONE POUND;
Rectified Spirit, and
Water, of each THREE PINTS: to infuse ten days or a fortnight, shaking the vessel daily.

Half a pint of this tincture to be given as early as possible after the attack, and to be repeated every hour till relief is obtained.

We have seen this remedy repeatedly employed, and invariably with success.

AN OLD SPORTSMAN'S

DESCRIPTION OF A COCKNEY *ALL OVER,*

WHEN PRESENT AT A HUNT FOR THE FIRST TIME IN HIS LIFE.

I SHALL never forget him, I hope; his dress was charmingly characteristic, and, without any other introduction, expounded him to every one in a moment. The day was bitterly cold, and all of us, save this stranger, were buttoned up to the chin in good fear-nought drab coats, that effectually kept out the weather, and looked as if they did so. The appearance was altogether comfortable, and quite in season; the Cockney appeared in a green coat, puffed and puckered at the shoulders, very short, with the skirts pared away into a delicate swallow-tail, exposing more than his hips behind; a slight linen waistcoat, without buttons, or with only three or four, the space between the stomach and neck opening freely, to give egress to a flaunting frill; tight white cotton breeches (I speak the bare truth), kerseymere leggings, pumpish-looking shoes, and a fur cap. The costume surely was perfect; he was, as may be supposed, very speedily penetrated bone-deep by the cold; though, to do him justice, he made no complaint, except by the chattering of his teeth, and certain involuntary and St.-Vitus-like movements that would be taking place now and then in various parts of his body. There was nothing very observable in his mode of riding, only that he turned his knees and toes out like a dancing-master; by which act, he had a little, loose, detached seat; and, as he made use of his stirrups, he was shot up to a prodigious height from his saddle, at every step of his horse; his white breeches appearing to descend and rebound, in the manner of a piece of Indian rubber. Of course he was the general butt of the company, who all prepared, in the same jovial spirit, to make the most of the unexpected rarity that the chances of the morning had dropped amongst them.

When the hare was put up, "Let the gentleman holla!" they exclaimed; and forthwith he uttered a cry such as hound never heard. "Let the gentleman put her up!" it was next proposed; and he proceeded to frighten away the hare, waving a pocket handkerchief, crying, "Huish! huish!" as an old woman repels a goose. "Let the gentleman ride—ride, sir, ride!"—and away he went—bump—bump—over the startled hills, all alone—followed only by shouts of laughter,—himself the game—the view—the whole hunt of the day. It was not

long before he seemed to perceive that he was entertaining the looker-on; and he bore his exposure with a cheerfulness and good-humour which richly deserved a warmer pair of breeches. He became, at length, quite altered by the cold: his face, which, for some time, had preserved a tolerable paleness, now turned to blue; he positively looked less, and was in a course, it seemed, of disappearing altogether: yet he was still warm of heart; manfully left his little coat unbuttoned, and kept his frill and toes out with as much formality as on his first appearance. When we had been out about five hours, the poor fellow came up to me with his watch in his hand, and, with a voice that could scarcely force its way through his stiffened lips, observed, "Half an hour's more *sport*, and then it will be dark." He wished me to understand that he regretted this approaching deliverance, which, in my judgment, very nearly concerned his life. I took no part, I beg to say, in the common conspiracy against him. I had my irresistible sense of his preposterousness, and many a rich smile at all his *noodling* ways; but I manifested no sign, I trust, that could in any way be offensive to him. I had much talk with him; and, as I have exposed his weak points, I think it but fair to say that I found in him a great deal of intelligence, apart from any relation to his saddle, together with a kindness and urbanity (no uncommon qualities in Cockneyism, let them laugh at it as they please) which would have hesitated, I think, on any provocation, to have wounded the feelings of those who had been so merry at his expense. Even as a sportsman, he had qualities which might have redeemed him from contempt. I defend not his practice in putting up a hare; but there was no lack of spirit and moral courage in the man; and he proved it under a course of protracted suffering, which I truly believe would have daunted any of the ruddy, brawny, bull-headed persons, who, in their greater conceit and warmer coats, had laughed at him so unsparingly. He could have had no interest in the sport, except what it was his bitter fortune to be obliged to affect; he was a mere mark for ridicule and a piercing wind; yet I am convinced that he would have sat and perished in his saddle, rather than have uttered a murmur;—an instance of Cockney heroism which all Tooley-street surely may be proud of.

ON THE DOG.

ENGLAND has been long eminent for the superiority of her dogs and horses, now very generally preferred in almost every part of the world; whether this superiority arises from the climate, or from the pains taken in their breeding, education, and maintenance, we do not undertake to determine: the fox-hound and the bull-dog, out of this island, are said to lose their most prominent characteristics in a few years; if so, there must be some local cause for their perfection in this country, and their degeneration in others.

The attachment of our countrymen, for ages, to the sports of the field, has given them health and vigour of body, and a gallant contempt of danger; the uniform effects on those nations that have cultivated them.

The dog may be considered as not only the intelligent, courageous, and humble companion of man—he is often a true type of his mind and disposition. The hunter's dog rejoices with him in all the pleasures and fatigues of the chace; the ferocious and hardy disposition of the bull-dog may commonly be traced on the determined brow of his master; nor does the dog of the blind beggar look up at the passing stranger but with suppliant eyes.

Of his various good qualities—his courage, sagacity, attachment to man, and to his own kind—we shall have occasion to give many remarkable anecdotes and proofs.

The following anecdote of a shepherd's dog cannot be surpassed, and will tend to show how far the dog's powers may be cultivated:—

The owner himself having been hanged some years ago for sheep-stealing, the following fact, amongst others, was authenticated by evidence on his trial; when the man intended to steal any sheep, he deputed his dog to perform the business. With this view, under pretence of looking at the sheep, with an intention to purchase them, he went through the flock with the dog at his feet, to whom he secretly gave a signal, so as to let him know the individuals he wanted, to the number of perhaps ten or twelve, out of a flock of some hundreds: he then went away, and, from a distance of several miles, sent back the dog by himself, in the night-time, who picked out the individual sheep that had been pointed out to him, separated them from the flock, and drove them before him by himself, for the distance of ten or twelve miles, till he came up with his master, to whom he delivered his charge.

Having made some general observations on the sagacity and obedience of the dog, and on his attachment to man, we shall add the following, on the authority of Mr. Blaine, by way of illustrating our subject :—

"Many dogs have an universal philanthropy, if I may so express it—a general attachment to all mankind. Others are not indiscriminately friendly to every one; but such, almost invariably, make it up by a more ardent and a more durable regard for those they do love. Perhaps the duration of an attachment in these animals heightens our ideas of their intellectual powers, over more than the immediate ardency of it: for the constancy of it combines memory, reflection, and sentiments, that completely soar above instinctive impulses.

"This regard for particular persons is so great, that it frequently interferes with, and now and then totally overcomes, their instinctive care for their young. Here the moral principle is at war with the instinctive, which gives place to the superior powers of pure intellect. Dogs, forcibly separated from those they love, frequently refuse food for many days; some have actually starved themselves; and others, taking just enough to support nature, have more gradually exhausted themselves, and at length have died of grief. The same has occasionally occurred where they have been separated from each other.

"Two spaniels, mother and son, were self-hunting in Mr. Drake's woods near Amersham, Bucks: the gamekeeper shot the mother; the son, frightened, ran away for an hour or two, and then returned to look for his mother: having found her dead body, he laid himself down by it, and was discovered in that situation the next day by his master, who took him home together with the body of his mother. Six weeks did this affectionate creature refuse all consolation, and almost all nutriment; he became, at length, almost universally convulsed, and died of grief.

"I have also seen several instances of dogs voluntarily undertaking the office of nurse to others who have been sick. When we consider the warmth of their feelings, and the tenderness of their regard, this is not to be wondered at, if it happen among those habituated to each other; but I have occasionally observed it among those who were nearly strangers. One very particular case occurs to my recollection; where a large dog of the mastiff breed, hardly full grown, attached himself to a very small spaniel, ill with distemper, from which the large dog was himself but newly recovered. He commenced this attention to the spaniel the moment he saw it, and for several weeks he continued it unremittingly---licking him clean, following him every where, and carefully protecting him from harm. When the large dog was fed, he has been seen to save a portion, and to solicit the little one to eat it: and, in one instance, he was observed to select a favourite morsel, and carry it to the kennel where the sick animal lay. When the little dog was from illness unable to move, the large one used to sit at the door of his kennel, where he would remain for hours guarding him against interruption. Here was no

instinct, no interest; it was wholly the action of the best qualities of the mind.

"In the human species, *gratitude* has ever been considered as one of the highest virtues. When shall we see it exhibited in a more interesting point of view than by these admirable animals? A benefit is never forgotten by the majority of them; but for injuries, they have the shortest memory of any living creature."

THE GREASE IN HORSES.

We observe at the Veterinary College a large proportion of cases of grease and chapped heels,—complaints which are generally most frequent at this season, and we believe very prevalent at the present time.

It may, therefore, be useful to subjoin the most approved mode of treatment in this troublesome and loathsome disease; because it very often happens that a little care, and the adoption of proper measures, at its first appearance, will arrest its further progress, while the neglect of this early attention may lead to the worst results, and confirm it in such a manner that even skill and time can scarcely eradicate it.

At the beginning, or in the early stage, of this complaint, if the horse is in high condition, bleeding and purging are the proper remedies.

It is important that the parts should be well cleansed, and kept constantly moist by the application of a soft poultice, until the inflammatory symptoms have abated, which will be in a few days; after which, the following lotions may be applied:—

Astringent Lotion.

Alum ..... 1 oz.
Boiling Water ..... 1 pint.

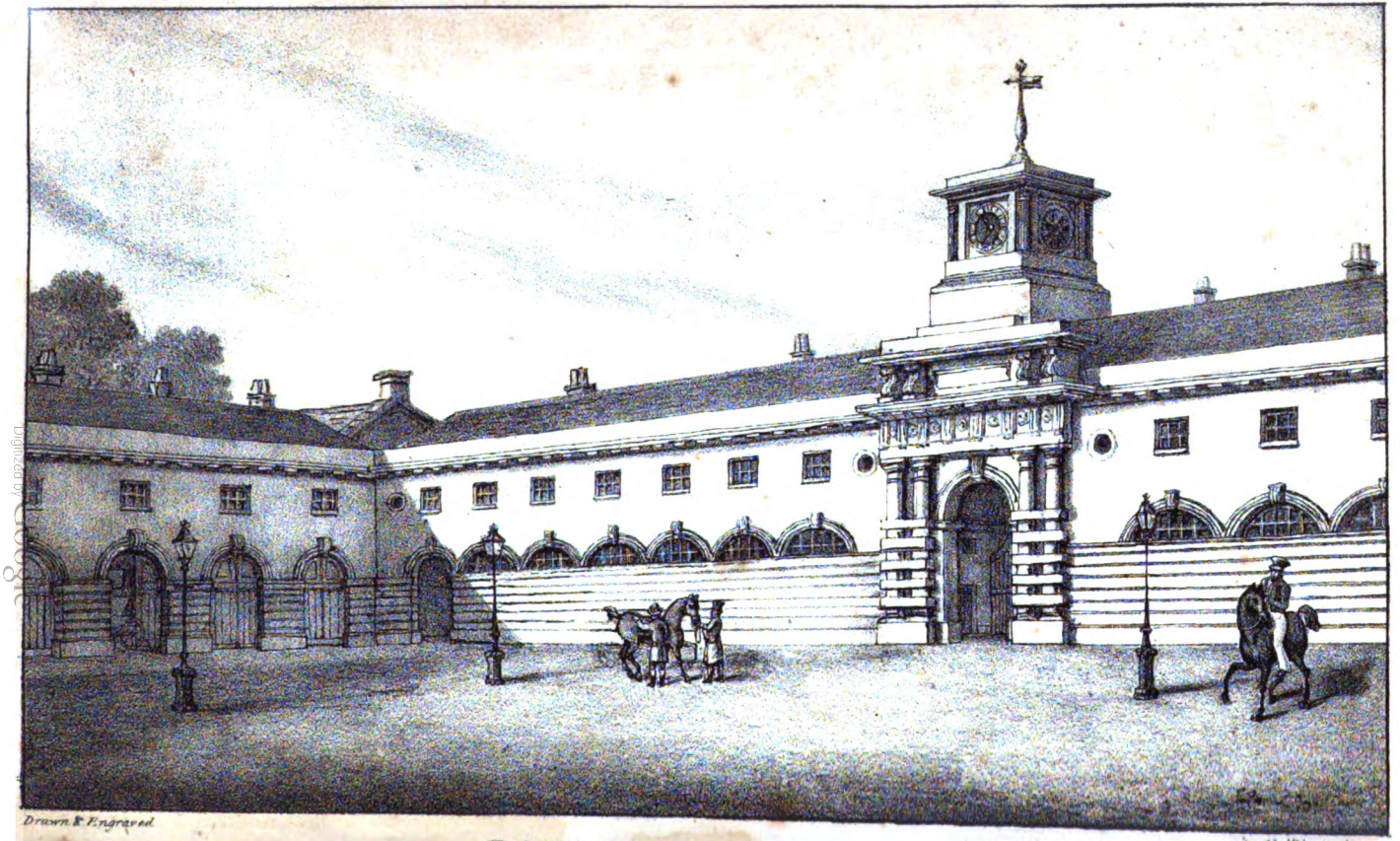
Astringent and Stimulating Lotion.

White Vitriol ..... 2 oz.
Boiling Water..... 1 pint;
Stir till dissolved.

Wash the parts night and morning, and when quite clean and dry, apply the lotion to the sores or chaps with a sponge.

Diuretics, in balls or powders, are invariably useful, and should never be neglected.

Moderate exercise, when admissible, will be found an important auxiliary in the cure of this complaint.



Drawn & Engraved

THE

FARRIER AND NATURALIST.

No. 2.] FEBRUARY. [1828.

DESCRIPTION OF THE ROYAL MEWS, PIMLICO.

THESE magnificent stables are worthy to form an appendage to the noble palace which is now erecting on the site of Buckingham House. They are situated at a suitable distance behind it: the principal buildings form a square of about two hundred and fifty-feet, and the view we have given is taken from the inside, looking towards the grand entrance which fronts the Pimlico-road. Although considerable attention has been paid to the external appearance of the building, it has not been at the expense of the internal arrangements; for the stables are among the most complete which we have ever seen, uniting convenience with lightness, and free from unnecessary drafts of air, so prejudicial to horses in general.

That which is occupied by the King's state horses is about eighty feet long by forty wide, and twenty-five high. The ceiling is ornamented with handsome arches, which have a good effect; but every thing connected with the stalls and lower part is of the plainest and most useful description. Twenty horses stand in this large apartment; and the heat of their bodies, unaided by artificial warmth, renders it always of a most delightful temperature, forming a contrast with the starving coldness of the College stables, and the suffocating atmosphere which is too commonly maintained in the stables of his Majesty's subjects.

Of these beautiful animals, the very perfection of stateliness, and fitted only to swell the pomp of a knightly pageant, it is enough to say, that they do credit to the superintendence of Mr. Roberts, the state coachman; and they appear to live, if we may judge from appearances, a life of the most perfect ease and comfort; but their allowance seems to be by no means extravagant. There are twelve Hanoverian cream-coloured, and eight coal-black horses, with about forty others of English breed, at this time in the establishment. This building has been completed about three years. On entering the quadrangle, the carriage-houses are situated on the right, and the offices on the left; the ride and the loose boxes, which are of an excellent construction, are on the outside.

ON THE

IMPORTANCE AND PRESENT ESTIMATION OF THE VETERINARY PROFESSION IN ENGLAND.

As it will be one of the chief objects of this Journal to watch over the welfare of the profession, to suggest hints for its improvement, and convey the plans of others for its amelioration, we have thought proper to offer some preliminary remarks, explaining our views of its intrinsic importance, and the state of general opinion respecting it. It will not, we believe, be disputed by professional men, that its usefulness and importance are much underrated in public opinion; and many will admit, that even its members themselves are not generally aware of the rank which they ought to hold, and the estimation which it is in their power to command.

Veterinary science, considered in its application to domestic animals, is bounded only by the sphere of their usefulness. It applies, in a degree, to every individual who keeps a horse or a dog, for business or recreation; and it comes home to the humane feelings or private interests of all classes of men: but, wide as this field appears, and uncultivated as it may be in many parts, it is not to the study, the treatment, and cure, of animal diseases alone, that this science is strictly confined. Second only to human medicine in actual importance, it possesses considerable advantages over it, and offers opportunities for the cultivation of general physiology and pathological knowledge, and more particularly for that branch of science termed Comparative Anatomy, that are far superior to those which the medical practitioner can boast.

There are difficulties certainly in the pursuit of this peculiar science, which perhaps counterbalance the advantages; and having received less attention, its advancement is proportionately small: but it should not be forgotten, that the ancients, as well as moderns, who have distinguished themselves by important discoveries, have found them in dissecting the bodies of animals, having always recourse to comparative investigations and experiments, to extend the bounds of medical and surgical knowledge; thus transplanting to the medical profession, the honour of discoveries which were made in trenching upon ours.

Precluded, by the laws and superstitions of their times, from examining the organization of human bodies, the ancient professors of the healing art conducted their investigations wholly on those of brutes,

and thus became familiarized with their structure and diseases in a greater degree than with those of men. Of course, their practice was directed to the complaints with which they were best acquainted; accordingly we find, that human and veterinary surgery started hand in hand; and at first it is evident, that the professions were united, and considered equally worthy of attention.

Aristotle alone, by dissecting the bodies of animals, with a powerful, active, and unprejudiced mind, arrived at discoveries which forestalled the labours of future centuries. Hippocrates, Celsus, and Galen, drew their knowledge of anatomy and physiology from the same source. When Rome arrived at its height of luxury and refinement, the professions first became distinct, and the veterinary department was studied and practised by men, whose writings show them to have been no way inferior, in education or attainments, to their contemporaries of the human school. It was then, we may observe, a profession of respectability and consideration; but afterwards, in the general ignorance and superstition which prevailed during the middle ages, it was wholly transferred to the hands of the shoeing smiths; and its sister science, human surgery, experienced a somewhat similar fate, being engrossed by the barbers for a *long* period; but as it is more nearly connected with the interests of mankind, it has resumed much earlier its station among the liberal sciences, which have slowly and separately revived in improvement and estimation.

The various causes which have combined to retard the progress of our art, are not now to be considered; but it is only forty years since that animal medicine became a distinct profession in this country, and even yet, the vulgar leech maintains his ground against the modern veterinarian.

That great benefit has already resulted from the application of science to this degraded art, will not, we believe, be denied by any; but much still remains to be done: when the successful practice of the college diplomatist shall correspond with his high profession, and when the public, rejecting advice and medical interference from uneducated men, shall place full confidence in the veterinary character, then, and not till then, will it merit congratulation.

The difficulties which have hitherto involved the subject of shoeing, the various and contradictory plans pursued by different practitioners, and the failure of most of these, have contributed, in no slight degree, to weaken public faith in the profession. As the most ignorant risk little chance of detection in practising this art, from the obscurity

which must always attend medical proceedings with dumb animals; so also, it requires a double portion of patience, acuteness, and knowledge, to ascertain the precise seat and urgency of disease, when neither speech nor sign can be called to the practitioner's assistance; but to compensate for the difficulty of diagnosis, the veterinarian possesses a more complete controul over his patient---the power of enforcing necessary measures, and a liberty in investigating morbid appearances, without those restraints which fetter the physician. His opportunities for experiment are also superior, and he should make this profession the theatre for discovery in anatomy and pathology.

The circulation of the blood was proved by comparative means; and the illustrious John Hunter had constant recourse to experiments on animals in all his investigations. Why are we backward in contributing to the stock of general knowledge? Let every veterinarian feel anxiously disposed to forward the interests and elevate the reputation of his art; and it is sincerely hoped that this publication will assist, in no small degree, by serving as a channel of communication among its members, to raise it to its proper station as a respectable and honourable profession.

LEEMING'S BLISTERING ESSENCE, AND SPAVIN LINIMENT.

This preparation is much used for blistering horses, and is very frequently found particularly serviceable in cases of curbs, incipient spavins, lameness from injuries in the joints, back sinews, &c.

Spanish Flies (Cantharides) in powder, two ounces;
Euphorbium, in powder, one ounce;
Rectified Spirit, one pint and a half.

To be digested ten days or a fortnight, frequently shaking it up; then pour off the clear part, or strain for use. From two to four table spoonfuls to be rubbed gradually into the part intended to be blistered.

It occasionally requires to be repeated two or three times, at short intervals, before a cure is effected, particularly in cases of long standing.

ON THE DISEASES OF THE EYE OF THE HORSE.

(Continued from p. 20.)

Of the Simple Inflammation of the Eye of the Horse.

INFLAMMATION, as it is the most common, so it is the most important, disease in the eye of the horse. It proceeds or accompanies almost all the diseases to which that organ is subject, and it is the constant effect of injuries. The treatment of inflammation in the horse's eye must therefore be well understood.

Simple inflammation of the eye is marked by striking symptoms. Though the inflammation be not violent, the animal keeps the eye-lids closed; the eye-lashes adhere together, from the secretion of mucus, which has become inspissated; the eye-lids are more or less swollen, their veins are distended with blood; and there is an unnatural flow of tears, which is more or less copious. When the eye-lids are opened, their internal surface appears redder than natural; the *haws* are inflamed and swollen; the white of the eye is covered with red vessels, and the cornea, or horny coat, loses its pellucidity and lustre, and becomes dim; a general muddiness, either affecting the whole of that tunic, or confined to one part, forming the commencement of a speck or film.

When the progress of inflammation of the eye is not arrested by proper remedies, the cornea becomes more and more dim; matter is formed below it in the cavity of the aqueous humour, and finally the cornea ulcerates; the matter, with the aqueous humour, then escapes, and thus both the appearances and utility of the eye are destroyed.

Inflammation of the eye is usually accompanied by more or less general fever, marked by heat in the mouth, and thirst, loss of appetite, frequency of the pulse, unhealthy appearance of the coat, coldness of the ears and legs, with alternate heats and chills.

Inflammation of the eye frequently succeeds injuries. It arises from colds also, fevers, and sudden chills after violent exercise; and, like inflammation of all other organs, it most commonly attacks young horses, and those in high condition.

Treatment.—Much depends on the first means which are adopted in the treatment of inflammation; for if the disease do not receive a sudden check, the same decided measures cannot be adopted in all the future stages of the disease; the cure then becomes protracted, and effects of the disease remain, which blemish, if they do not injure, the organ.

The chief means to be employed to relieve inflammation in the horse's eye, are bleeding, purging, blistering, and attention to food and air.

A copious evacuation of blood is the first thing to be done; and I would advise that the blood be taken from the neck in preference to any vein in the immediate vicinity of the inflamed organ. The common opinion is, that the nearer the inflamed part from which the blood

is taken, so much more effectual is the remedy. It will, however, be found, that although the inflammation appear immediately to subside by local bleeding, yet, whenever the system is at all disturbed, blood taken from a large vein, or general blood-letting, is much more powerful in relieving the constitutional derangement, whilst it has an equal power in allaying the local inflammation. It will also be found, that if blood be taken from vessels in the immediate vicinity of the inflamed part, the irritation caused by the operation is generally considerable; and though the redness is relieved at the time, it very soon returns by the supply from the collateral vessels, which does not take place after general blood-letting. The orifice made in the vein should be large; and, as much depends on the immediate effects of the first bleeding in all cases of inflammation, from three to five quarts may be taken, according to the violence of the symptoms. A second bleeding may be had recourse to, in from twelve to twenty-four hours, should the symptoms increase, or remain undiminished.

At the same time the horse should be given a purgative-ball; or,

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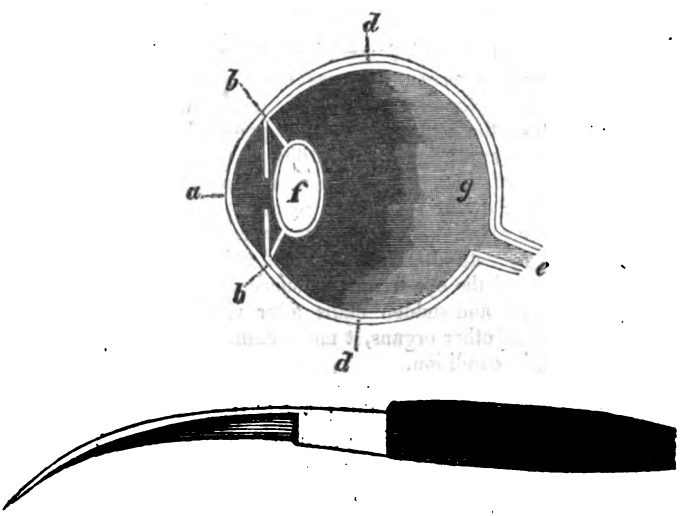
A Plan of the Structure of the Horse's Eye, as described in p. 19, No. 1.



(b a b) The transparent cornea.

(d d) The choroid coat.

(e) The entrance of the optic nerve through the sclerotic coat, expanding to form the retina.

(b) The iris.

(f) The crystalline humour.

(g) The vitreous humour.

what is perhaps the safer and most efficacious practice, a common purgative-ball may be divided into three doses, and one portion given every four or six hours. This merely acts gently on the intestines, whilst, by making the animal sick, it diminishes the force of the circulation; and it is not attended by the debilitating effects which often follow strong purging. Horses, indeed, whilst they can bear bleeding to a great extent, sink rapidly by purging.

Nothing is to be done to irritate the inflamed eye; but it is to be frequently fomented with a decoction of poppy-heads, or camomile flowers. A second, or even a third bleeding may be necessary, to remove the inflammation; but these will be in a less quantity than the first, and are not to be had recourse to till a reasonable time has elapsed after the exhibition of the other remedies, so that their effects may be observed. After the acute symptoms have subsided, the eye generally continues more or less weak, and irritable, and the white of the eye remains red, though the vessels are of a duller hue. In this state, blistering the cheek and temple may be of service, but the blister should be cautiously and carefully used, to prevent any blemish. The vinous tincture of opium is also an excellent application, and may be applied by taking a camel's-hair pencil dipped in it, and then touching the ball of the eye once or twice a-day. Saturnine and vitriolic lotions are recommended, and they may sometimes be advantageously employed, singly, or combined with opium. In some cases, too, of old inflammation, where such remedies have failed, a seton put in the cheek has been useful; and in cases of this kind, a course of alterative medicines may also be given.

It is of great consequence, in the treatment of all diseases of the eye of the horse, to pay attention to the air of the stable; for as this is often impure, it is proper to keep him in a well-aired place, and his head placed so that he shall not be annoyed with light, or obliged to stoop for food.

With respect to food, the horse should have no corn until the inflammatory symptoms subside, but live on green meat or mashes.

The practice of scarifying the eyes, is one which it is seldom if ever necessary to resort to; and when not performed with great dexterity, the irritation created by the operation does more harm, than the blood taken away does good. The cruel practice of cutting out the haws, from considering it as a diseased growth, is much to be condemned, as not only useless but hurtful.

When matter is formed in the eye, it may be of great use to discharge it along with the aqueous humour, and thus prevent the ball from bursting. This is an operation that requires a good deal of nicety, and is to be done by penetrating the anterior chamber of the eye with a sharp-pointed knife, something like a common lancet, the eye-ball and lids being previously cautiously and well-secured.

(To be continued.)

OBSERVATIONS ON THE DISTEMPER IN DOGS.

BY EDWARD JENNER, M.D. F.R.S.

March 21, 1809.

THE following paper, written by that celebrated physician and great observer of nature, the late Dr. Jenner, is inserted, prior to our making some observations on the nature and treatment of this complaint, which is so fatal to the dog, and disappointing to the sportsman.

"That disease among dogs, which has familiarly been called 'the Distemper,' has not hitherto, I believe, been much noticed by medical men. My situation in the country favouring my wishes to make some observations on this singular malady, I availed myself of it, during several successive years, among a large number of fox-hounds belonging to the Earl of Berkeley; and, from observing how frequently it has been confounded with hydrophobia, I am induced to lay the result of my inquiries before the Medical and Chirurgical Society. It may be difficult, perhaps, precisely to ascertain the period of its first appearance in Britain. In this and the neighbouring counties, I have not been able to trace it back much beyond the middle of the last century; but it has since spread universally. I knew a gentleman who, about forty-five years ago, destroyed the greater part of his hounds, from supposing them mad, when the distemper first broke out among them —so little was it then known by those the most conversant with dogs. On the continent, I find, it has been known for a much longer period. It is as contagious among dogs as the small-pox, measles, or scarlet-fever, among the human species; and the contagious miasmata, like those arising from the diseases just mentioned, retain their infectious properties a long time after separation from the distempered animal. Young hounds, for example, brought in a state of health into a kennel where others have gone through the distemper, seldom escape it. I have endeavoured to destroy the contagion, by ordering every part of a kennel to be carefully washed with water, then white-washed, and, finally, to be repeatedly fumigated with the vapour of marine acid— but without any good result.

"The dogs generally sicken early in the second week after exposure to the contagion. It is more commonly a violent disease than otherwise, and cuts off at least one in three that is attacked by it. It commences with inflammation of the substance of the lungs, and generally of the mucous membrane of the bronchiæ. The inflammation, at the

same time, seizes on the membranes of the nostrils, and those lining the bones of the nose, particularly the nasal portion of the ethmoid bone. These membranes are often inflamed to such a degree as to occasion extravasation of blood, which I have observed coagulated on their surface. The breathing is short and quick, and the breath is often fœtid; the teeth are covered with a dark looking mucus. There is frequently a vomiting of a glary fluid. The dog commonly refuses food, but his thirst seems insatiable, and nothing seems to cheer him like the sight of water. The bowels, though generally constipated as the disease advances, are frequently affected with diarrhœa at its commencement. The eyes are inflamed, and the sight is often obscured by mucus secreted from the eye-lids, or by opacity of the cornea. The brain is often affected as early as the second day after the attack. The animal becomes stupid, and his general habits are changed. In this state, if not prevented by loss of strength, he sometimes wanders from his home. He is frequently endeavouring to expel, by forcible expirations, the mucus from the trachea and fauces, with a peculiar rattling noise. His jaws are generally smeared with it, and it sometimes flows out in a frothy state, from his frequent champing.

"During the progress of the disease, especially in its advanced stages, he is disposed to bite and gnaw any thing within his reach. He has sometimes epileptic fits, or quick successions of general, though slight convulsive spasms of the muscles. If the dog survive, this affection of the muscles continues through life. He is often attacked with fits of a different description: he first staggers, then tumbles, rolls, cries as if whipped, and tears up the ground with his teeth and fore-feet: he then lies down senseless and exhausted. On recovering he gets up, moves his tail, looks placid, comes to a whistle, and appears, in every respect, much better than before the attack. The eyes, during this paroxysm, look bright, and unless previously rendered dim by mucus, or opacity of the cornea, seem as if they were starting from the sockets. He becomes emaciated, and totters from feebleness in attempting to walk, or from a partial paralysis of the hind legs. In this state, he sometimes lingers on till the third or fourth week, and then either begins to show signs of returning health (which seldom happens when the symptoms have continued with this degree of violence), or expires. During convalescence, he has sometimes, though rarely, profuse hemorrhage from the nose.

"When the inflammation of the lungs is very severe, he frequently dies on the third day. I knew one instance of a dog's dying within twenty-four hours after the seizure; and in that short space of time the

greater portion of the lungs was, from exudation, converted into a substance nearly as solid as the liver of a sound animal. In this case, the liver itself was considerably inflamed, and the eyes and flesh universally were tinged yellow, though I did not observe any thing obstructing the biliary ducts. In other instances, I have also observed the eyes looking yellow.

"The above is a description of the disease in its severest forms; but in this, as in the diseases of the human body, there is every gradation in its violence.

"There is also another affinity to some human diseases, viz.—that the animal which has once gone through it, very rarely meets with a second attack. Fortunately, this distemper is not communicable to man. Neither the effluvia from the diseased dog, nor the bite, have proved in any instance infectious; but as it has often been confounded with canine madness, as I have before observed, it is to be wished that it were more generally understood; for those who are bitten by a dog in this state, are sometimes thrown into such perturbation, that hydrophobic symptoms have actually arisen from the workings of the imagination. Mr. John Hunter used to speak of a case, somewhat of this description, in his lectures.*

"Having never, to a certainty, seen a dog with hydrophobia, I am of course unable to lay down a positive criterion for distinguishing between that disease and the distemper, in the precise way I could wish: but if the facts have been correctly stated, that in hydrophobia the eye of the dog has more than ordinary vivacity in it, and, as the term implies, he refuses to take water, and shudders even at the sight of it; while in the distemper he looks dull and stupid, is always seeking after water, and never satisfied with what he drinks; there can be no loss for a ready discriminating line between the two diseases."

* A gentleman who received a severe bite from a dog, soon after fancied the animal was mad. He felt a horror at the sight of liquids, and was actually convulsed on attempting to swallow them. So uncontrollable were his prepossessions, that Mr. Hunter conceived he would have died, had not the dog which inflicted the wound, been found, and brought into his room in perfect health. This soon restored his mind to a state of tranquillity. The sight of water no longer affected him, and he quickly recovered.

ON THE LAW RESPECTING HORSES,

THEIR SOUNDNESS, UNSOUNDNESS, WARRANTRY, &c.

THE celebrated Judge Blackstone, in his Commentaries on the Laws of England, has observed, that "It is incumbent upon every man to be acquainted with those laws, at least, with which he is immediately concerned." And as we wish every man to know enough of law to keep himself out of disputes respecting horses, we shall endeavour to lay down such rules as may assist him in doing so.

It unfortunately happens that those persons who are mostly engaged in deciding disputes relative to horses, are the least acquainted with their structure, diseases, &c. We allude to judges and lawyers; and even granting they were perfect in this particular, the terms soundness and unsoundness are still far from being properly defined in the present state of the law on the subject, which is clearly shown by the various unreasonable constructions that have been put upon these terms by the judges themselves. The late Lord Mansfield decided that all horses purchased above a certain price were, by law, considered sound, whether warranted so or not.

But this arbitrary and unbusiness-like decision has been very properly set aside by later judges; and Lord Ellenborough, the late Lord Chief Justice of the Court of King's Bench, held that, in order to constitute unsoundness, it is not necessary that a horse should labour under an incurable or permanent disease; but such a degree of actual infirmity as interferes with the present use of the animal, is sufficient. He held, that if a horse had even a cough at the time of sale with a warrantry of soundness, which cough might be cured in a few days, yet it constituted unsoundness, inasmuch as it would prevent the purchaser from employing the animal.

This, then, is the general construction of the law at the present time, with regard to soundness and unsoundness: as to what really constitutes those terms, we shall revert hereafter.

And the better to render our ideas as clear as possible to our various readers, we shall make separate heads, and treat of them in the following order:—

Of the sale of horses with warrantry, and what constitutes a warrantry.

Of the sale of horses without warrantry.

Of soundness and unsoundness, and what constitutes it.

On the best precautions to adopt, in buying a horse, to avoid litigation.
Of the best plan to pursue when legal measures are indispensable.
General laws respecting horses.
Horse-racing, cruelty to horses, gaming, &c.

Horse causes are not unfrequent in our courts of justice, and having paid much attention to the subject, we have often had to witness and lament the want of knowledge of the leading points of horse law on the part of counsel and judges; and though the jury, properly speaking, may be said to give the award, they are but too often, from being also ignorant of the principles, biassed by judges and counsel, and thus frequently give their verdict to the undeserving and uninjured party. It is frequently the case, when a horse-dealer happens to be concerned, that a verdict is given against him from a prejudice which exists towards this class of men, who, we believe, are on many occasions to be credited in their dealings, for they have a professional character to support, whilst private gentlemen, as temporary dealers, have none; who sell horses which do not suit them, and leave purchasers to find out their faults by experience.

ESSENCE OF MUSTARD.

As this composition is sometimes used about horses for raising a speedy blister, we have given the best mode of preparing it.

Mustard seed (fresh and good) bruised, 4 oz.

Oil of turpentine, one pint and a quarter: digest them together for ten or twelve days, often shaking them up; then strain for use.

If it should be desirable to have this essence coloured, a small portion of alkanet root can be added to it.

This essence, diluted with olive oil, in the proportion of one-half, third, or fifth, will speedily blister, and much better than if made with the common flour of mustard, which is very frequently adulterated with wheat flour.

This mixture may be rendered still more active, by the addition of solution of ammonia, in the proportion of one part to three or four of the above oil and essence; particularly if the strong solution of ammonia made by Howard & Co. be used; which being much stronger than any other, is not only more certain in its effect, but a smaller portion also will answer the purpose.

In using this liniment, it is to be well rubbed into the part, after removing the hairs by cutting close to the skin.

INSTRUCTION AT THE VETERINARY COLLEGE.

To the Editor of the FARRIER *and* NATURALIST.

SIR;

As your Journal contains much matter appertaining to the Veterinary College, I send you the annexed paper on the subject of Veterinary Instruction.

Mr. Coleman receives with each pupil who enters at what is called the Veterinary College, the sum of twenty guineas. Now, this appears to be, and really is, a very large fee; but then, we are told that the payment of it entitles the pupil to attend, gratuitously, various lectures, given by some of the distinguished teachers in different branches of human Medicine and Surgery;—by-the-way, this paying for a gratuity is rather an odd mode, and deserves further consideration;—and further, we are told, it entitles the pupil to all the advantages of the College practice in regard to treating diseases. This, however, is no expense to Mr. Coleman; the practice is provided from the horses of subscribers, who pay livery price for the keep of each horse individually; and all the expenses of the establishment, together with ample salaries to Mr. Coleman and his assistant, are paid from the general fund; so that this sum of twenty guineas is a net amount, without any drawback whatever in the shape of expenses; and last year sixty-two of these fees, or one thousand three hundred and two pounds, passed into the pocket of Mr. Coleman.

Now, if the College practice, as it is called, means anything, it certainly must include a description of each disease, its probable cause, its character, the remedies usually employed, and the intention with which each is exhibited; and surely these details should be given by Mr. Coleman, or by competent persons at his expense, and under his immediate direction and superintendence. But what is the fact? Why, that Mr. Sewell, who is called by Mr. Coleman the Professor's Assistant and Demonstrator, but who calls himself Assistant Professor, and whose whole practical knowledge is bounded by what he has acquired within the walls of the building at St. Pancras, now gives, in the theatre of that building, what he calls Lectures, and from which such of the pupils as do not pay a further fee to him, are EXCLUDED. I will not here inquire into the value of the matter of these lectures, but I mean to maintain, that the principle of demanding a second fee for the promulgation of that knowledge which ought to be imparted in return for the ample fee paid in the first instance, is decidedly wrong:

that such parcelling out of instruction, and augmentation of fees, is, in point of fact, a breach of good faith. That the fees so improperly received should be returned; and unless more extended instruction is afforded to the pupil, so far from increasing expense, the amount of fee received by Mr. Coleman ought rather to be diminished.

FREDERICK C. CHERRY.

Clapham, January, 1828.

ON DIURETIC MEDICINES FOR HORSES.

HAVING treated at large on the subject of aloes in our last number, as being the purgative most usually employed in veterinary practice, we consider it inexpedient, at the present time, to proceed further with the description of this class of drugs, as the remainder are of minor importance, and comparatively but little used. But we propose, at a future period, to give a full description of them, and show how far they may be practically useful.

We shall now enter on the consideration of the next most useful class, viz. Diuretics, so called from their action on the kidneys, by increasing the quantity of urine.

There are numerous drugs which have this effect; and as they can almost always be resorted to with little danger of doing mischief, and certainty of operation, so they will be found of great use in many derangements of the system, and, in some diseases, of first rate importance.

The drugs which are most commonly employed for this purpose, are resin, nitre, turpentine, the vegetable alkalies, and the different soaps, with many others, less to be depended upon, and more dangerous in their effects. We shall now proceed to give directions for the best manner of administering these remedies, whether separately or conjointly, as well as to point out the disorders in which they are most beneficial.

In most inflammatory disorders, diuretics will be found highly useful, after the more active treatment of bleeding, &c. has been resorted to; and, in some very slight cases, they may occasionally be trusted to alone, when, by increasing the urinary secretions, the system is relieved.

In that frequent and troublesome disease, grease, diuretics are pre-eminently valuable; and when properly administered and assisted by appropriate external applications, they seldom fail to effect a cure.

The drugs just mentioned, combined in proper proportions, are more

effectual than if given separately; and as they are of a peculiarly manageable nature, may be administered in balls, drinks, or as powders, mixed with bran mashes or corn; a few select forms for which we now subjoin.

Diuretic Ball (strong).

Yellow resin.

Nitre (nitrate of potassa), in powder, each half an ounce.

Common turpentine.

Common yellow soap, each two drachms.

Oil of juniper, ten or twenty drops: form into a ball; if found to be too soft, a sufficient quantity of liquorice-root powder, or linseed meal, can be added.

This ball may be given every other day, or once or twice a-week, as required.

Diuretic Ball (mild).

Yellow resin, half an ounce.

Nitre, three drachms to half an ounce, both in powder.

Yellow soap, two drachms: form into a ball; a little treacle or honey may be added, if required.

Diuretic Powder.

Yellow resin.

Nitre, each half an ounce; mix.

This powder may be given every day in bran mash.

Diuretic Drink (strong).

Common turpentine, half an ounce to six drachms.

Common yellow soap, two to three drachms.

Oil of juniper, half a drachm to a drachm: rub these well together in a mortar, then add solution of subcarbonate of potash (oil of tartar), two or three drachms; nitre, half an ounce; and then, gradually, a pint of warm gruel or water, for a drink.

Diuretic Drink (mild).

Glauber salts (sulphate of soda), four to twelve ounces.

Nitre, half an ounce to one ounce.

Warm gruel or water, one pint: dissolve, for a drink.

Active and stimulating diuretics will be highly improper in inflammation of the kidneys or bladder, and ought never to be resorted to in such cases.

There are other drugs used as diuretics, though uncertain in their operation, and some that are very dangerous; but these will be alluded

to hereafter: of the first description are some of the neutral salts, cream of tartar (supertartrate of potash), and squills; of the latter are corrosive sublimate (oxymuriate of mercury), fox-glove, or digitalis, and tobacco. Oil of juniper, in its pure state, is a very good diuretic, but the high price, when genuine, prevents it being much used; the article mostly sold for the genuine one, is oil of turpentine, with a small portion of the true oil mixed with it.

Resin, when purchased in powder, is very commonly mixed with whiting or chalk, and, although a cheap drug, cannot always be depended upon; this addition is made for the purpose of preventing its caking together, and the practitioner will therefore, always do well to powder his own resin.

Colchicum root is also a diuretic, and a useful medicine in some diseases, but great care is required in drying it, &c., as well as the period of the year at which it ought to be dug up; from neglect of these circumstances, much uncertainty and discredit have been attached to this drug: we therefore propose to treat at large on it, and its effects on animals, in a future number.

EXPERIMENTS ON THE RE-PRODUCTION OF DOMESTIC ANIMALS.

BY MR. CH. GIRON DE BUZAREURGUES,

Corresponding Member of the Royal Academy of Sciences.

THE experiments alluded to, and of which a brief notice was read to the Academy on the 2d April, 1827, had, for their object, to determine the means by which, in sheep, the number of male or female lambs could be diminished or increased, according to the wishes of the proprietor of the flock.

The experiment is stated by its author in this manner: *To divide a flock of ewes into two equal parts, and to cause* to be produced, by one half of the flock so divided, a greater number of males or of females than in the other, according to the choice of the proprietors. This object seems to have been effected, in the present instance, by a selection of the ram or male; for it would appear, that if the male be very young, there will be produced more females than males, and *vice versâ;* that is, in order to obtain a greater proportion of male lambs to the females, the ram must be four or five years of age.—*Annal. des Sc. Nat.*

ANATOMY OF THE DOMESTIC CAT.

To the Editor of the FARRIER *and* NATURALIST.

SIR;

THE science of Comparative Anatomy being so beautiful and interesting, I have been induced to transmit the accompanying paper, containing a few anatomical facts (unnoticed by authors) connected with the anatomy of the domestic cat, which, perhaps, may not be uninteresting to your readers. These observations I shall occasionally transmit to you, as they occur; and trust that gentlemen will be induced to follow my example, and inform us of the peculiarities they may notice, whenever the animal differs from the standard of the Almighty's works—MAN. Should you deem this worth a place in your valuable journal,

I remain, Sir, yours, obediently,

H. W. DEWHURST.

24, *Sidmouth Street, Gray's Inn Lane,*
January 20, 1828.

UNNOTICED FACTS CONNECTED WITH THE ANATOMY OF THE DOMESTIC CAT.

IT is not my intention, in this paper, to give a minute description of the anatomy of this animal, but merely to notice a few anatomical facts; and at the same time I beg to call the attention of the student to so delightful a study. I have to regret, that every student is not compelled, by the proper authorities, to devote a short period to the anatomy of the domestic animals, and more especially when there unfortunately happens to be a scarcity of human subjects. Without any further preface, I shall commence with the

BONES. A peculiarity exists in the parietal bones of this animal, viz. an osseous process on its internal surface, extending about one-third of an inch into the cavity of the cranium; this, with the process from the opposite bone, divides the cerebral cavity into two distinct portions, viz. the larger or anterior, containing the cerebrum; the lesser or posterior, the cerebellum. This septum being analogous to, and answering all the purposes of, the tentorium of the human subject, I have named it the *tentorial process* of the parietal bone. The *os ethmoidale* is very beautiful, the cells being horizontal.

In the internal condyle of the *os brachii*, is the foramen generally found in carnivorous animals, for the passage of the brachial artery.

The STERNUM is generally composed of five or six pieces, united together by cartilage. I only once saw the xyphoid cartilage ossified.

The RIBS are thirteen pairs.

The CAUDAL VERTEBRÆ, or TAIL, are twenty-three in number. This animal has no uvula.

The AORTA. A curious deviation from the human subject is found in this animal; only two arteries arise from the transverse arch, which is short, and assumes a conical appearance. The same is to be noticed in the dog and rabbit. The largest, or arteria innominata trifurcates, gives off the right subclavian and two carotid arteries, while the left subclavian arises separately.*

The PERICARDIUM. This membrane is perfectly transparent.

The LIVER. This organ is composed of five lobes—three on the right side, two on the left; and the lobulus spigelii.

The GALL BLADDER exhibits the usual appearance; the *ductus communis choledochus* is very tortuous, and can be seen terminating in the duodenum.

The KIDNEYS. There are no supra-renal glands attached to these organs. The renal veins ramify on the surface, on most animals of this class. The kidneys are not enveloped.

There is no appendix vermiformis cœci.†

The COLON is very short: there is no transverse arch.

* The variations in the origin of these arteries, and also in their course, are more common, I believe, than many surgeons are aware, and who ought to be prepared to meet such, before they attempt any important operation. In my museum, I have a specimen from the cat, illustrating the above remark: also two from the human subject;—one with four arising from the transverse arch, the left vertebral being the fourth; the other, which I believe to be unique, was presented me by an eminent anatomist. There are five arteries: viz.—the *right subclavian, right and left carotids, left vertebral, and left subclavian.* I once saw a preparation, with only one artery arising from the arch, which gave off the usual number.

† This appendix is found in man and in the ourang-outang, but in no other animal.

AN ESSAY ON ANCIENT HORSE-SHOEING.

BY JOHN BECKMANN,

Public Professor of Economy in the University of Gottingen.

(Translated from the German.)

It can be proved by incontestable evidence, that the ancient Greeks and Romans endeavoured, by means of some covering, to secure from injury the hoofs of their horses, and other animals of burden: but it is equally certain, that our usual shoes, which are nailed on, were invented much later. We are told by Aristotle and Pliny, that shoes were put upon camels in the time of war, and during long journeys; and the former gives them the same name as that given to the shoes, or rather socks or soles, of the common people, which were made of strong ox-leather. When the hoofs of cattle, particularly oxen, had sustained any hurt, they were furnished with shoes made of some plant of the hemp kind, wove or plaited together. These, indeed, were only a sort of chirurgical bandage; but such shoes were given, in particular, to mules, which, in ancient times, were employed more than at present for riding; and it appears, by two instances of immoderate extravagance handed down to us by Roman writers, that people of rank caused these shoes to be made very costly. Nero, when he undertook short journeys, was drawn always by mules which had silver shoes; and those of his wife, Poppæa, had shoes of gold. The information of these authors, however, is not sufficient to enable us to conjecture how these shoes were made; but, from a passage of Dio Cassius, we have reason to think that the upper part only was formed of those noble metals; or that they were, perhaps, plaited out of thin slips.

Arrian also reckons these soles or shoes among the riding-furniture of an ass. Xenophon relates that certain people of Asia were accustomed, when the snow lay deep on the ground, to draw socks over the feet of their horses, as they would otherwise, he adds, have sunk up to the bellies in the snow. I cannot comprehend how their sinking among the snow could, by such means, have been prevented; and I am inclined rather to believe, that their feet were covered in that manner in order to save them from being wounded. The Russians, in some parts, such as Kamtschatka, employ the same method in regard to the dogs which draw their sledges, or catch seals on the ice. They are furnished with shoes, which are bound round their feet, and which are so ingeniously made, that their claws project through small holes.

The shoes of the Roman cattle must have been very ill fastened, as they were so readily lost in stiff clay; and it appears that they were not used during a whole journey, but were put on either in miry places, or at times when pomp, or the safety of the cattle, required it: for we are informed by Suetonius, that the coachman of Vespasian once stopped on the road to put on the shoes of his mules.

The reason why mention of these shoes on horses occurs so seldom, undoubtedly is, because, at the time when the before-quoted authors wrote, mules and asses were more employed than horses, as has been already remarked by Scheffer and others. Artemidorus speaks of a shod horse, and makes use of the same expressions employed in regard to other cattle. Winkelmann has described a cut stone in the collection of Baron Stosch, on which is represented the figure of a man holding up one foot of a horse, while another, kneeling, is employed in fastening on a shoe. These are all the proofs of horses being shod among the ancients with which I am acquainted. That they were never shod in war, or, at any rate, that these socks were not sufficient to defend the hoof from injury, seems evident from the testimony of various authors. When Mithridates was besieging Cyzicus, he was obliged to send his cavalry to Bithynia, because the hoofs of the horses were entirely spoiled and worn out. In the Latin translation, it is added, that this was occasioned by the horses not having shoes; but there are no such words in the original, which seems rather to afford a strong proof that, in the army of Mithridates, there was nothing of the kind. The case seems to have been the same in the army of Alexander; for we are told by Diodorus Siculus, that, with uninterrupted marching, the hoofs of his horses were totally broken and destroyed. An instance of the kind is to be found in Cinnamus, where the cavalry were obliged to be left behind, as they had suffered considerably in the hoofs; an evil, says the historian, to which horses are often liable.

From what has been said, I think I may venture to draw this conclusion, that the ancient Greek and Roman cavalry had not always, or in common, a covering for the hoofs of their horses, and that they were not acquainted with shoes like those used at present, which are nailed on. In the remains of ancient sculpture, among the ruins of Persepolis, on Trajan's pillar, those of Antonius, Marcus Aurelius, and many others, no representation of them is to be found; and one can never suppose that the artists designedly omitted them, as they have imitated, with the utmost minuteness, the shoes of the soldiers, and the nails which fasten on the iron that surrounds the wheels of carriages. The objection, that the artists have not represented the shoes then in use,

and that, for the same reason, they might have omitted shoes such as ours, though common, is of no weight; for the former were used only very seldom; they were not given to every horse: and when they were drawn over the hoof and made fast, they had an awkward appearance, which would not have been the case with iron shoes like those of the moderns. A basso-relievo, it is true, may still be seen in the Mattei Palace at Rome, on which is represented a hunting-match of Gallienus, and where one of the horses has a real iron shoe on one of his feet. From this circumstance, Fabretti infers that the use of horse-shoes is of the same antiquity as that piece of sculpture; but Winkelmann has remarked, that this foot is not ancient, and that it has been added by a modern artist.

I will readily allow, that proofs drawn from an object not being mentioned in the writings of the ancients, are of no great importance, and that they may be even very often false. I am, however, of opinion, whatever may be said to the contrary, that Polybius, Xenophon in his book on riding and horsemanship, Julius Pollux in his Dictionary, where he mentions fully every thing that relates to horse-furniture and riding-equipage, and the authors who treat on husbandry and the veterinary art, could not possibly have omitted to take notice of horse-shoes, had they been known at those periods when they wrote. Can we suppose that writers would be silent respecting the shoeing of horses, had it been practised, when they speak so circumstantially of the breeding and rearing of these animals, and prescribe remedies for the diseases and accidents to which they are liable? On account of the danger which arises from horses being badly shod, the treatment of all those disorders to which they are incident has been committed to farriers; and is it in the least probable, that this part of their employment should have been entirely forgotten by Vegetius and the rest of the ancients who studied the nature and maladies of cattle? They indeed speak seldom, and not very expressly, of the ancient shoes put on horses; but this is not to be wondered at, as they had little occasion to mention them, because they gave rise to no particular infirmity. Where they could be of no utility, they have recommended them; which plainly shows that the use of them was not then common. Gesner remarks very properly, that Sycinus, in Lucian, who was unacquainted with riding, when enumerating the many dangers to which he might be exposed by mounting on horseback, speaks only of being trod under the feet of the cavalry, without making any mention of the injury to be apprehended from iron shoes. To be sensible, however, of the full force of this argument, one must read the whole passage. Many of the ancient historians, also, when

they speak of armies, give an account of all those persons who were most necessary in them, and of the duties which they performed; but farriers are not even mentioned. When it was necessary for the horses to have shoes, each rider put them upon his own; no person, in particular, were requisite for that service: but had shoes, such as those of the moderns, been then in use, the assistance of farriers would have been indispensable.

As our horse-shoes were unknown to the ancients, they employed the utmost care to procure horses with strong hoofs;* and, for the same reason, they tried every method possible to harden the hoofs, and to render them more durable. Precepts for this purpose may be found in Xenophon, Vegetius, and other authors. It, indeed, appears wonderful to us, that the use of iron shoes should have remained so long unknown; but it was certainly a bold attempt to nail a piece of iron, for the first time, under the foot of a horse; and I firmly believe that there are many persons at present, who, had they never seen such a thing, would doubt the possibility of it if they heard it mentioned. Horse-shoes, however, are not absolutely necessary; horses, in many countries, are scarce, and, in some, they are not shod even at present. This is still the case in Ethiopia, in Japan, and in Tartary. In Japan, shoes, such as those of the ancients, are used. Iron shoes are less necessary in places where the ground is soft and free from stones; and it appears to me very probable, that the practice of shoeing became more common as the paving of streets was increased. There were paved highways, indeed, at a very early period, but they were a long time scarce, and were only to be found in opulent countries. But when roads covered with gravel were almost everywhere constructed, the hoofs of the horses would have soon been destroyed without iron shoes; and the preservatives before employed would have been of very little service.

(To be continued.)

* The prophet Isaiah, chap. v. ver. 28, to make the enemy appear more terrible, says, "The hoofs of their horses shall be counted like flint;" and Jeremiah, chap. xlvii. ver. 3, speaks of the "noise of the stamping of the hoofs of the strong horses;" and Ezekiel also says, chap. xxvi. ver. 11, "With the hoofs of his horses shall he tread down all thy streets." And in Judges, chap. v. ver. 22, we find the following allusion—"Then were the horses' hoofs broken by the means of the prancings, the prancings of their mighty ones."

ANIMAL PHRENOLOGY.*

Explanation of the Plate.

Philoprogenitiveness, or Love of Offspring. (No. 2) Fig. 3.
Combativeness, courage in animals, *large*, and *full*. (No. 5) Figs. 1, 3.
Ditto, small or deficient. (No. 5) Figs. 1, 4.
Benevolence in man; meekness, or good temper, in animals, large and full. (No. 13) Figs. 1, 3.
Deficient in meekness, bad tempered, or vicious. (No. 13) Figs. 2, 4.

THE doctrine of the special manifestations or indications of the mind, has been admirably divided by Dr. Spurzheim, into two *Orders;* which are again subdivided into *Genera*, as follows:—

Order I.—Feelings, or Affective Faculties, contain 2 Genera.

Genus I.—Propensities.

These are common both to man and animals.

1. Amativeness.
2. Philoprogenitiveness.
3. Inhabitiveness.
4. Adhesiveness.
5 Combativeness.
6. Destructiveness.
7. Secretiveness.
8. Acquisitiveness.
9. Constructiveness.

1. *Amativeness.*

This organ will generally be found much larger, in proportion, in males than females, particularly among animals; the seat of this organ

* For full information on the science of Phrenology, we refer our readers to Dr. Spurzheim's very able works. A plaster cast, with the marked organs, or numbered, will be indispensable, as well as animal skulls. A cast of the head of the celebrated ECLIPSE may now be obtained of Mr. Deville, 367, Strand.

is the cerebellum. Those who wish to distinguish the peculiar developements of the cerebellum in various animals, by the shape and size of the neck, should be acquainted with the ordinary forms of the cerebellum in mammiferous animals and birds in general. The cerebellum of birds is single, and resembles the vermiform process of the cerebella of quadrupeds, which present lateral parts in addition to the vermiform process.

The bull and ox will furnish us with an example of the difference between these organs; in the former it will be found large, and in the latter small, in consequence of castration; the organ, not being excited, becomes either stationary or diminishes: the latter may be observed in old bulls after castration, when the cerebellum becomes less, and the bull takes much more the appearance of an ox than he had before.

2. *Philoprogenitiveness—Love of Offspring.*

This organ will often be found large in animals: particularly the mare, which is well known to be much attached to her colt, has the organ large, *see No.* (2), *fig.* 3; and this enlargement will often enable those who are well acquainted with the part, to distinguish a mare from a horse, without any other difference. This organ is very large in monkeys, who, it has been observed, have a strong attachment to their progeny.

3. *Inhabitiveness.*

Some animals are partial to high situations, and dwell principally on mountains and rocks; and in all those we find the organ large: the chamois, wild goat, &c. will furnish us with examples. Other animals prefer low places or plains; this we see in deer, hares, rats, &c.: thus, one species of rats live in canals, cellars, and such like places; another gets into the upper part of buildings, high lofts, &c. Some, again, seek the water from their first existence, as the turtle and duck. Amongst birds we also find some species hover in the upper regions, and others, though equally good flyers, keep principally near the ground: some build their nests at the tops of trees, some on the ground. The domestic cat affords us an instance of inhabitiveness; seldom going far from the house or its dwelling, and having a large manifestation of this organ.

4. *Adhesiveness, or Attachment.*

This organ we find in some animals very largely developed, more particularly in the dog; numerous proofs of which are daily before us. The fox, also, gives us a strong instance of this faculty, he being attached to his mate for life. Some birds, also, afford good examples of

it, as the magpie, jay, pigeon, and dove. These always continue in pairs, and, on examination, will be found to have these organs large.

5. *Combativeness—Courage in Animals.*

This is a propensity differing in its degrees, in animals as well as in man. Some animals are never known to fight, while others are seeking every opportunity to engage, and appear fond of it. Rabbits are known to be more bold and courageous than hares; and some dogs are more prone to fight than others, and are constantly watching an opportunity to attack, while others again invariably run away.

Courageous animals have the head behind, and between the ears, very large. *(See No. (5) figs. 2, 3.)*

In the horse this will be found a sure criterion by which to judge whether he is shy and fearful, or bold, determined, and persevering.

In dogs, the same thing is to be observed, by referring to the plate and figures.

In game-cocks we also find the same appearance; and some *jockeys*, and *cock and dog-fighters*, have heretofore been acquainted with these circumstances, from noticing the largeness of the parts; but it was the phrenologist that laid down the principle.

6. *Destructiveness—The Propensity to Destroy.*

The skulls of carnivorous and herbivorous animals, on inspection, exhibit a striking difference, which may be seen by placing the skull of carnivorous animals horizontally, and tracing a vertical line through the external ear, or meatus auditorius; when a great portion of the brain will be found situated behind that line; and the more the animal is carnivorous, the longer will the portion of brain be in that region, as well as being full nearly over the ear.

The lion, tiger, wolf, cat, pole-cat, fox, and weasel, &c. will readily show the contrast, when compared with the deer, sheep, hare, rabbit, &c.

7. *Secretiveness—Propensity to Conceal, or Cunning.*

This organ may be denominated slyness in animals. It is situated just above the organ of destructiveness, and is found large and active in some animals.

The fox is very careful not to be observed; the dog frequently hides his bone; and the cat, when watching the mouse, does not stir a limb.

8. *Acquisitiveness—A propensity to Covet or Acquire.*

This organ is much more active in man than in animals; but a variety of instances are well known, and clearly prove that animals

also possess it. Magpies and ravens carry away and hide things, which they cannot eat or make use of. Certain dogs prefer bad meat which they steal, to good meat given to them. Herds of animals, for instance the chamois, are known to occupy one district, and drive away all others who may attempt to encroach on them; thereby showing a possession. Some again lay up stores, as the squirrel, &c.

9. *Constructiveness—The Organ of Construction.*

This is a very powerful and active organ in man, and also in some animals; and in the skulls of the beaver, marmot, and field-mouse, we find a striking difference in this part, when compared with those animals which do not build or construct. Likewise we see a difference, in the same part, between the rabbit which burrows, and the hare that does not.

It is by the activity of this organ, that the bird builds its nest, the beaver his hut, and the rabbit makes his burrow.

Genus II.—Sentiments.

These sentiments are common to man, and partly to animals.

10. Self-Esteem.
11. Love of Approbation.
12. Cautiousness.
13. Benevolence (in animals, meekness.)
14. Veneration.
15. Firmness.
16. Conscientiousness.
17. Hope.
18. Marvellousness.
19. Ideality.
20. Gaiety, or Mirthfulness.
21. Imitation.

10. *Self-Esteem, or Pride.*

This organ, extremely active in man, and commonly called pride, is also found in some animals, and is often to be noticed in the horse. An anecdote of a horse is related, that belonged to Bonaparte, who would show considerable marks of pride and pleasure, when he was carrying the emperor, that were not to be observed when his groom,

or an ordinary person, rode him. Other animals, sometimes, show this faculty. The peacock, and turkey-cock, are examples.

11. *Love of Approbation.*

Some animals are evidently sensible to caresses and flattery; and, on the other hand, some others appear totally destitute of this sentiment.

The horse, dog, and cat, and many other animals, are well known to be gratified and pleased, when noticed in a kind manner. We have observed some horses quite as much pleased with our notice, as the coachman has been by praising the appearance of his horses, or his manner of managing or driving them.

12. *Cautiousness.*

Certain animals are very timid and circumspect, as the deer tribe, &c.; and are in the habit of placing sentinels to warn them of their danger. This may be seen in the chamois, also in cranes, starlings, bustards, and geese. This precaution cannot be the result of intellectual combination; but is accomplished, in all probability, by natural organic arrangements.

Animals which seek their food by night, have the upper and lateral part of the head posteriorly more developed, than those which go about during the day.

Bats have the head large posteriorly.

13. *Benevolence in Man—Meekness in Animals.*

This organ can easily be proved, by referring to animals, either in comparing different species, or different individuals of the same species. Some kinds of animals are naturally meek, as the deer, sheep, &c.; while others are wild, savage, and mischievous: some horses, cows, dogs, &c. are meek and familiar; and some individuals of the same kind are vicious, and bite, kick, &c.

In the different tribes of monkeys, we find this organ varying, and their dispositions always according.

The good-tempered and mild animal will have that part of the forehead, which corresponds to the organ of benevolence in man, *elevated* and *prominent;* and, on the contrary, the vicious or ill-tempered will have a depression, or hollow; and as these are more or less developed, so will the tempers of the animals vary. *(See No.* (13)*figs.* 1, 2, 3, 4.)

(To be continued.)

ON THE SCAB, OR SHAB;

A DISEASE FREQUENT AMONG SHEEP.

This is a disease of the skin, to which sheep are liable; the signs of its approach usually to be observed are, that the animal does not feed, is very restless and impatient, rubbing itself against rails, gates, banks, stones, or any thing it can get near; and in some instances they tear off the wool with their teeth. On parting the wool, the skin is seen to have a red, fretted appearance, emitting a peculiar ichor, which afterwards hardens into a scurf, or small scabs: the wool likewise becomes foul, and falls off prematurely; the animal ceases to grow, or loses flesh, pines away, and, if not cured, at length sinks under the continual irritation occasioned by this disease. As in all the complaints of this nature, considerable difference of opinion exists as to its cause and nature. Some authors contend that it is produced by a general cause, operating on the system through the blood, and showing its effects in the extreme vessels which form the skin; whilst others attempt to show, that it is occasioned by small animalculæ, which enter the skin, and produce the eruption, consequent irritation, and itching: others again contend that it is a disease peculiar to the skin, and propagated from one animal to another by a contagious fluid, and requires for its production the actual contact of matter.

In this respect, it appears to be much of the same nature as the mange in horses and dogs, and it therefore becomes highly proper to remove and separate any of the flock, as soon as they are known to be diseased.

There are several remedies used as cures for this troublesome malady, but the one most usually employed is mercury, in the shape of ointment; to be applied with the finger, between the wool along the back and down each shoulder.

The following is the ointment used and recommended, as being the most effectual, by the late Sir Joseph Banks:—

Quicksilver, one pound.

Venice turpentine, and common olive oil, each half a pound.

Rub the quicksilver and turpentine together in a mortar, till well mixed; then add the oil, and *four pounds of lard:* mix well into an ointment for *use.*

STOMACHS OF ANIMALS.

It is only among mammiferous animals, and of these among herbivorous ones, that truly *ruminating* species occur—viz. those which first imperfectly chew and swallow their food, and subsequently return it through the œsophagus, in small quantities at a time, to the mouth,

there to be thoroughly masticated, and then swallowed a second time. For this purpose ruminating animals have a peculiar disposition of the teeth; the molar teeth are intersected by serrati, form transverse furrows, and the crowns are not placed horizontally, but incline obliquely; so that, in the upper jaw, the outer side is highest, and, in the lower, that next the tongue: hence they have the lower jaw small, and admitting of considerable lateral motion; by which, as is evident to the sight, the mechanism of this part of the singular function in question is executed.

In those ruminants which are also cloven-footed, the fourfold stomach, with its remarkable structure and mechanism, contributes to this object. The food, when first swallowed, and in a half crude state, is received into the immense *first stomach*, as into a store-house, in which it is only a little softened; from it small portions of the food are successively taken up by the *second stomach*, which appears merely an appendage to the first, and propelled a second time through the gullet into the mouth. In the next place, the food, after having been again chewed, is carried, by a particular groove, direct from the gullet into the *third stomach*, without passing through the two first; lastly, it is transmitted to be completely digested in the fourth, which approaches the most closely to the stomach of other mammiferous animals.

In some herbivorous animals, as in the horse, the stomach has an uniform appearance externally, but, internally, it is divided into two portions by its internal membrane; that of the left side being continuous with the epidermis of the œsophagus, and that of the right with the lining membrane of the duodenum.

To the Editor of the FARRIER *and* NATURALIST.

SIR;

ALTHOUGH I have no pretensions to the title of a "knowing one," or to be "concerned with horses," yet, perhaps, no man rejoices more that a work has at length appeared, exclusively devoted to the consideration of Domestic Animals, than myself; because I have been, for a long time, an attentive observer of their wrongs and sufferings, and lamented that no channel was open, through which they might meet redress, and the true interests of mankind, in their use, be fairly advocated and explained. And although your chief object may be to extend the bounds of Veterinary Science, I sincerely hope you will not neglect the favourable opportunity which such a publication affords for ameliorating the general condition of our dumb servants, by calling the public attention to the unheeded loss which they sustain, through

the present system of abusive treatment which prevails in the stable and on the road, which, in particularly flagrant instances, has often brought down the partial censure of humane writers, but never, as a system, met that full exposure and reprobation that it loudly calls for.

What must be the first reflection of a feeling mind, on reading that interesting article in your last number, entitled—"Proof of the natural Age of the Horse," in which it is coolly stated that this may be from thirty to forty years, but "that the abuse and unnatural treatment he experiences, shorten that period generally one-half, and frequently two-thirds?" Is this an act to be lightly passed over? Is not the reflection appalling? and does it not proclaim more intelligibly than a thousand words of reasoning, the amount of the wrongs, and the extent of that misery which can cause such a result, of which, I dare to say, that thousands of those who profess to love horses are wholly unaware? Are we to understand, Mr. Editor, that you have no plan to offer—no measures to propose, which will prevent the continuance of such an abominable evil, or lessen this enormous waste of animal life? at least, let us hope that the simple knowledge of the fact will awaken the attention and sympathy, as well as the interests, of those who are best capable of providing a remedy; they may palliate, if they cannot remove, the causes which lead to such a shameful breach of humanity. At present, men are far from viewing this subject in a clear or proper light; if they did, where would be the necessity of Martin's Act, to enforce the duty of humanity? or why does that Act call forth derision, instead of public support? It is to be regretted indeed, and perhaps it is wrong, that laws should be had recourse to for such a purpose; for to punish crimes as well as creeds, is only to perpetuate them. I would rather see kind usage of brutes result from well directed efforts to redress their injuries, and the influence of a better spirit than the terror of offending against the laws; and to raise and foster this generous feeling—to make the owners of horses see their advantage consists in kinder measures—will, I trust, be a leading object of your Journal,—an object which will render it respected and useful, and open a wide field of interesting matters to a numerous class of readers like myself, who delight in anything which proposes to promote the comfort and welfare of these invaluable creatures.

Thus far I am borne out by plain reason; and without any assumption of jockey knowledge, perhaps I may be permitted to make another general remark or two on a popular error, or rather inadvertence in judging, which is very common among gentlemen who being often exceedingly precise and careful in the treatment of their own horses, and

seeing their friends the same, are induced to say and believe, that however animals may be ill used by the lower classes, and in more menial service, nothing can be more comfortable than the situation of a large proportion of them,—better by far than many poor people; as for the hackney-coach horses, poor devils! they are used to it. Now, a sort of amateurship (if the word is allowable) has made me acquainted, though a confirmed pedestrian, with many individual horses, and led me to trace them, with a careful assiduity, through each changing service, to the hands of the knacker. I have watched them on the down-hill of life; I have seen the prancing steed sold from the service of his gentle master, and marked the subsequent "gradations in his fate;" and in so many instances, that I am brought to the opinion that all the over-weening attention he experiences in early life, is only an aggravation of his future sufferings. When young, he is caressed and pampered, well fed, clothed, and cared for; but no sooner has he attained maturity, than, from lameness or accident, he is disposed of, and gentle exercise gives place to a state of almost unceasing labour: he is now a machine, not presumed to have feeling, to go, or to break. A short time suffices to render him unfit even for this; and he sinks into baser hands, who, in the purchase, calculate with practical precision on the residue of life, and the probable powers of endurance which yet remain. Behold him now exposed to every kind of violence and ill-treatment, subject often to hunger, cold, and the inclemency of the seasons, without even the pity of the world in his favour; because he is an old horse, they say, and of little value. Such is the hard fate of the larger number of horses; it is erroneous to suppose that any are well treated; for it is clearly the wrong side of humanity to breed up an animal in ease and luxury, and then permit him to be gradually, yet prematurely, destroyed by this cruel system. I look at those miserable objects, the hackney-coach and cabriolet horses, with a feeling much like that with which we view a decayed gentleman, who is obliged, from misfortunes, to labour in his latter days. They have all seen better times, and have to blame mankind for their infirmities, which are now made matter of derision, and used as apologies for abuse.

They have my fullest sympathy, but, Mr. Editor, it is you who must render them effectual service; and if the insertion of this rambling letter can rouse your professional readers to consider the subject more attentively than heretofore, every purpose for which it was written will be accomplished.

Your obedient Servant,

AN OBSERVER.

ON THE USE OF THE CHLORATE OF SODA, AND CHLORATE OF LIME,

As Remedies for Gangrenous Tumors which occur in Horses and Cattle, and for disinfecting and purifying Stables.

BY A. G. LABARRAQUE, A FRENCH CHEMIST.

In the gangrenous tumors which horses and cattle are subject to, in that disease which in this country is popularly called Distemper, and, by the *cognoscenti*, Epidemic* Disease, but more properly, by the French, named Epizootic Disease, from the Greek words, *epi* upon, *zoon* an animal;† M. Labarraque strongly recommends the Chlorate of Soda, on the authority of M. Bouley, jun., Veterinarian, whose remarks on the use of this preparation, in the treatment of gangrenous tumors, we here insert.

"All veterinary surgeons who have used setons in the treatment of horses with epizootic diseases, must have remarked that these means were almost always useless, and oftentimes dangerous. I have, in particular, observed eight carbunculous tumors, which had been the result of their application: five of the animals affected died; the other three were cured. The five first were treated by cauterization, and by the administration of antiseptics; and the other three by the same means, with the addition of the chlorate of soda of *M. Labarraque.*"

M. Bouley, jun. recommends the chlorate of soda to be applied on pledgets of tow to the tumors, or by injection.

Messrs. Dupuy, Giraud, jun., and Vatel, Professors at "L' Ecole D'Alfort," and Berger, Veterinarian of the "Garde du Corps," have equally proved the properties of the chlorate in these affections, according to M. Labarraque; and he further states, on the authority of *Messrs. Bouley, jun.*, and *Vatel*, that this liquid speedily destroys the fœtid odour exhaling from tumors, facilitates the separation of eschares, and appears to be a powerful antiseptic.

On the use of the Chlorate of Soda, for disinfecting and purifying stables, M. Labarraque gives the following directions:— The chlorate of soda may be of great use for purifying and dis-

* A word not applicable to animals in any sense whatever, being composed of two Greek words—*Epi* upon, *demos* the people.

† Consequently a very appropriate term, as being applicable to all animals.

infecting unhealthy stables, and those which have been inhabited by sick horses. It should be used in the following manner:—A bottle of concentrated chlorate of soda is to be put into a pail of clear water, and the mixture stirred: a strong brush, or a birch broom, is to be dipped into the chlorate water, and immediately rubbed, with great force, over the walls, manger, rack, and generally throughout the whole stable: this done, all the parts which have been brushed with the chlorate, are to be washed with clean water: lastly, finish the operation by brushing the parts again with the chlorate, in the same manner as painters give a second coat. A stable of forty-feet in length, by twelve in width, and ten in height, requires four bottles of concentrated chlorate. Each bottle should be diluted in ten or twelve quarts of soft water. From this we can judge that one bottle will be sufficient for a stable of three or four horses.

The disinfection of the stable being accomplished, the doors and windows should be left open for it to dry; healthy horses may then reside in the stable without fear of being infected; yet, in a case of "Epizootica," we ought, as a prophylactic means, to sprinkle the stable, night and morning, with chlorated water, prepared in the following manner:—A concentrated bottle of chlorate is to be mixed in four or five pails of water, and the stable to be well sprinkled with this mixture: neither horses nor men will experience the least inconvenience from this mode of disinfection, and great advantages will be derived from the salubrity of the place.

For washing horses, as is the custom when they are cured, and before placing them with healthy horses, it would be well to substitute, for vinegar and water, a small quantity of chlorate and water, prepared in the same manner as recommended for sprinkling.

CHLORATE OF LIME is also recommended by the same author, as a disinfectant.

Those persons who may wish for further information on the subject, or the mode of preparing the chlorate, can obtain it by referring to M. Labarraque's treatise on the subject, or the translation by Mr. Scott.

N.B. That certain situations, as well as close and confined places, when the air is impure, may produce disease in animals, we do not deny; but many very strongly doubt, if disease is ever communicated from one animal to another by what is denominated infection; but are inclined to believe, that there must be an actual contact of matter positively conveyed from one subject to the other, and thereby constituting a true contagious disease.

NATURAL HISTORY OF THE PUPPY.

THE puppy is an animal often mentioned, often seen, often complained of, but never yet accurately described. As the word *puppy* is not to be found in Linnæus, it may be necessary to attempt a definition. Puppy, then, is derived from the French *poupée*, which means either a whelp, or one of those pasteboard figures, which we see in the shops of fashionable hair-dressers, to exhibit their skill. It originally signified the whelp of a female dog, and at that time was known rather in kennels than in families; but it is now understood as a species of human beings, differing from the rest of mankind in this respect, —that in them there is something internal, as well as external, to be looked at or expected; whereas, with the puppies, all is outside. When, therefore, we speak of the head of a puppy, we are not speaking of that which contains the brain or intellect, but of a round empty knob, which has no other pre-eminence than that of being accidentally placed at the upper extremity of the body.

Puppies (from the above derivation of their name) came from France: but though puppies were originally the growth of that country, they may be cultivated with success in almost any; and it is pretty certain, that they have been made to thrive with as much success in London, as at Paris. In the account of this animal, I must correct myself, so far as to guard against the term *cultivation*, which is, strictly speaking, not applicable to them; on the contrary, they never flourish so well as when left to themselves, and kept free of all cultivation: those who have attempted cultivation, have either failed, or produced an animal of a quite different species. Cultivation and education are almost synonynous terms, and therefore equally improper in this case.

At what time they were imported into this country it is not easy to say, as they have been mentioned by writers for nearly two centuries past; but it is principally within the last that they have become domesticated, and that no place has been found entirely free from them. In the metropolis, the best specimens are to be seen; and next to that, in the principal cities, and in some towns on the sea coast, such as Brighton, &c.: but in the latter, they are chiefly in the summer; and it is only within these thirty years that they have frequented those places at all.

The metropolis, notwithstanding, is the chief haunt of the species, and no public places are free from them. The theatres, opera, concerts, and riding-schools, the parks, and the most frequented streets, particularly St. James's-street and Regent-street, often swarm with them.

It was a long time supposed that they were of the monkey kind; in respect to chattering, they certainly resemble that animal. Their language is pronounced with the same kind of confused noise, and what they say is equally sensible. They have also all the mischievous tricks of monkeys, and somewhat of their knack of imitating common actors, or taking off certain peculiarities; but in other respects they totally differ from the monkey, who is a far more faithful and affectionate animal, and fulfils the end of its creation more punctually than the puppy. Veracity, in matters of natural history, is of great importance, and therefore we have introduced this short comparison between the two animals. It is our present business to do justice to puppies, but it must not be at the expense of monkeys.

We have already hinted that the puppy is an animal entirely *outside;* strip him of that, and you have a mere nonentity, or what we may term the personification of *nobody*. It is in their skin, or outer covering, that they pride themselves, and by which they are principally known. On this account also it is, that they are so much encouraged by various descriptions of artizans, particularly tailors and barbers, who have acquired such a perfect knowledge of the genius of the animal, that they can alter its shape at pleasure; and do sometimes, for the entertainment of the public, produce such extraordinary transformations as have been thought worthy of representation on the stage, and these are often exhibited by artists in the print-shops.

It is common with natural historians to inquire into the use of animals they describe; but this is a question which, in the case of puppies, would be attended with some difficulty, and no author has seriously made the attempt. In truth, the more we consider them, the more useless they appear. A great part of their time is consumed in sleep, or at least in bed, where they are to be found at the time when the rest of the world have completed half the business of the day. Justice, however, requires me to add, what I have slightly hinted at already, viz. that they occasion a considerable consumption of broadcloth and leather, particularly in the article of boots; but, on the other hand, they have occasioned a diminution in the demand for shoes and stockings; none of these articles having, for many years, been

considered as belonging to the puppy tribe. With regard to the propagation of this animal, there are many difficulties and uncertainties. That they are capable of propagating their own species, has been doubted; and, indeed, they seldom marry: but, on the other hand, they are themselves said to be the produce of a cross-breed, composed of a fool and a fine lady. These produce puppies in abundance, and take great care in rearing them, till they have reached their fifteenth or sixteenth year; after which their parents send them into the world to provide for themselves, and seldom take much care about them afterwards. They are not a very long-lived animal; they are generally worn out after they have been upon the town a few years; and very many of them, when they have arrived at the age of twenty-one, are caught by persons appointed for the purpose, and locked up in cages, of which there are several in and about the metropolis, particularly in the Old Bailey and Fleet-market, and a very large one in St. George's Fields.

Some of them are not absolutely disagreeable; and many persons, especially ladies, are particularly fond of them, preferring them to parrots and monkeys. Indeed, they are in some respects more docile than these animals, and perform a greater number of droll and diverting tricks; some of them cannot only call a coach, but hand the company into it, and pay for it afterwards.

Some of them can very cleverly defray the expense of a tavern bill, and will present tickets for the opera or a concert, like a human being. Some, likewise, have been taught various games, although it must be confessed they play their cards but indifferently; yet, if they pull out their money readily and gracefully, it affords amusement to their antagonists. Others of them ride on horseback very expertly, and acquire a knowledge of the business of the stable, equal to that of the most rational grooms and jockeys.

When to this is added the chattering noise they make in talking, and the various actions which they are taught to mimic, it may be supposed that, in general, they would be preferred to monkeys or parrots; but there are many reasons why this should not be the case, and the principal reason is, that the expense of keeping them is enormous.

ON THE FŒTUS OF A POLYDACTYLOUS* HORSE,

HAVING THE

TOES SEPARATED BY A MEMBRANE.

BY M. G. ST. HILAIRE, MEMBER OF THE INSTITUTE.

THE extremely brief notice of this rather singular specimen of a peculiar kind of deformity in the horse, scarcely furnishes a sufficiently accurate account to be submitted to our readers. It would seem that the distinguished naturalist, to whom we owe the publicity of the very singular specimen alluded to, having proceeded to the South of France, for the express purpose of conducting in safety to Paris the cameleopard, examined on his route whatever Museums existed; and in that belonging to the Veterinary School at Lyons, he met with the fœtus, the peculiar mal-conformation of whose feet gave rise to his brief notice.

For the benefit of those not sufficiently acquainted with the doctrines of comparative anatomy originally laid down by Aristotle, and likewise in order to render M. St. Hilaire's notice intelligible to the generality of our readers, we shall very briefly state the osteology of the horse's foot, and compare it with those of other animals, and with man.

The pectoral extremities of the horse, or his fore legs, are composed essentially of the same elements as the human arms; and the bones of each may be arranged and described in this way:

	In Man.	In Horse.	
Bones of the shoulder ..	2	1	The clavicles are wanting.
Do. arm	1	1	
Do. fore-arm ..	2	2	Only when the animal is young; when old, the ulna, which at all times, in the horse, is an imperfect bone, becomes firmly united to the radius.
Do. carpus	8	7	The part of the limb corresponding to these bones, is very generally, but very improperly, called the knee.
Do. metacarpus.	5	3	One complete, and two incomplete, imperfect, or *rudimentary*.
Do. fingers	14	3	

* *Many-fingered*; from two Greek words, signifying *many*, and *finger*.

The horse, then, has but a single toe or finger, and not three, as some anatomists have said. The extremely imperfect and rudimentary metacarpal bones can never be called imperfect toes, in strict language; nevertheless, they really constitute the elements of toes, which have been formed in this imperfect and *rudimentary* manner, because they were not wanted for the safe progression of the animal; inasmuch as we apply this term to the short toes of the pig, which have a metacarpal and digital bones, are detached and protected by a nail, similar to the more perfect or longer ones. On the contrary, all that remains of such toes in the horse, are two small perfectly rudimentary metacarpal bones; there is not the slightest vestige of any digital bones or phalanges.

It sometimes happens, as may be seen in Museums, that the imperfect toes of certain animals (as in the pig, for example) occasionally are found perfect, or, in plain language, grow to the same length as the more perfect ones; and of this, we have seen one or two instances in the pig—all four toes being in these specimens of equal length and strength, or nearly so.

Now, this seems to be the case with the fœtus of the horse described by M. St. Hilaire; and, if so, as we doubt not, is the only instance recorded, unless we consider as such the horse described by Suetonius, and said to have belonged to Cæsar; but to enable us to decide on this point, neither the description of Suetonius, nor of the French naturalist, will be found sufficiently minute.

M. St. Hilaire describes the fœtus he examined to have been about eight or nine months old. He states, that it is polydactylous only in the fore feet; and that the left foot has three toes nearly equal, but the right only two. The toes are said to be connected by a membrane—a kind of periosteum insulating the metacarpal bones and toes, and even passing beyond them about six lines. Now, M. St. Hilaire imagines that this membrane extended to the envelopes of the placenta; but this is merely a conjecture, and one founded on hypothesis.

REMARKABLE HYBRID.

A Correspondent of M. de Freussac has advertised him of the production, at Berlin, of an animal between a stag and a mare. The appearance of the creature is very singular; the fore part being that of a horse, the hinder part that of a stag, but all the feet like those of the latter animal. From the intimacy of the same stag with another mare, a second specimen is confidently anticipated.

THE JOCKEY'S SLANG VOCABULARY.

ACCOMMODATE, or ACCOMMODATION. In the sporting world, is to part a *bet*, or to let a person go halves (that is to *accommodate* him) in a bet that is likely to come off successful. It is, also, in an ironical manner, to *believe* a person when you are well assured he is uttering a lie; by observing, you *believe* what he is saying, merely to *accommodate* him.

BANG UP *(Whip)*. Quite the thing. Well done. Complete. Dashing. In a handsome style. A bang up cove; a dashing fellow who spends his money freely. To bang up prime; to bring your horses up in a dashing or fine style: as the swell's rattler and prads are bang up prime; the gentleman sports an elegant carriage and fine horses.

BANKS' HORSE. A horse famous for playing tricks, the property of one Banks. It is mentioned in *Sir Walter Raleigh's History of the World*, p. 178; also by *Sir Kenelm Digby* and *Ben Jonson*. —*Obsolete.*

BARNACLE. An instrument like a pair of pincers, to fix on the noses of vicious horses whilst shoeing; also for gratuity given to grooms, by the buyers and sellers of horses.

BECALMED. His prad is becalmed; his horse is knocked up..

BELL, TO BEAR THE. An allusion to the fore-horse or leader of a team, whose harness is commonly ornamented with a bell or bells. Some suppose it a term borrowed from an ancient tournament, where the victorious knight bore away the *belle*, or *fair lady*. Others derive it from a horse-race, or other rural contentions, where bells were frequently given as prizes.

BELLOWS. The lungs. Good bellows; good lungs.

BISHOPPED, or TO BISHOP. A term used among horse-dealers for burning the mark into a horse's tooth, after he has lost it by age; by bishopping, a horse is made to appear younger than he is. The derivation of this term is supposed to be from a person of the name of Bishop, who first practised this deception.

BLACKLEGS. A gambler or sharper on the turf, or in the cockpit: so called, perhaps, from their appearing generally in boots; or else from game-cocks, whose legs are always black.

BLACK SPY. A smith.—*Cant.*

BLATER. A calf.—*Cant.*

BLEATING CHEAT. A sheep.—*Cant.*

BLEATING PIG. Sheep-stealing.—*Cant.*

BLEEDERS. Spurs. He clapped his bleeders to his prad; he put spurs to his horse.

BLOWER. A horse with thick wind.

BONE-SETTER. A hard-trotting horse.

BOOBY-HUTCH. A one-horse chaise, noddy, or buggy.

BOTTOM. In the sporting sense, strength and spirits to support fatigue; as a bottomed horse.

BOUGHS. The hips; wide in the boughs.

BROTHER OF THE WHIP. A coachman.

BUCK. A blind horse.

BUFFER. A dog. Buffer's nob; a dog's head.—*Cant.*

BUFFER-NABBER. A dog stealer.—*Cant.*

BUFFER. One that steals and kills horses and dogs for their skins.

BUGGY. A one-horse chaise.

BUTCHER'S HORSE. A poor and rough-looking horse.

CACKLER. A hen.

CACKLER'S KEN. A hen-roost.—*Cant.*

CACKLING CHEATS. Fowls.—*Cant.*

CHAUNTING COVES. Horse-dealers. A certain class of these fellows impose on the public by specious and imposing advertisements; who set forth qualities their horses never possessed: in short, a dead take in. Such advertisements are to be met with daily in the London newspapers.

CLEANED OUT. A sporting phrase, in allusion to any person who has lost all his money in betting.

COB. A stout compact nag.

COLLYWOBBLES. The gripes in horses.

COLT. One who lets horses to highwaymen.—*Cant.*

COVER. To cover, in betting, is to put down the money. If a person is a stranger upon the turf, or is considered *doubtful*, he is called upon to *cover* by his opponent.

CUDDIE. A jackass.—*Cant.*

CUR. A cut or curtailed dog. According to the forest laws, a man who had no right to the privilege of the chase, was obliged to cut or lame his dog. Among other modes of disabling him from disturbing the game, one was by depriving him of his tail; a dog so cut was called a *cut* or *curtailed* dog, and, by contraction, a cur.

DAISY-CUTTER. A jockey term for a horse that does not lift up his legs sufficiently, or goes too near the ground, and is, therefore, apt to stumble.

DICKEY. An ass. Roll your dickey; drive your ass.

DIGGERS. Spurs.—*Cant.*

DOG-BUFFERS. Dog-stealers, who kill those dogs not advertised for, sell their skins, and feed the remaining dogs with their flesh.

DRAG. A cart.

DRAG COVE. The driver of a cart.

DRUMMER. A jockey term for a horse that throws about his fore-legs irregularly: the idea is taken from a kettle-drummer, who, in beating, makes many flourishes with his drumsticks.

DUNAKER. A stealer of cows and calves.

ESSEX LION. A calf. Essex being famous for calves, and chiefly supplying the London market.

EVES. Hen roosts.

FANCY. One of the *fancy* means a sporting character; that is, either attached to pigeons, dog-fighting, boxing, &c.

FEAGUE. To feague a horse; to put ginger up a horse's fundament—and, formerly, as it is said, a live eel—to make him lively, and carry his tail well. It is said a forfeit is incurred by any horse-dealer's servant who shall show a horse without first feaguing him. Feague is used, figuratively, for encouraging or spiriting one up.

FEUTERER. A dog-keeper; from the French *vautrier*, or *vaultrier*, one that lends a hired hound for the chase.

FLOGGER. A horsewhip.—*Cant.*

GAB, or GOB, STRING. A bridle.

GAG. An instrument for propping open the mouth of a horse.

GALANEY. A fowl.—*Cant.*

GALLOPER. A blood-horse; a hunter. The toby gill clapped his bleeders to his galloper, and tipped the traps the double; the highwayman spurred his horse, and got away from the officers.

GAMBADOES. Leathern cases of stiff leather, fastened to the saddle, and admitting the leg and foot; the name was at first jocularly given.

GAMBS. A corruption of the French word *jambes*. Farcy gambs; sore or swelled legs, usually applied to the hind legs of the horse.

GAMMON AND PATTER. Common place talk of any profession, as the gammon and patter of a horse-dealer.

GIBBE. A horse that shrinks from the collar, and will not draw.

GIGG. A nose. Snitchell his gigg; fillip his nose. Grunter's gigg; a hog's snout. Gigg is also a high one-horse chaise. To gigg a Smithfield hank; to hamstring an over-drove ox, vulgarly called a mad bullock.

GLASS EYES. A term for a blind horse.

GOADS. Those who wheedle in chapmen for horse-dealers.

GOB-STRING. A bridle.

GREEN. Doctor Green, *i. e.* grass; a physician, or rather medicine, found very successful in curing most disorders to which horses are liable. My horse is not well, I shall send him to Doctor Green.

GROGGED. A groggy horse; a foundered horse.

GROGHAM. A horse.—*Cant.*

GUMMY. Clumsy, particularly applied to the legs of horses.

HANK. A Smithfield hank; an ox rendered furious by overdriving and barbarous treatment. Bull-hankers; men who delight in the sport of bull-hanking, that is, bull-baiting or bullock-hunting.

HARRIDAN. From the French word *haridelle*, a worn-out jade of a horse, or mare.

HAVIL. A sheep.—*Cant.*

HOBBY-HORSE. A particular kind of small Irish horse.

HOG. To hog a horse's mane; to cut it short, so that the ends of the hair stick up like hog's bristles.

HORSE-COSER. A dealer in horses, vulgarly and corruptly pronounced *horse courser*. The verb, *to cose*, was used by the Scots, in the sense of bartering or exchanging.

JACKED. Spavined; a jacked horse.

JARVIS, or JARVY. A hackney coachman.—*Cant.*

JINGLERS. Horse cosers frequenting country fairs.

JUGELOW. A dog.

KEFFEL. A horse.—*Welch.*

KNACKER. One that kills horses, and sells the flesh.

KNIGHT OF THE WHIP. A coachman.

KNOWING ONES. Sportsmen on the turf, who, from experience and an acquaintance with the jockeys, are supposed to be in the secret; that is, to know the true merits or powers of each horse; notwithstanding which, it often happens that the knowing ones are taken in.

LEAVE IT ALL TO THE COOK. A bit of flash, intending to denote judgment: as the cook is supposed to be the *best judge* in dressing the meat; so, a sporting man, when he refuses a bet that he thinks will not answer his purpose, replies, in an ironical manner, "I'll leave it all to the cook."

LOWING RIG. Stealing oxen or cows.

MAN OF THE TURF. A horse-racer or jockey.

MARGERY PRATER. A hen.—*Cant.*

MOWER. A cow.

NAB. To nab the rust; a jockey term for a horse that becomes restive.

NAB-GIRDER, OR NOB-GIRDER. A bridle.

NABBER OF NAPS. A sheep-stealer.—*Cant.*

NORTH ALLERTONS. Spurs; that place, like Rippon, being famous for making them.

NOSE BAG. A bag fastened to the horse's head, in which the soldiers of the cavalry put the oats given to their horses: whence the saying, I see the nose-bag in his face; *i. e.* he has been a private man, or rode private.

PERSUADERS. Spurs. The kiddey clapped his persuaders to his prad, but the traps boned him; the highwayman spurred his horse hard, but the officers seized him.

PIPER. A broken-winded horse.

PRAD. A horse. The swell flashes a rum prad; the gentleman sports a fine horse.

PRAD COVE. A horse-dealer.

PRAD LAY. Cutting bags from behind horses.—*Cant.*

PRANCER. A horse. Prancer's nob; a horse's head, used as a seal to counterfeit pass. At the sign of the prancer's poll; *i. e.* the nag's head.

PRIGGING. Riding.

QUEER PRANCER. A bad, worn-out, foundered horse; also a cowardly, or faint-hearted horse-stealer.

QUI TAM. A qui tam horse; one that will both carry and draw.—*Law wit.*

RATTLER. A coach. Rattler and prads; a coach and horses.

RATTLING COVE. A coachman.—*Cant.*

RELIGIOUS HORSE. One much given to prayer, or apt to be down upon his knees.

RIP. A miserable rip; a poor, lean, worn-out horse.

RIPPONS. Spurs. Rippon is famous for a manufactory of spurs, both for men and fighting cocks.

ROARER. A horse that makes an unusual noise in breathing.

ROOST LAY. Stealing poultry.

RUMBLE-TUMBLE. A stage coach.

RUM PRANCER. A fine horse.—*Cant.*

RUMTITUM. A flash term for *a game* bull; one that is kept on purpose to be *baited*, and to try the courage of the dogs.

SCARLET HORSE. A high red, hired or hack horse: a pun on the word *hired*.

SECRET. He has been let into the secret; he has been cheated at gaming or horse-racing. He or she is in the grand secret; *i. e.* dead.

SICK AS A HORSE. Horses are said to be extremely sick at their stomachs, from being unable to relieve themselves by vomiting. Bracken, indeed, in his Farriery, gives an instance of that evacuation being procured; but by a means which, he says, would make the Devil vomit. Such as may have a wish to try an emetic, either on the animal or the fiend, may consult his book for the recipe.

SKIP-JACKS. Youngsters that ride horses on sale; horse-dealers' boys.

SMUG. A nickname for a blacksmith.

SNAFFLER. Snaffler of prancers; a horse-stealer.

SNICKER. A glandered horse.

SPANISH, OR KING OF SPAIN'S, TRUMPETER. An ass when braying.

SPANK *(Whip)*. To run neatly along, between a trot and gallop. The tits spanked it to town; the horses went merrily along all the way to town.

SPILT. Thrown from a horse, or overturned in a carriage. "Pray, Coachee, don't spill us."

SPINDLE-SHANKS. Slender legs.

SPOIL-IRON. The nickname for a smith.

STAR-GAZER. A horse who throws up his head.

STIRRUP-CUP. A parting cup or glass, drank on horseback, by the person taking leave.

SULKY. A one-horse chaise or carriage, capable of holding but one person; called by the French a *désobligeante*.

SWELLED HEAD. A disorder to which horses are extremely liable, particularly those of the subalterns of the army. This disorder is generally occasioned by remaining too long in one livery stable, or inn; and often arises to that height, that it prevents their coming out at the stable door. The most certain cure, is the *unguentum aureum*—not applied to the horse, but to the palm of the master of the inn or stable.

N.B. Neither this disorder, nor remedy, is mentioned by any of the modern writers on Farriery.

TIM WHISKY. A light one-horse chaise, without a head.

TIT. A horse.

TITTUP. A gentle hand-gallop, or canter.

TOUTERS. In the sporting world, men who, on the sly, obtain the speed and capabilities of race-horses during their training; and then give information to certain persons, who, from such sort of knowledge, bet their money with more certainty.

TURF. On the turf. Persons who keep running-horses, or attend and bet at horse-races, are said to be on the turf.

TYKE. A dog.

VARDO. A waggon.

VARDO-GILL. A waggoner.

UNGUENTUM AUREUM. A bribe.—*Classic cant.*

UNICORN. A coach drawn by three horses.

WILLING TIT. A free horse.

WOOLBIRD. A sheep.—*Cant.*

SPINNING ORGANS OF CATERPILLARS.

THE spinning organs of caterpillars consist of thin vessels, with a blind termination, one placed on each side of the intestinal canal, and much exceeding the length of the body—being a foot long in the silk-worm, for instance; they ultimately terminate by delicate excretory ducts, in an opening beneath the spinning tubercle on the lower lip, (nearly in the same manner as the sublingual glands beneath the tongue), where their fluid, becoming condensed by the action of the air, is drawn into threads, which are employed in forming webs for the purpose of metamorphosis. As is well known, we are indebted for silk to the beautiful web of the caterpillar of the Phalæna *Mori*, where the cocoon, weighing two grains and a half, consists of a thread two hundred feet long. In point of character, these organs are evidently repetitions of the spinning apparatus at the anus of a less perfect insect, *e. g.* spiders: and it is interesting to observe, that the web of the spider is chiefly employed to form a covering for the ova—thus serving to favour the developement of the young; whilst, in the caterpillar, the cocoon is subservient to the metamorphosis and developement of the animal itself.

ROYAL VETERINARY COLLEGE CASES.

SPAVIN.

A Bay Gelding---Aged.

Nov. 3. Admitted, with an enlargement of the off-hock at the seat of spavin, and lame.

A seton to be inserted, and dressed daily with the turpentine ointment.

27. Apply powder of sulphate of copper to the orifices of the seton.

28. Seton to be dressed with turpentine ointment.

Dec. 4. Diminish the size of the seton to one-third, and dress as before.

6. Seton to be removed.

8. Apply the solution of sulphate of zinc to the orifices left by the seton.

14. To take five drachms of aloes in a ball, and have mashes.

15. Ball has acted freely, hock to be kept wet with liquor plumbi, S. A. dilut.

26. Discharged.

OPHTHALMIA.

Brown Gelding---Six years old.

Nov. 8, 1827. Admitted.---Vessels of the conjunctiva very turgid, &c. To be bled to eight pints.

9. Apply frequently the dilute solution of lead every day.

12. To be bled in the angular vein, and take aloes, three drachms, in a ball.

13. Two drops of tincture of opium to be put into the eye.

15. Continue the lead lotion.

16. Continue the lead lotion; to take sulphate of copper and turpentine, each two drachms, made into a ball, with linseed meal.

17. Repeat ball.

19. Water, half a pint; sulphate of zinc, thirty grains; for a lotion, to be used frequently in the day. Repeat ball.

20. Repeat ball every day; inflammation lessened.

22. Powder of sulphate of zinc, two grains, to be put into the eye.

24. Repeat ball; and tincture of opium, two drops.

25. Take three drachms of aloes, in a ball.

26. Discharged cured.

POLE EVIL.

Aged Gelding.

Nov. 9, 1827. Admitted, with an enlargement in the pole. To take seven drachms of aloes, the part to be fomented, and to have mashes.

10. Ball operated; to continue fomentations.

13. Apply a solution of common salt frequently through the day.

16. To take one drachm of calomel, two of turpentine, in a ball.

17. Apply dilute solution of lead every day.

18. To be bled six pints; take aloes, five drachms.

19. Apply infusion of cantharides, two ounces, to the enlargement.

21. Use the fomentation frequently.

24. Take aloes, half an ounce, in a ball, and use cold applications.

26. Take turpentine, two drachms, in a ball: cold as before to be applied.

30. Common fomentations to be used frequently.

Dec. 6. Taken from the Infirmary.

INFLAMMATION OF THE LUNGS.

Chestnut Gelding---Seven years old.

Dec. 10, 1827. Pulse 65, respiration difficult, eyes dull, and loss of appetite.---To be put in the open air.

11. Relieved; insert a rowel in the chest.

12. Dress daily with turpentine ointment.

15. Convalescent; allowed full diet.

20. Taken out.

INFLAMMATION OF THE FOOT.

Bay Gelding---Six years old.

Dec. 27, 1827. To be bled in the foot eight pints; have on a *plain spring shoe.*

28. Take six drachms of aloes in a ball, and apply tincture of myrrh.

31. To stand up every night.

Jan. 1, 1828. Apply a poultice to the foot every night.

2. Foot to be stopped with wet clay; repeat poultice.

5. Apply tar to the sole.

10. Taken from the Infirmary.

INFLAMMATION OF THE LUNGS.

Bay Gelding---Six years old.

Dec. 27, 1827. Pulse accelerated, respiration laborious. Bleed eight pints, and take aloes, three drachms.

28. Relieved; to take calomel, one drachm, in a mash.

30. To take aloes, half an ounce, in solution.

31. Take calomel, one drachm, in a mash.

Jan. 1, 1828. Take aloes, three drachms, in solution; to have a rowel in the throat.

2. Common fomentation to the throat, dressing, and a clyster.

3. Calomel, one drachm, in a mash. Discharge has taken place; horse better.

4. Calomel to be repeated.

7. Remove the rowel, and give the calomel.

9. Make a seton over each side of the throat.

10. To dress seton daily with turpentine ointment.

20. To be bled from the palate, three pints.

GREASE.

Bay Gelding—Six years old.

JAN. 4. Large sores of the off fore-heel. Apply a poultice every night.

5. Apply turpentine ointment.

6. Take aloes, five drachms; apply oil of tar to the sores.

7. Ball operated; repeat oil of tar every day.

16. Discharged.

AN INSCRIPTION ON THE MONUMENT OF A NEWFOUNDLAND DOG.

(BY LORD BYRON.)

"WHEN some proud son of man returns to earth,
Unknown to glory, but upheld by birth,
The sculptor's art exhausts the pomp of wo,
And storied urns record who rests below:
When all is done, upon the tomb is seen,
Not what he was, but what he should have been;—
But the poor dog, in life the firmest friend,
The first to welcome, foremost to defend;
Whose honest heart is still his master's own,
Who labours, fights, lives, breathes for him alone;
Unhonoured falls—unnoticed is his worth—
Denied in heaven the soul he held on earth:
While man, vain insect! hopes to be forgiven,
And claims himself a sole exclusive heaven.
Oh, Man! thou feeble tenant of an hour,
Debased by slavery, or corrupt by power,
Who knows thee well, must quit thee with disgust,
Degraded mass of animated dust:
Thy love is lust, thy friendship all a cheat,
Thy smiles hypocrisy, thy word deceit;
By nature vile, ennobled but by name,
Each kindred brute might bid thee blush for shame.
Ye who, perchance, behold this simple urn,
Pass on—it honours none you wish to mourn:
To mark a friend's remains, these stones arise,
I never knew but one, and here he lies.

Duckworth and Ireland, 76, Fleet Street.

THE

FARRIER AND NATURALIST.

No. 3.] MARCH. [1828.

THE VETERINARY COLLEGE,

AS ORIGINALLY CONSTITUTED,

COMPARED WITH ITS PRESENT MISMANAGED AND CORRUPT STATE.

Addressed to His Majesty, as Patron, and to the Subscribers of the Institution.

"Look here, upon this picture, and on this."
Hamlet, Act 3, Scene 4.

HAVING, in our first Number, given a brief history of the establishment and progress of our Veterinary School, we are now induced, from regard to the interests of the profession and the public, to take into consideration its laws, the mode in which they are executed, and its government. On further observation, and better acquaintance with the College, so great a disparity do we find between the original objects and intentions of its founders, and the purposes to which it is at present devoted, that we can no longer refrain from drawing a parallel between them. Of the high hopes that were entertained when it was first established, and the beneficial results that were expected to accrue from its labours, our readers may judge from the extracts we are about to offer; in what manner these have been fulfilled, it will be our duty impartially to point out.

The rules and regulations which were originally adopted, are now, through the apathy and imbecility of the Governors, in most instances departed from; having been curtailed, nullified, and set aside, by the preponderating power of Professor Coleman and his *Sub*, until little other law is recognized at the College than the dicta of these interested individuals. This matter is of such paramount importance as to demand the most serious attention of the Subscribers; therefore, without any further introduction, we shall proceed to lay before them a comparison

between the past and present laws of the College; that is, if any law can at this time be said to exist beyond that which we have above alluded to.

Regulations for the Veterinary College.

Rule I.—The Establishment shall consist of a *Society* and *School*, to be called the *Veterinary College.*

Rule II.—The business of the Society shall be conducted by a President, Twelve Vice-Presidents, Twenty-four Directors (or Governors), and a Treasurer; forming a Council, in whom shall be lodged the whole executive power of the College, *subject to the control of the Members at large in General Meetings.*

Rule III.—The President, Vice-Presidents, and Treasurer, shall be chosen annually. The twenty-four Governors shall be divided into four classes. One class shall go out each year, and six other Governors be elected in their place. No Governor shall be re-elected till after the intervention of one year.

Rule V.—Five Auditors shall be annually chosen; three of whom shall not be of the Council, nor on any Committee.

Rule VII.—Four Quarterly General Meetings shall be held in the year.

None of these very excellent and wholesome laws are acted upon. Where are the President—the Vice-Presidents? *Who is the Treasurer?* Do the twenty-four Governors regularly, or ever, hold their Monthly and Quarterly Meetings? *Do the five Auditors ever examine the Accounts?*

Rule XIV.—No Member, who shall in any manner, directly or indirectly, derive any advantage, profit, or emolument, from the funds of the College, or who shall be charged by the College with any office whence such profit shall accrue, shall be elected into the Council; and any Member of the Council so receiving, shall immediate vacate his place. Nor shall any Member, who receives any advantage or emolument from the College, be chosen or continue on any Committee.

How carefully the spirit of this rule is now maintained, may be exemplified by the subjoined enumeration of the different offices held by Mr. *Assistant* Sewell, viz.—Member of the Examining Committee, Treasurer and Secretary to the same; Treasurer, Secretary, Steward, Collector, and Demonstrator, to the College; Surgical Lecturer *(for his own benefit)*, Conservator of the Museum, &c.

Rule XVI.—A volume of the Transactions of the College and School shall be published annually, and delivered to each Subscriber, or his order, at the College, *gratis*.

Above thirty years have elapsed since the promulgation of this order; during which time the Subscribers have been presented, by Professor Coleman, with a few pages on wounds of joints, and an unfortunate Essay on a *patent artificial* Frog, as the sum total of the discoveries which the third of a century has afforded.

No Transactions have ever been published, with this solitary exception, which occurred in the year 1797; and so great was the effort in bringing it forth, and such the effect upon the Subscribers, that it may be fairly attributed as much to good policy as incapacity that no further exposures has appeared.*

Rule XVII.—*A Medical Experimental Committee* shall be chosen, who shall *meet occasionally* for the purpose of suggesting and making experiments. with a view to throw additional light on the animal economy, and to ascertain the effects of medicine upon different animals, to be procured for that particular purpose, and for inspecting the drugs and medicines bought for the use of the Infirmary; and this Committee shall from time to time *make reports* of their proceedings.

In this rule, we see the essence of that spirit which pervaded the founders of the College; among whom were the names of the scientific Hunter, Crawford, Fordyce, Scott, Baker, and Cline, who, doubtless, intended, in giving it their support, to form a school for the cultivation of comparative anatomy in general; perceiving the important advantages which medical science in particular might derive from the efforts of such an establishment, properly conducted, and pursuing experiments on animals with freedom and zeal.

But, since the death of John Hunter, what has been accomplished? The *proceedings of this Committee have never been heard of;* and though much may have been effected by individuals outside the College walls, yet, during this protracted period, not a single fact has been added by this pompously announced Committee to the common stock of zoological knowledge.

Isolated experiments have been performed by zealous pupils, but has any regular course of such been undertaken at the College, and made public? Are any animals procured for this purpose by the

* Reprinted in this Number, p. 128.

Professor, or are the qualified pupils even permitted to conduct experiments, but at their own expense? Where are the fruits of thirty years in comparative anatomy and medicine? There is not, will it be believed? even a Manual of Anatomy for the use of the students, who are obliged to wade, without a demonstrator, through the vague and contradictory works of various authors, uncertain whether what they learn be either acknowledged by their superiors, or whether it be really correct.

There is no printed authorized Pharmacopœia. Is neglect or incompetence the apology?

Rule XVIII.—Besides the four Quarterly Meetings, there shall be ordinary Meetings of the Subscribers on the Monday of every week, in order to consider and discourse of matters relating to the particular object of the Institution; to hear, read, and discourse upon, all letters, reports, communications, memoirs, or other papers, containing such information, medical, philosophical, agricultural, commercial, or of any other nature, as may belong to the province of Veterinary Science.

Here, again, we see the liberal views and enlarged sphere of usefulness originally contemplated. But how have they been encouraged? The voice of the Subscribers has been long silent; and no one dreams of questioning the authority of "the ruling powers," any more than he would think of addressing a paper on a medical or veterinary, much less a philosophical or scientific, subject, to the consideration of an institution so low in the estimation of well-informed men.

"A superintending Committee, consisting of three of the Governors, shall meet every Tuesday, to receive the Reports of the officers, and examine into the state of the College."

No such Committee is in existence.

"The *Professor*" shall have the arrangement and direction of the studies and occupations of the Pupils, of the distribution of his Lectures, and "shall make a report every week to the Committee of the *state* of the College," and "receive nothing into the College but what is ordered by them," &c.*

* The manner in which the Professor discharges these duties is known only to himself.

Rules respecting the School and Pupils.

1st.—Any person desirous of becoming a Pupil in the *foundation** of the College, shall at least be able to read and write legibly. Preference shall be given to such youths as have received the elements of a good education; and more especially to those who have some knowledge of Surgery and Pharmacy.

Every one who has attended the College of late years, is aware, that, contrary to this rule, Mr. Coleman omits no opportunity of stating, that medical pupils seldom succeed as Veterinary surgeons; though experience is in direct contradiction to his assertion—the most eminent practitioners having been originally of that class.

By persuading the better informed pupils, however, who might otherwise know enough to expose the fallacy of his doctrines, that the knowledge they have previously acquired will avail them little in studying the Veterinary Art, he appears to check their disposition to inquiry, and prepares them to receive his theories with implicit confidence. On the other hand, how has the art been degraded, and why does it hold so low a scale in public estimation? The Professor has not scrupled at times to admit the most improper persons, from whom he had nothing to fear,—linendrapers and paper-hangers,—some who, from their own acknowledgment, had never sat on a saddle in their lives,—shoemakers and tailors, dividing their time between the College and the bench, have been known to labour and study alternate days, and, in a few months—Oh, horrible!—turn out with a regular licence to practise on the lives of the brute creation.

Rule 5th.—Persons qualified according to the foregoing Rules, will be admitted into the College, on paying Twenty Guineas, which will constitute them perpetual Pupils.

Paying to whom? To the Establishment, it would appear; but, whatever was originally intended, it is now a bonus, paid into the hands of the Professor, and *pocketed* by him—a circumstance which, in some measure, serves to explain the readiness with which the lowest characters obtain admittance into this profession.

Page 35.—"Although the particular distribution of the studies shall be referred to the judgment of the Professor, yet the general order of them shall be nearly as follows:"—

* What means the FOUNDATION—Professor Coleman? We shall discuss this question with you hereafter.

The study of Zootomy, first, was to occupy nearly half a year: next, that of the exterior knowledge of the Horse, and a course of operations,—to be followed by a course of Pharmacy and Medical Botany. The shoeing department was to be perfectly understood, and particularly attended to; and, after having gone through every branch of the Veterinary Art, "the Pupils shall be obliged to attend the Infirmary daily, when the Professor shall employ them according to their respective abilities. He shall confide to their care one, two, three, or more animals, whose symptoms they shall be obliged accurately to observe, and note down in a journal, and report the same daily to the Professor."

Particular instruction was also to be given on the nature and treatment of Epizootic diseases, &c.; and "it appears from the above division of the studies, that a term of three years is sufficient for a complete education, *provided* the pupils are capable, assiduous, and well-inclined."

Now, it is well known that the "march of intellect," of late, has been most rapid; consequently, if the pupil be incapable—destitute of all preliminary knowledge,—in fact, if he be as ignorant as one of the dumb patients, a six months' attendance has frequently been sufficient to attain for him that unerring criterion of veterinary talent—the thing called a Diploma.

Finally—"The Pupils, having completed their studies, shall undergo a PUBLIC EXAMINATION in the theory and practice of every branch of the Veterinary Art; and those who shall be considered as perfectly instructed therein, shall receive a Certificate (or Diploma), signed by the Professor, and confirmed by the Committee."

Our remarks in detail, on the existing state of this important regulation, must be deferred till another Number: suffice it now to observe, that the examinations, instead of being *public*, are conducted privately at a tavern, before a Committee of medical gentlemen, who, however eminent they may be in their own profession, are decidedly incompetent to examine a pupil on the Veterinary Art; as may be proved to demonstration by a few minutes' discourse with some of the miserable practitioners (we speak of the minority, who degrade the whole body) whom they have authorized and sent forth.

Why do not experienced veterinarians constitute this Examining Committee? In that case, the College Diploma would be a mark of honourable distinction; instead of which, it is now the emblem of a farce, or of a contemptible humbug. At the early institution of the College, it was necessary to resort to medical examiners; but now, it

is the greatest injustice to the profession, the pupils, and the public, that candidates should be rejected or admitted at the discretion of an inefficient junta, like the present Board of Examiners, to whom, however, we shall devote a separate article at a future period.

By the foregoing extracts, we are enabled to form a judgment of the kind of institution which St. Bel's supporters intended to establish, which was established, and indeed continued, till the lamented demise of that Professor.

Upon Mr. Coleman's accession to the chair, the affairs of the College were in a very precarious state, which afforded facilities, and perhaps, in some measure, furnished a pretext, for the innovations that ensued. We give this gentleman due credit for the address with which he collected the scattered subscribers at that period, and for persuading his Majesty's Government to extend their liberal aid in support of the Establishment; but nothing can or ought to palliate his now arbitrary proceedings; and his undue influence over the veterinary profession, owing to his Government appointments, requires, at our hands, exposure and reprobation.

The present government of the College is supposed to take its rise from a General Meeting of Subscribers, held once a-year at the Thatched-house Tavern; but this assembly is, in truth, a mere shadow, or matter of form. A subscriber is seldom heard either to propose or remonstrate. The existing officers are re-appointed, and the whole affairs of the College are referred to a committee, who again consult Professor Coleman, with whom the entire control of the Establishment consequently rests.* In short, it has been repeatedly stated, and never denied, that in Mr. Coleman lies the supreme authority of the College. That he holds nearly all the offices and patronage, and receives the greater part of the emoluments thereof, will appear from the following enumeration of his titles and appointments:—Professor to the Veterinary College; Veterinary Surgeon-General to the British Cavalry; Veterinary Surgeon to the Ordnance Department: *Druggist General, and Contractor for the Government Horses;* Lecturer to the Farriers at the Woolwich Depôt;

* The Committee of Governors was formerly chosen by the subscribers at large; but at present, when a vacancy occurs, they choose from among the perpetual subscribers whomsoever they themselves may deem fit or convenient; thus depriving the members of their elective rights, and making the government a close conclave, chiefly of the Professor's nomination, and subservient to his interests.

Principal Examiner, Chief Receiver of Fees, and Surgeon-General to the College.

The Professor's *salary* is £500 per annum. He receives twenty guineas from every pupil at the College, and is liberally paid for all other appointments, amounting, it is understood, to upwards of £3000. As Veterinary Surgeon-General to the Cavalry, he possesses the whole patronage of that department, and can forward or blight the prospects of the pupils at pleasure, in proportion to their independence or servility. As the *Veterinary* Examiner of his own pupils, he exercises almost equal power, and can make the ordeal easy or difficult. A diploma may certainly be gained against his will, by distinguished merit, but, in general, it is notorious that the answers of pupils must agree with his favourite opinions, whether true or false it matters not, or rejection will await them. Consequently they dare not, even in conversation, express an opinion contrary to the Professor's views; no new opinion, no glimpse of improvement, is permitted to enter; and it must be obvious, that this plan is decidedly calculated to perpetuate ignorance, by prohibiting liberal research, among the students. Nor are the students the only party aggrieved: the public in general, and the reputation of the art, it can be proved, have suffered by the admission of unqualified characters, while some of the most accomplished candidates have been rejected on trifling grounds, or perhaps from contending for truth in opposition to the Professor's errors.

The students have no authorized printed Pharmacopœia, no Manual of Anatomy, and no demonstrator; for Mr. Assistant Sewell, although holding the place and perquisites, *cannot be said to demonstrate!!*

The Lectures are given in one long course; and if from illness the Professor is unavoidably prevented from giving them, there are none delivered, as Mr. Sewell is prevented, it appears, from incapacity. No Lectures on Pharmacy are ever given. The case of the pupils, under existing circumstances, is truly deplorable.

As to the present Rules and Regulations, but little information can be gained from them, being comprised in one quarto page, the reverse of which is occupied by a kind of generalizing advertisement of the Institution, and its claims to public support. The "Rules" relate chiefly to the "privileges," &c. of subscribers, and are particular only in securing and enforcing their annual contributions; while the greatest possible care is taken to avoid every expression that might bind the Professor to his duty towards the public and the pupils, for whom, indeed, not a single regulation of any sort appears. It is a

most unsatisfactory document, leaving the Professor irresponsible,—with the whole establishment, funds, pupils, the interest of the profession and of the public—all apparently at his mercy.

The following *distant reference* forms a part of this guarded document.—"Every gentleman having subject of complaint, either on the medical or stable treatment of his horse, or of misconduct in the forge, or of any servants of the College, is requested to communicate the same *by letter*, addressed either to the Chairman of the Stable Committee, or of the next General Meeting." This is referring Mr. Thompson to Mr. Thompson.

There is another circumstance mentioned which we cannot pass over, as it shows the money-getting spirit of the College rulers, and has done much injury to the profession, particularly in London. In order to induce people to become subscribers, they have annexed a catalogue of the prices at which medicines may be obtained at the College: these are "lower than the ordinary prices of druggists," and calculated to ruin the private practitioner, who must charge, to obtain a livelihood, at least five times the miserable deteriorating pittance of the College monopolists.

But enough has been said, it is confidently hoped, to awaken the attention of every subscriber, and to call forth an expression of disapprobation at these abuses (for all are interested in the improvement of the veterinary art), which can only be checked by reformation.

It is somewhat singular, that, in this liberal and populous country, so renowned for its horses, and conspicuous for the high share of regard and importance attached to them, there should be only one Institution devoted to their medical care—and still more extraordinary that this should have fallen into the hands of a single individual. This unjust and improper thraldom of a profession will surely never be permitted, when the members of it are made fully sensible of the situation in which they are placed. It has hitherto been from misapprehension that the public have listened to the dicta of the College: had they been aware that it was only to please a prejudiced Professor that they were sacrificing their interests, an investigation would long since have been instituted.

Upon the whole, we do not hesitate to assert, that the Veterinary College is one of the most rotten public establishments in England: but we hope and believe, that we have it in our power to considerably reduce the mass of corruption by which both it and the profession are at present degraded.

ANIMAL PHRENOLOGY.

[Continued from p. 75.]

Order 2.—Intellectual, or Knowing Faculties, is subdivided into 3 Genera.

Genus I.—External Senses.

These are common both to man and animals.

Voluntary motion.
Feeling.
Taste.
Smell.
Hearing.
Sight.

The external senses are the instruments by which the internal faculties show their activity. And many animals have these senses more active and perfect than man; but none equal him in understanding.

Genus II.—Perceptive Faculties.

Partly common to man and animals.

They make animals acquainted with existences, with the physical qualities of external objects, and with their various relations.

22. Individuality.
23. Configuration.
24. Size.
25. Weight.
26. Colouring.
27. Locality.
28. Calculation.
29. Order.
30. Eventuality.
31. Time.
32. Melody.
33. Artificial language.

22. *Individuality.*

By comparing one kind of animal with another, or with man, it is obvious that tame animals have the forehead more developed than wild

ones; and they are more or less tameable in proportion as the forehead is so developed or enlarged. It has long been a disputed point, whether the tameableness of animals is solely the work of man, or whether they are tame by nature; but this is a point not difficult to decide on, as we evidently see them in both states, and those animals that are naturally wild, even when tamed, become again wild if neglected, or are only tame to their keepers or particular persons. An instance of this was seen in the hunting tigers of Tippoo Saib, which were brought to the Tower of London after the fall of Seringapatam. These had been tamed for the chase, but were only so to their Indian keepers, or persons they were used to, and ultimately became savage. On the other hand, certain animals are tame without any trouble: mice follow the abode of man; and in Egypt, though considered an impure animal, dogs, without any particular master, remain in the villages and towns, never go far from the dwellings of man, and consequently are originally tame.

This organ is situated in the middle of the lower part of the forehead, between the eyebrows, at the anterior inferior part of the brain (above it is the organ of meekness), in conjunction with which it renders animals more docile and serviceable in proportion as it is developed. It is frequently found large in the dog and horse.

23. *Configuration, or Form.*

This organ is situated in the internal angle of the orbit: and as we find animals of the lower order (insects) know well individuals of their kind, and of their family, they therefore possess the faculty in question. Elephants and dogs give very striking examples of this kind, by recognizing persons after having seen them a long time before. Amongst sheep, we see the young ones always know their mothers; and honey-bees distinguish the individuals of their own hive from those of any other.

27. *Locality.*

This organ will be found in the anterior part of the brain, above the eyebrows; and we find most animals endowed with this faculty, as, without it, they would not be able to find their young or their dwellings, on leaving them to seek food. It is very active in some animals over others of the same kind. Horses and dogs possess this faculty to a strong degree, but in some it is much more powerful than in others; and we may occasionally see dogs and horses, more particularly the former, find their way from place to place without difficulty, to the astonishment of their owners. Cats also are sometimes known to find

their homes, when they have been carried to a considerable distance. Also pigeons, and the various migrating birds, possess this faculty, which, at certain periods of the year becomes so active, that it is difficult to keep them alive, and from injuring themselves in attempting to escape.* These animals also come back, not only into the same climate, and into the same country, but to the same place—to the same window, bush, chimney, or tree.

82. *Calculation.*

This organ is placed at the external angle of the orbit. It is uncertain whether this faculty exists in animals. It is asserted that a bitch perceives if one of her puppies is taken away; but it is not evident that she counts her young ones: she may perceive by the faculties of individuality and form, that an individual is wanting. George le Roi has observed, that magpies count three; for if there be a hut in the neighbourhood of a tree, upon which a magpie has placed its nest, and if three persons enter this hut, the magpie is not deceived —it does not come to the nest before the three persons have left the hut; but if more than three persons enter, it can no longer reckon their number, and cannot compare the number of those who are gone in, with that of those who are gone out. Dupont de Nemours, however, thinks that magpies can count nine.

* Mr. Robert Sweet, of Chelsea, the well-known botanical author, who keeps a great many of the migrating birds, has written a small Essay, entitled the "British Warblers," on the Genus Sylvia. He gives us the following account:—These birds, when in confinement, are very restless at the seasons of their usual migration from one country to another,—at the time that they are leaving this country to another, in autumn, about twice during the winter, and again when they are returning in spring. From their agitation at various times in winter, it may be concluded that they visit more than one country after their departure from this. It is very curious to see them when in this state: their restlessness seems to come on them all at once, and generally in the evening. When they are sitting, seemingly quite composed, they start up suddenly, and flutter their wings; sometimes flying direct to the top of the cage, or aviary; at other times running backwards and forwards on their perches, continually flapping their wings, and looking upwards all the time: nor will they notice any thing that is going forward, as long as they continue in that state, which lasts for an hour or two at each time. By their always wishing to fly upwards, it may be supposed, that when they first take their flight, they mount upwards to a great height, so that they can direct their course the better, by seeing the way clear all round them. Their agitation generally lasts on them about a fortnight; sometimes more, and sometimes less. In the spring it seems strongest on them. At that season they will sometimes flutter about the whole of the night, and sleep a great part of the day."

32. *Melody.*

This organ is situated laterally in the forehead, above those of order and calculation. The heads and skulls of birds which sing, and of those which do not sing, and the heads of the different individuals of the same kind which have a greater or less disposition to sing, present conspicuous difference at the place of this organ. The heads of males, for instance, and those of females of the same kind of singing-birds, are easily distinguished by the different developements of this organ.

33. *Language.*

The organ of language is situated in the lower and back part of the anterior lobe of the brain, and lies transversely upon the orbitary plate of the frontal bone.

As man and animals are destined for society, it is consequently necessary they should communicate and understand their sensations, ideas, and reflections; and this communication can take place only by signs. These signs are either natural, or arbitrary and artificial. The natural signs are conformable to every faculty. All beings endowed with the same activity essentially in the same manner, and all beings endowed with the same faculty, understand its natural manifestations: but several beings, all endowed with different faculties, could not communicate their sensations. This law is common to man and animals.

Animals which have a certain faculty in common with man, understand his natural manifestations. The dog, for instance, perfectly understands the signs of anger in his master, because the dog possesses the faculty which produces anger.

Animals do not at all produce, yet they learn, the signification of arbitrary signs, in as far as they are endowed with the respective sensations and ideas: hence tame animals learn in every country the arbitrary language of their masters: they may acquire even the significations of different sounds in different languages.

Genus III.—Reflected Faculties.

34. Comparison.
35. Causality.

These powers constitute what is called reason, and consequently belong principally, if not wholly, to man.

INSTRUCTIONS FOR BREEDING PHEASANTS,

BY MR. P. CASTANG,

Manager to the late Mr. Brooks.

Eggs being provided, put them under a hen that has kept the nest three or four days; and if you set two or three hens on the same day, you will have the advantage of shifting the good eggs. At the end of ten or twelve days, throw away those that are bad, and set the same hen or hens again, if setting hens should be plenty.

The hens having set their full time, such of the young pheasants as are already hatched, put into a basket, with a piece of flannel, till the hen has done hatching.

The brood now come, put under a frame, with a net over it, and a place for the hen, that she cannot get to the young pheasants, but that they may go to her; and feed them with boiled egg cut small; boiled milk and bread, alum curd, ants' eggs, a little of each sort, and often.

After two or three days they will be acquainted with the call of the hen that hatched them; let them have their liberty to run on the grass plat, or elsewhere, observing to shift them with the sun, and out of cold winds: they need not have their liberty in the morning till the sun is up; and they must be shut in with the hen in good time in the evening.

Every thing now going on properly, you must be very careful (in order to guard against the distemper to which they are liable) in your choice of a situation for breeding the birds up; and be less afraid of foxes, dogs, pole-cats, and all sorts of vermin, than the *distemper*. I would rather encounter all the former than the latter; for those, with care, may be prevented, but the distemper once got in is like the plague, and destroys all your hopes. What I mean by a good situation, is nothing more than a place where no poultry, pheasants, or turkeys, &c., have ever been kept; such as the warm side of a field, orchard, pleasure-ground, or garden, or even on a common, or a good green lane, under circumstances of this kind; or by a wood side; but then it is proper for a man to reman with them under a temporary hovel, and to have two or three dogs chained at a proper distance, with a lamp or two at night. I have known a great number of pheasants bred up in this manner in the most exposed situations. It is proper for the man always to have a gun, that he may keep off the hawks, owls, jays, magpies, &c. The dogs and lamps shy the foxes more than any thing; and the dogs will give

tongue for the man to be on his guard if smaller vermin are near, or when strollers make their appearance.

The birds going on as before mentioned, should so continue till September, or (if very early bred) the middle of August. Before they begin to shift the long feathers in the tail, they are to be shut up in the basket, with the hen, regularly every night; and when they begin to shift their tails, the birds are large, and begin to lie out; that is, they are not willing to come to be shut up in the basket. Those that are intended to be turned out wild, should be taught to perch (a situation they have never been used to); this is done by tying a string to the hen's leg, and obliging her to sit in the tree all night: be sure you put her in the tree before sunset; and if she fall down, you must persevere in putting her up again, till she is contented with her situation; then the young birds will follow the hen, and perch with her. This being done, and the country now covered with corn, fruits, shrubs, &c., they will shift for themselves.

Feeding.—A strict cleanliness is to be observed, the meat not to be tainted with dung, and the water to be pure and often renewed. Ants eggs being scarce, hog-lice, ear-wigs, or any insects may be given; or artificial ants' eggs substituted, composed of flour, beaten up with an egg and shell together, the pellets rubbed between the fingers to the proper size. After the first three weeks, in a scarcity of ants' eggs, a few GENTLES, procured from a good liver tied up, the gentles, when ready, dropping into a pan or box of bran; to be given sparingly, and not considered as common food.

A Receipt to make Alum Curd.

Take new milk, as much as your young birds require, and boil it with a lump of alum, so as not to make the curd hard and tough, but custard like.

N. B.—A little of this curd twice a day, and ants' eggs after every time they have had a sufficient quantity of the other food. If they do not eat heartily, give them some ants' eggs to create an appetite, but by no means in such abundance as to be considered their food.

The distemper alluded to, is not improbably of the same nature as the roup in chickens, contagious, and dependent on the state of the weather; and, for prevention, requiring similar precautions.

Food for grown pheasants, barley or wheat; generally the same as for other poultry. In a cold spring, HEMP-SEED, or other warming and comfortable seeds, will forward the breeding stock.

ON TONIC MEDICINES FOR HORSES.

MEDICINES of the class denominated tonic, are occasionally used in veterinary practice with much benefit; but, in a great number of instances, more credit is given to their effects than we are justified in ascribing to them.

The action of tonic medicines on the system is not clearly understood, and, consequently, cannot be easily defined; but the most probable mode of their operation is that by excitement—increasing the vigour of the system generally.

By their effect upon the stomach, the tone of which is strengthened, and ultimately by acting on the muscular fibres themselves, through the medium of the blood, they produce increased action, and, if regularly administered and judiciously selected, a more permanent and desirable effect may be calculated upon, in many cases, than from the exhibition of cordials in solitary or frequent doses; but in others, a combination of them may be preferable.

Those drugs which are used for tonics may be divided into mineral and vegetable; of these the former will be found the most powerful.

The most effectual of the mineral tonics are sulphate of copper *(blue vitriol)*, subacetate of copper *(verdigris)*, sulphate of zinc *(white vitriol)*, oxyde, or flowers of zinc Ægyptiacum, sulphate of iron *(green vitriol,* or *copperas)*, arsenic, and the different mineral acids, viz. muriatic, nitric, nitrous, and sulphuric.

Of the vegetable tonics, the Peruvian or cinchona bark, Rhatany or krameria root, Cusparia or Angustura bark, may be considered the most powerful, and likely to be efficacious; and under this class nearly all the bitter vegetable productions, whether roots, wood, barks, leaves, or flowers, may be included as being occasionally useful. Of these we may name columba, quassia, camomile, gentian, buckbean, &c.

A strong decoction of oak or willow bark, when a tonic drink is used, will afford an excellent vehicle for more powerful remedies.

Tonic medicines will be useful in most cases after active inflammation has completely subsided, as after acute inflammation of the lungs, &c., and all diseases where extensive blood-letting has been had recourse to. In diarrhœa, when inflammation is not present, tonics, combined with astringents, may be given with advantage.

There are also not unfrequently found, among horses, particular temperaments or habits of body, which are commonly denominated weak and washy, which we have often seen benefited by a regular course of tonic medicines.

ON BLEEDING HORSES.

[*By Mr. B. Clark, in Rees's Cyclopædia.*]

THIS is an operation frequently required in veterinary practice; principally intended to diminish the mass of blood, and thereby destroy the too great fulness, or over-action, of the heart and arteries.

When this operation is intended to affect the general system, the evacuation is usually made from the jugular vein. For the relief of a particular part, the vessels which belong to it, or which are adjacent to it, may be opened; as the vein running down the inside of the fore-arm is commonly opened when it is conceived the shoulder is affected, the necessity of this operation, on account of injuries in this part, is less frequent than is generally imagined; the vein itself, in general, gives out but little blood, and is very apt to swell after the operation.

Affections of the feet are more frequent, and we have often opened the coronary veins with obvious good effects: by puncturing with a lancet various parts of the coronary ring, the blood flows copiously, and at length stops of itself, without the least ill consequences.

The vein which encircles the coffin-bone is also, without much difficulty, opened in inflammations of this part; the blood flows freely, the artery which accompanies it being in general opened along with it.

It is necessary, in performing this operation, to remove the horn covering the vessels with a drawing-knife, till the blood flows in sufficient abundance. The horn round the point of section should be thinned considerably, to prevent irritation, and mild resinous dressings should afterwards be laid over the part to exclude the air, &c.

This operation we have heard condemned by some, as producing ill consequences, and a sore difficult to heal. We have only to remark, after having repeatedly performed it, that we have not met with an instance of these ill effects following it.

The angular veins of the eye are often opened with good effects in inflammations of this part, as also the vessels which are seen passing over the sclerotic coat of the eye, and over the duplicature of the *membrana conjunctiva* on the inside of the eye-lids, both of which admit of easy section with the lancet.

The *temporal* artery also presents itself very conveniently for opening, in the horse; and in inflammations of the brain, or its coverings, or where a sudden depletion of the system is desired, it is productive of manifest good effect. If this vessel should bleed too freely, and appre-

hensions are entertained of the loss of too much blood, it is most easily stopped by pressure, or by a deep incision which completely severs the vessel; in this case, its ends soon retracting, stop the further effusion of blood.

The veins of the palate are conveniently situated for opening, by making a transverse incision in this part with a lancet; and this is often had recourse to in the relaxation of the palate, termed *lampers*, and with apparently good effect. Some are deterred from the operation, by having experienced a difficulty in stopping the flow of blood; a circumstance that, in the few times we have performed this operation, has not occurred to us.

We shall now briefly state the mode of operating, and the consequences which sometimes follow the opening of the jugular vein in horses.

It is most usual to bleed with the fleam, or the lancet; the former, on account of the thickness of the skin of the horse, and the resistance afforded by the hair, is generally had recourse to. It is also next to impossible to drive the blade into the neck so deep as to be injurious, on account of the shoulder to which it is affixed: it is, perhaps, on this account, the safest and most certain instrument, especially in the hands of grooms and helpers in stables, as it cannot be much abused.

In the structure of it, the back should be particularly attended to; for, in general, this is too narrow, insomuch that the instrument, being struck, sinks into the channel of the vein; the prominent muscles of the neck receive the stroke, and the vein is not opened.

To remedy this, which is a very common inconvenience, the back of the fleam should be at least three quarters of an inch broad, in which case the operation very rarely fails.

The lancet also is very convenient in thin-skinned horses, and performs the operation very well. It requires, however, on account of the resistance of the skin and hair, to be used rather boldly, as to the length it is presented with, and the force employed, at least when a copious flow of blood is desired.

It is usual to wet the hairs over the part intended to be punctured; and then, if they are drawn parallel to the direction of the vein, the lancet passing between them, there is less resistance than if they presented themselves transversely to the blade; in which case they must necessarily be divided before the incision can take place.

The jugular vein, after bleeding, often ulcerates, and is attended with the most serious ill consequences, the mischief extending in both directions along the internal surface of the vein from the point of the inci-

sion; the cavity of the vein, or its canal, becomes obliterated, and the irritation occasions a thickening of the cellular membrane surrounding the vein, often to some inches in depth. This, in general, if no external irritation happen, subsides gradually, and disappears without any further ill consequences, and the vein is totally lost on that side: at other times, an oozing and discharge of thin lymph takes place from the injured part, and a sinus form, running mostly against the course of the vein up the neck, which, being *freely opened*, soon heals without farther inconvenience. At other times, considerable abscesses form, which are opened without danger, and the thickening of the cellular membrane gradually subsides, and the part heals. Again, in others, the inflammation and ulceration extend along the course of the vein to the head, forming abscesses, which burst and discharge blood, and the ulceration, extending to the head, becomes fatal.

As prevention is often much easier than cure, to avoid this accident great care should be taken to use a clean instrument, with a smooth, keen edge; not to strike where the vein has been already opened, where very often is an enlargement, and the vein becomes thinner in that part, and more extended; *not to include any thing but the skin in pinning it up;* and not to leave the pin remaining in the neck too long, to become cankered and rusty, and thus produce irritation. The pin should be clipt as short as possible, to prevent the horse rubbing it out against the manger, &c.

The wound will in general close of itself after a few minutes, if all pressure upon the vein be removed, and sufficiently firm to stop the escape of the blood, if the lips of the orifice are pressed together, without any pinning; and the horse's head, to render it more certain, should be tied rather high to the rack for a short time: when, however, the orifice is very large, or the veins very tumid, and disposed to bleed, pinning is the surest practice.

Lancets are often made with a spring, suddenly to plunge them into the vein, and are usefully and commodiously employed for this operation, as they do it with great suddenness and effect; more so than the hand or the blow of a bloodstick. The only objection is, that the instrument, from the pressure against the neck required in using it, cannot be so suddenly withdrawn as might be desirable, so that if the horse plunges at the moment, he might severely cut himself; which we have seen happen. To prevent the possibility of such an occurrence, the instrument might be provided with a second spring, to bring back the lancet to its sheath, or case, immediately after the stroke, which would render this instrument very useful and perfect.

ON THE DISEASES OF THE EYE OF THE HORSE.

[Concluded from p. 55.]

Of the Puriform Inflammation of the Eye of the Horse.

THIS inflammation of the eye of the horse differs from that which has been described, in the part of the eye which is affected, as well as in some of the symptoms of the disease. In the puriform inflammation, the disease is confined to the membrane which lines the eye-lids and covers the eye-ball, called the conjunctiva, or mucous membrane; and its chief character is the profuse discharge of a puriform fluid. Besides the discharge of mucus, which is more or less mixed with tears, the eye-lids are very much swollen, and their edges glued together; their internal membrane is also swelled, formed into folds, with matter deposited among them. The cornea appears depressed, from the swelling of the conjunctive membrane on the white of the eye, sometimes forming large bladders, which the ignorant have considered as new growths, and conceived proper to remove. The puriform inflammation of the eye is generally the effect of cold, resembling the common catarrh, and it often spreads among all the horses of a stable; for, like the same disease in the human body, if the matter touches a sound eye, it produces the disease.

The treatment of this species of inflammation is to be conducted on the same general plan as in that already detailed. The depletive system of bleeding and purging is to be had recourse to, and pursued according to the violence and obstinacy of the attack. The eye, or eyes, for it usually attacks both, should be fomented with the anodyne and emollient decoctions, the animal kept in a well-aired stable, and fed moderately. When the more severe inflammatory symptoms are subdued, the extract of lead, undiluted, may be applied once or twice a-day to the eye with a camel's-hair pencil, in the same manner as directed with regard to the vinous tincture of opium; or a small portion of the red precipitate ointment may be put between the eye-lids with a camel's-hair pencil, or probe, every second day.

Of the Specific Inflammation of the Eye of the Horse.

The disease now to be described is perhaps the most common, and certainly is by far the most dangerous, disease of the eye of the horse. It has seldom been distinguished from the simple and puriform inflammations of this organ, though its more serious consequences are well known.

This inflammation is seated in the internal parts of the eye-ball, affecting more particularly the choroid coat and the iris.

There usually comes on very suddenly, perhaps in a single night, a great tenderness in one eye, commonly marked by the eye-lids being shut, a copious secretion of tears, the white of the eye appearing slightly

red, and the whole anterior chamber of the eye dim and clouded; there being no distinct speck on the cornea, as takes place in the common inflammation of the eye. The redness of the eye-ball is never very remarkable, even though the disease assumes its most aggravated form; but the dimness of the anterior chamber increases rapidly, and in two or three days, or even a shorter period, a yellow spot appears at the bottom of that cavity, arising from the formation of matter. Sometimes the quantity of matter is very considerable, and I have seen it fill at least two-thirds of the anterior chamber.

After lasting one, two, or three weeks, the inflammation and watering usually begin gradually to subside. The matter, though in a very large quantity, is sometimes almost entirely absorbed, so that scarcely any vestige is to be seen; and, in other instances, thin webs of opaque matter remain, which destroy the transparency and lustre of the eye, and which, by their adhesion to the edges of the pupil, interfere with its motions, and destroy its form. It is astonishing how acute dealers in horses are in discovering an eye which has had an attack of this kind.

Sooner or later, while the horse appears in a state of perfect health, the eye is again attacked, the disease being accompanied by the same symptoms, making a similar progress, and having the same termination; whilst each new attack is accompanied with the deposition of more and more opaque matter. These attacks succeed each other at very different, and sometimes at very distant, intervals, until the whole pupil is filled with an opaque white matter, and the sight of the eye completely destroyed.

During this progress, the disease is often confined to one eye; at least, one eye is usually much more severely affected than the other. In some cases the two eyes are simultaneously affected; and finally, by a succession of attacks, the horse becomes completely blind.

If an eye, which has in this manner suffered, be dissected, it will be found that the external changes have been accompanied with still more serious internal derangements. The crystalline lens, which lays behind the opaque matter effused in the pupil, has lost its natural transparency, forming in the human eye what is called a cataract, or, in the horse, "*moon blindness.*" The capsule of the lens has also become quite white and opaque, and there is usually found, collected between the choroid coat and retina, a quantity of coloured fluid, sometimes of a straw yellow, and sometimes bloody, which, by its accumulation and pressure, causes an absorption of the vitreous humour, and at the same time compresses the whole retina into a chord or bundle.

It has already been noticed, that horses are very subject to this disease. It attacks them of all ages, of all classes, and in all states of condition; though, as far as I have been able to observe, it is most common in those that are high bred, and in high condition. It is therefore probable, that dark, hot, and ill-ventilated stables, must have great influence in the production of this disease.

It is supposed to be most frequent in particular lines of blood; and those who breed horses for the turf are averse to breed from mares or stallions who have weak or blind eyes.

From the foregoing remarks,* this opinion appears to be founded on accurate observation; and it deserves attention in the selection of stock.

This disease has usually been found incurable; and when a horse's eye has once been affected with it, the proprietor is generally anxious to sell the horse, aware of the disease returning sooner or later, and finally terminating in blindness.

Bleeding, moderate purging, a cooling diet, and a well-aired stable, afford a temporary relief, and, by moderating the severity of the symptoms, diminish the permanent dimness of the anterior chamber. Considerable benefit is derived, in some cases, from the application of the vinous tincture of opium, two or three times a-day, in the manner formerly directed. A seton in the temple, or cheek, has also been advised by some; but, as far as I have been able to observe, however beneficial these remedies may be in diminishing the severity of the symptoms, yet they never prevent the repetition of attacks, and the ultimate destruction of the organ.

I have already noticed the remarkable sympathy between the two eyes, and that when a disease attacks one, the other is very apt to become more or less affected.† This fact is strikingly illustrated in the diseases of the human eye; and having many years ago remarked, that the disease which has now been described in the horse, generally first affects one eye, and then the other, it occurred to me, that if the eye first affected were to be altogether destroyed, the progress of the disease in the other would be arrested, and one eye thus preserved. An opportunity of making the experiment soon occurred. A valuable race-horse had one eye considerably injured, from repeated attacks of this disease, and the other eye, during one of these, appeared tender. I made an incision through the cornea of the bad eye, with a sharp pointed bistoury, through which the aqueous humour escaped. The lens was then squeezed out, and along with it the whole vitreous humour, which seemed in a healthy state. A poultice was applied over the eye-lids, the eye suppurated, and ultimately completely sunk. The other eye resumed its natural lustre and transparency, and I heard of this horse upwards of six years afterwards, when he was a very valuable hunter, the eye having remained perfectly well.

Since making this experiment, I have found that there was nothing new in the observations I had made; for many, conversant with horses, are aware, that if one eye be so severely affected that it is quite destroyed, they consider that there is a great chance of the other remaining sound. I have even heard some farriers remark, that if the bad eye happens to meet with an accident, and the injury hasten its destruction, the other will be saved; and further, that, aware of this, some have even ventured to adopt the practice of destroying the diseased eye, which they have rudely done by putting quick-lime between the

* See General Observations, No. 1. p. 18.

† When a tooth of the horse decays, the corresponding tooth on the opposite side soon after becomes diseased. It is the same in man.

eye-lids, or by thrusting a nail into the eye-ball, so as to excite violent inflammation, suppuration, and destruction of the organ.

When, therefore, a horse is affected with this terrible disease, it is of much importance to have the means of saving one eye, as, for every useful purpose, one eye is found to be as valuable as both. Few will adopt this practice before the disease has made considerable progress in one eye, or until the second eye appears to be affected. In this latter case no time ought to be lost. The operation is in itself simple. A curved sharp-pointed bistoury * is to be introduced into the anterior chamber, close to the circumference of the cornea, and its point is to be passed into the pupil, so as to puncture the capsule of the lens. It is then to be carried to the opposite side of the cornea, so that, in withdrawing it, there is a large incision made in the cornea.

The aqueous humour immediately escapes, and, by afterwards squeezing the eye-ball, the lens can be easily removed, and along with it the vitreous humour; or, if that be absorbed, by the coloured fluid collected between the choroid coat and retina. In this collapsed state of the eye-ball, the wound suppurates, and little inflammation supervenes.

When the horse is deprived of one eye, he may for some time have the vision with the other confused; but this is rectified by a little experience. In some instances it may happen, that the eye which is saved has been originally an imperfect one, so that the horse never acquires perfect sight.†

Injuries of the Eye of the Horse, and of Extraneous Substances getting between the Eye-lids.

When the eye receives an injury, the first thing to be guarded against is the subsequent inflammation; this being more or less, according to the severity of the injury.

If none of the coats of the eye or eye-lids have been divided, it will be sufficient to foment the eye with a decoction of camomile flowers, to take some blood from the vein in the neck, and to give a purgative-ball.

It sometimes happens that the cornea is divided by a sharp instrument; and it also sometimes gives way from the concussion of a blow on the eye-ball. This injury is often followed by a good deal of inflammation, very copious and repeated bleeding being necessary to abate it.

When the inflammation subsequent to an injury has subsided, more or less irritability, and weakness of the eye, often remain; and, for the removal of this, nothing is more effectual than the application of the vinous tincture of opium, in the way before-mentioned, fomentations being at this time desisted from.

When particles of dust, or any extraneous substance, gets into the

* See Plate No. 2, p. 54.

† To avoid deformity, glass-eyes have been used for horses.

eye, it often creates a good deal of uneasiness. As these adhere but slightly to the membrane lining the eye-lids, they may generally be removed with a camel's-hair pencil, or the point of a probe; or some milk and water may be thrown forcibly with a syringe between the eye-lids,

I have seen a husk of corn stick very firmly to the cornea, and produce a great deal of irritation; but whenever any extraneous substance is removed, the inflammation and irritation caused by it rapidly subsides, and there is seldom any thing necessary to be done, except bathing the eye with hot water.

Of Films, or Specks on the Eye.

Films, or specks on the cornea, are always the consequence of some previous inflammation, whether that has been the effect of an injury, or any other cause.

In ordinary cases, the obscurity of the cornea diminishes along with the accompanying inflammation; but, in others, a distinct speck remains after all inflammation has subsided.

A variety of stimulating and highly irritating substances are employed for the removal of such films, and many of them may be of equal utility. I have, however, generally remarked, that they are used too frequently; and it will be found that such applications act more powerfully when used seldom.

A small piece of the *red precipitate ointment*, applied every third, or even every sixth day, is an excellent remedy; and this may alternately be used, with great effect, with a powder composed of one part of burnt alum to four of sugar; or pure calomel may be used in a similar manner; but, as the stimulating effect of these soon ceases, they ought to be employed at least once a day.

Concluding Observations.

Besides the diseases of the eye, which have been described, there are some others, which, either from their rare occurrence, or less serious consequences, may be but briefly noticed.

From what has been before remarked,* it will be perceived that the cataract in the horse, or what is commonly denominated "*moon-blindness*," is not, as in the human body, a distinct disease, but is always accompanied with other diseased changes. Besides, even were the horse subject to a simple opacity of the lens, the removal of that part of the organ would be followed by no advantages, as, without a magnifying glass, his vision would be imperfect.

It may also be here noticed, that there is a disease which frequently affects the eyes of horses in India, but which, as far as I know, has never been observed in Europe. A *worm*, which, from the description I have received from different people, may be compared to the common

* See p. 117.

ascaris, is generated in the anterior chamber, and can at times be distinguished swimming about, with apparently great vigour, in the aqueous humour. It produces a good deal of irritation and inflammation, the effects of which ultimately destroy the organ. The natives of India cure the disease by making an incision through the cornea, and extracting the worm. Though I have never had an opportunity of examining an eye affected with this curious disease, the circumstantial accounts from several accurate observers leave no doubt in my mind of its existence; and the fact accords with what is known to take place regarding the formation of worms, not only in the human body, but more particularly in the liver, lungs, brain, and other organs of the inferior animals.

Warts and little *tumours* are sometimes formed on the eye-lids, and are often the source of irritation, as well as of deformity. These may be best removed by snipping them off with scissors, and destroying the remaining portion with caustic.

Small polypous excrescences also sometimes arise from the iris; but these can seldom require any treatment.

The eye of the horse is also subject, like all the other organs of animals, to deformities from birth. I have already mentioned the instance of a mare with one eye, that had a foal with the same defect. In another instance, a large tuft of *hair* was found growing from each cornea. Sometimes this is of a curious colour, producing the wall-eye. But these defects cannot be remedied; and though the organ may not be injured by them, they must depreciate, to most people, the value of the horse.

The following forms are for the medicines referred to, and recommended in, Mr. Wardrop's Essay:—

Decoction of Camomile Flowers.

Camomile flowers, dried, one ounce.
Water, a pint.
Boil for a quarter of an hour, and strain.

Decoction of Poppy.

White poppy capsules (or heads), bruised, two ounces.
Water, two pints.
Boil for a quarter of an hour, and strain.

Wine of Opium.

Extract of opium, one ounce.
Cinnamon bark, bruised; cloves, bruised; of each a drachm.
Rectified spirit, four ounces.
Distilled water, twelve ounces.
Macerate for ten days, often shaking it; then strain.

Saturnine, or Lead Lotion.

Solution of subacetate of lead (Goulard's Extract), a drachm.
Distilled water, a pint.
Proof spirit, a drachm.
Mix.

Zinc Lotion.

Sulphate of zinc, from twenty to forty grains.
Distilled water, a pint.
Mix.

If opium is required to be used, two or three drachms of the tincture of opium may be added to either of the above lotions; if to the former, the proof spirit should be left out.

Ointment of Red Precipitated Mercury.

Red precipitated mercury (nitrico-oxyd of mercury), very finely levigated, one ounce.
White wax, two ounces.
Prepared lard, six ounces.
Melt the wax and lard together; then add the red precipitate, and stir till cold.

AN ESSAY ON ANCIENT HORSE-SHOEING.

BY JOHN BECKMANN,

Public Professor of Economy in the University of Gottingen.

[Concluded from page 70.]

HOWEVER strong I consider these proofs, which show that the ancients did not give their horses shoes such as ours., I think it my duty to mention and examine those grounds from which men of learning and ingenuity have affirmed the contrary. Vossius lays great stress, in particular, upon a passage of Xenophon, who, as he thinks, recommends the preservation of the hoofs by means of iron. Gesner, however, has explained the words used by that author so clearly, as to leave no doubt that Vossius judged too rashly. Xenophon only gives directions to harden the hoofs of a horse, and to make them stronger and more durable; which is to be done, he says, by causing him to walk and to stamp

with his feet in a place covered with stones. He describes the stones proper for this purpose; and that they may be retained in their position, he advises that they should be bound down with clamps of iron. The word which Vossius refers to the hoofs, alludes, without doubt, to the stones which were to be kept together by the above means. Xenophon, in another work, repeats the same advice, and says that experience will soon show how much the hoofs will be strengthened by this operation. Vossius considers also, as an argument in his favour, the expressions used by Homer and other poets, when they speak of iron-footed and brazen-footed horses, loud-sounding hoofs, &c.; and is of opinion that such epithets could be applied only to horses that had iron shoes. But if we recollect that hard and strong hoofs were among the properties of a good horse, we shall find that these expressions are perfectly intelligigible, without calling in the assistance of modern horse-shoes. Xenophon employs the like comparisons, free from poetical ornament, and explains them in a manner sufficiently clear. The hoofs, says he, must be so hard, that when the horse strikes the ground, they may resound like a cymbal. Eustathius, the scholiast of Aristophanes, and Hesychius, have also explained these expressions as alluding to the hardness and solidity of the hoofs. Of the same kind is the *equi sonipedes* of the Roman poet; and the stags and oxen with metal feet, mentioned in fabulous history, which undoubtedly were not shod. Epithets of the like nature were applied by the poets to persons who had a strong voice.*

Le Beau quotes a passage of Tryphiodorus, which, on the first view, seems to allude to a real horse-shoe. This author, where he speaks of the construction of the Trojan horse, says that the artist did not forget the metal or iron on the hoofs. But supposing it true, that the author here meant real shoes, this would be no proof of their being known at the time of the Trojan war, and we could only be authorised to allow them the same antiquity as the period when the poet wrote. That, however, is not known. According to the most probable conjectures, it was between the reign of Severus and that of Anastasius, or between the beginning of the third and the sixth century; besides, the whole account may be understood as alluding to the ancient shoes. At any rate, it ought to be explained in this manner, till it be proved, by undisputed authorities, that shoes, such as those of the moderns, were used in the time of the above poet.

Vossius asserts that he had in his possession a Greek manuscript on the veterinary art, in which there were some figures where the nails

* Achilles is said to have had a brazen voice.

under the feet of the horses could be plainly distinguished. But we are ignorant whether the manuscript or the figure still exists, nor is the antiquity of either of them known. It is probable that shoes were given to the horses by a modern transcriber, in the same manner as another put a pen into the hand of Aristotle. In my opinion, we must expect to meet with the first certain information respecting horse-shoes in much later writers than those in which it has been hitherto sought for and supposed to have been discovered. Were it properly ascertained, that the piece of iron found in the grave of Childeric was really a part of a horse-shoe, I should consider it as affording the first information on this subject, and should place the use of modern horse-shoes in the eighth century. But I do not think that the certainty of its being so is established in a manner so complete as has hitherto been believed. Those who affirmed that this piece of iron had exactly the shape of a modern horse-shoe, judged only from an engraving, and did not perceive that the figure was enlarged.* The piece of iron itself, which seemed to have four holes on each side, was so consumed with rust, that it broke while an attempt was made to clean them; and, undoubtedly, it could not be so perfect as the engraving.

The account given by Pancirollus, induced me to hope that I should find in Nicetas undoubted evidence of horse-shoes being used about the beginning of the thirteenth century; but that writer has deceived both himself and his readers, by confining himself to the translation. After the death of Henry Baldwin, the Latins threw down a beautiful equestrian statue of brass, which some believed to be that of Joshua. When the feet of the horse were carried away, an image was found under one of them, which represented a Bulgarian, and not a Latin, as had been before supposed. Such is the account of Nicetas; but Pancirollus misrepresents it entirely; for he says, that the image was found under a piece of iron, torn off from one of the feet of the horse, and which he considers therefore as a horse-shoe. The image, however, appears to have represented a vanquished enemy, and to have been placed in an abject posture, under the feet of the statue, (a piece of flattery which artists still employ,) and to have been so situated, that it could not be distinctly seen, till the whole statue was broken to pieces. Hence, perhaps, arose the vengeance of the Latins against

* Childeric died in the year 481. In 1653 his grave was discovered at Tournay; and a gold ring, with the royal image and name, found in it, afforded the strongest proofs that it was really the burying-place of that monarch. In the year 1665, these antiquities were removed to the King's library, at Paris.

the statue, because that small figure was, by some, supposed to represent one of their nation.

As it appears to me, that the words used by ancient authors to express shoes (*upodemata*, Greek; *soleæ*, Latin) occurred less frequently in the writers of later periods, I conjectured that modern horse-shoes, in order that they should be distinguished from the ancient shoes, might have received a particular new name, under which I had never found them mentioned. In the course of my researches, therefore, I thought of the Greek word *selinaia*, the meaning of which I had before attempted to explain; and I am now fully convinced that it signifies horse-shoes such as those used at present, as has been already remarked by others. As far as I know, that word occurs, for the first time, in the ninth century, in the works of the Emperor Leo; and this antiquity of horse-shoes is, in some measure, confirmed by their being mentioned in the writings of Italians, English, and French authors of the same century. When Boniface, Marquis of Tuscany, one of the richest princes of his time, went to meet Beatrice his bride, mother of the well-known Matilda, about the year 1038, his whole train were so magnificently decorated, that his horses were not shod with iron but with silver. The nails even were of the same metal; and when any of them dropped out, they belonged to those who found them. The Marquis appears to have imitated Nero; but this anecdote may be only a fiction. It is related by a cotemporary writer—but, unfortunately, his account is in verse; and the author, perhaps sensible of his inability to make his subject sufficiently interesting by poetical ornaments, availed himself of the licence claimed by poets, to relate something singular and uncommon. However this may be, it is certain that the shoes of the horses must have been fastened on with nails, otherwise the author could not have mentioned them.

Daniel, the historian, seems to give us to understand, that, in the ninth century, horses were not shod always, but only in the time of frost, and on other particular occasions.

I shall here observe, that horse-shoes have been found, with other riding-furniture, in the graves of some of the old Germans and Vandals, in the northern countries; but the antiquity of them cannot be ascertained.

ON THE SALE OF HORSES WITH WARRANTY.

THE law expressly states, that any thing sold by one person to another, and warranted sound, perfect, or good, must correspond to the description, and answer the purpose for which it was intended; otherwise it will be a breach of contract, rendering the bargain void, and subjecting the party making the warranty liable to an action for the recovery of damages.

The warranty must be *upon the sale;* for if it be made *after*, and not *at* the time of the sale, it is a void warranty, being then made without any consideration; neither does the buyer then take the goods upon the credit of the seller.

A warranty can only relate to things in being at the time the bargain is made, and not to things to come; as, that a horse is sound at the buying of him; not that he will be sound two or three years after.

A horse warranted to carry a man a very long distance, would also be void on the same grounds that a thing to come cannot be warranted.

If the seller knows the horse to be unsound, and has used any art to disguise him; or if he differ in any way from what he represents him to the buyer, the artifice will be equivalent to an express warranty, and the seller is responsible for the act.

A general warranty will not extend to guard against defects that are plainly and obviously the object of our senses; as, if a horse be warranted perfect, and wants either a tail or an ear, unless the buyer should happen to be blind.

If a horse be warranted sound, and he has lost the sight of an eye, and, as the discernment of such a defect is frequently dependant on skill, it is held that an action in such a case can be maintained for the recovery of damages.

A warranty, therefore, if expressed in general terms, under all circumstances, extends to all faults, whether known or unknown to the seller.

Notwithstanding a horse is warranted sound, this will not extend to vice or blemish; for a horse may be perfectly sound, and yet of so vicious a temper, that he would be quite useless to the purchaser; or he might have such blemish or blemishes about him, that, if again offered for sale, would considerably reduce the value; it is therefore highly necessary that these points are duly attended to, that the purchaser may not be deceived in supposing that a warranty of soundness

is all that is required: what constitutes these differences will be entered into fully hereafter, and in its proper place.

ON THE SALE OF HORSES WITHOUT WARRANTY.

If the seller knows the horse to be unsound, and has used any fraud or art to disguise him; or if he is in any way different from what he was represented to be to the buyer, this artifice will be deemed equivalent to an express warranty, and the seller is answerable for the deception.

It follows, therefore, that the sale of horses without warranty is reduced into a very small compass; for, at the time of sale, the seller almost always either affirms that the horse is sound, which amounts to a sale with warranty, or otherwise sells him as *unsound*, and the buyer then of course takes him as he is, and runs all risks as to any disease, imperfections, or faults, which he may happen to labour under, or be subject to.

The length of time required between the time of purchase, and the return of a horse warranted sound, but found to be otherwise, must always be uncertain, being partly a question of law, and partly a question of fact; the situation of the parties, the facility of communication, &c. being taken into consideration.

Horses that are purchased at sales by auction, require to be returned when unsound, within the time stated at the period of sale; otherwise the privilege will be forfeited, and the buyer be obliged to put up with his loss.

AN ACCOUNT OF A FAT OX.

A FAT OX, fed by Mr. Robert Sweeting, late of Wrantage, Taunton, now of Boulogne-sur-Mer, France, was killed on the 10th January, and weighed 1823 French pounds, and in English as follows, viz.—First fore-quarter, 27 score 6 pounds; second fore-quarter, 27 score 17 pounds; first hind-quarter, 23 score 18 pounds; second hind-quarter, 23 score; making the total weight of the quarters 18 cwt. 25 pounds. The tongue weighed 15 pounds; heart, 11½ pounds; hide, 122 pounds; fat, 224 pounds.

THE FIRST NUMBER

OF

VETERINARY TRANSACTIONS;

CONTAINING OBSERVATIONS ON

THE EFFECTS AND TREATMENT OF WOUNDS OF JOINTS AND OTHER CIRCUMSCRIBED CAVITIES.

By a circumscribed cavity, is meant a cavity without any external opening. The chest, the abdomen, mucous capsules, veins, and joints, are so many circumscribed cavities, and contain fluids which have no communication with the air. The term cavity has been objected to by some, as not applicable to parts which have no vacuity or space unoccupied. Veins, arteries, joints, and mucous bags, may be more or less distended; but their cavities are all completely filled. They all contain more or less of a fluid, but without any vacuum, as the parts accommodate themselves to the quantity of their contents: nevertheless, as the term is well understood, I see no necessity for any alteration. The fluid in joints, that in mucous bags, and in the chest and abdomen, is secreted by the arteries of each part, for the purpose of preventing friction. If the ends of bones, or surfaces of tendons, were allowed to rest, and move on each other, or if the lungs and intestines, at every inspiration, were to come into actual contact with the lining of the chest and abdomen, a considerable degree of irritation would ensue. To obviate such effects, an oily fluid is placed between the solids, to prevent the possibility of the one touching the other; and this fluid is formed from a fine vascular membrane which lines the different cavities. Where the fluid is required in great abundance, as in joints, it takes the name of synovia; and was formerly supposed to be formed from the fatty substance found in many joints, termed the synovial gland. But, as every secretion comes from the blood-vessels, and as this part is very little vascular, there can be no doubt but that the joint-oil must be secreted from the same source as the other secretions. Besides, there are some joints without the fatty substance, but none without synovia, or joint-oil. Bones are connected together by ligaments, and which frequently surround a joint; but, in the smaller joints of the extremities of horses, the tendons frequently in part supply the place of ligaments. In either case, the secreting membrane lines the ligament, or tendon, and is then continued over the cartilages which

cover the ends of the bones. This being the general mechanism of most joints, the bones are prevented from dislocation, and yet allowed to move to as great an extent as their muscular and mechanical function will admit; while the cartilages, from being elastic, cover and preserve the bones free from concussion; and the oil within the cavity not only serves to lubricate the parts in health, but preserves a constant separation between all the solids of the joint. One cause for much pain and disease, in all cases where the synovia or joint-oil escapes, is therefore evident. The membrane lining the joint is immediately squeezed between the two ends of the cartilages, and every motion of the limb produces pain, and excites inflammation. Independent, however, of this cause, it is found that where the cavity of the stomach or intestines are by any accident ruptured, an immediate alteration and cessation of the pulse frequently take place, even when unaccompanied with any external opening. In this case, death probably ensues from the same cause as blows on the stomach without a rupture. The stomach is so important to the welfare of the animal, that life cannot long be supported if the vitality of the stomach be destroyed. Mr. John Hunter very properly considered death from this cause as a general sympathetic effect; but the exposure of cavities of joints seems to destroy life by local irritation. Inflammation in all fresh wounds, to a certain degree, is as absolutely necessary to the cure, as digestion is essential to the health of the stomach. Without inflammation, a joint once opened, or a bone broken, could never unite. But Nature has wisely ordained, that when a soft or a hard part is divided, blood shall escape, and inflammation ensue. The coagulable parts of the blood either become a living organ, or a medium for the reception of blood-vessels from the original parts. It sometimes happens, however, that the inflammation, both of hard and soft parts, is greater than merely necessary to form the bond of union. When inflammation extends much beyond the divided parts great constitutional irritation takes place; and, if a joint be opened, the synovia escapes, the hard parts touch the inflamed surface, and frequently occasion death, or a stiff joint. The usual remedies are, to rub the surrounding integuments with hot oils, and blue vitriol: verdigrease, corrosive sublimate, and other caustic applications, are often introduced into the cavity of the wound, and into the joint itself. Where foreign matter of a stimulating nature is inserted into the cavity of the joint, death or a stiff joint must generally be the effect. The professor has certainly known some cases succeed, from the same application applied within the lips of the external wound, immediately under the skin. Nevertheless this practice is hazardous, as the motion

of the limb will be very likely to force some particles of the caustic within the cavity of the ligament. The internal cavity of veins is liable to be inflamed from the operation of bleeding, but more frequently in horses than in the human subject. This disease arises either from the pin used to stop the hæmorrhage passing improperly through the vein, or remaining too long in the part after the operation, or from the lips of the wound not being brought into close contact, and then the inflammation extends from the lips of the vein on the internal surface towards the head. The edges of the divided vein must always inflame after every bleeding, or the wound would continue open: but, when the inflammation extends beyond the proper limits, suppuration speedily takes place, which separates the lips of the wound. In the human subject, when the vein inflames, inflammation extends from the arm towards the heart; and Mr. Hunter found, in some instances, that the heart itself partook of the disease. In the horse, the jugular vein is the blood-vessel most commonly opened; and when the cavity of the vein inflames, it extends very generally towards the head, while the vein below the orifice unites, and becomes impervious. Although a vein is not strictly a perfectly circumscribed cavity, yet it has no communication with the air; and, when once exposed, if the parts, after the operation, do not unite by the first intention, the vein is liable to great mischief. Whenever inflammation attacks the internal surface of veins from bleeding, or any wound, the disease is to be considered as of the same nature, and requiring the same remedies, as the exposure of joints or other cavities. The first symptom of inflammation and suppuration within the cavity of a vein is generally a small degree of swelling about the orifice, the lips of which soon recede from each other, and a little oozing escapes from the part. At other times, the swelling will be more considerable, attended with frequent hæmorrhage; and where the swelling extends much above the orifice, the vein is frequently callous and enlarged, as high as the head. This enlargement and hardness of the vein proceeds, in part, from the coagulable lymph filling up its cavity, and, in part, from the coats of the vein being thickened; and the lymph sometimes becomes organized, and firmly unites to the internal surface of the vein. In other cases the coagulable substance does not unite to the vein, but acts as a foreign body on the whole internal surface of the vein. The professor has seen instances where lymph, many inches in length, has been taken from the jugular vein, and extended as high as the veins of the face and neck, unconnected with its coats. Abscesses also form occasionally in the neighbourhood of the part diseased, sometimes with, at other times without,

any communication with the vein. Although the inflammation is seldom continued below the orifice of the vein, yet he has known of one instance where the vena cava, and even the heart itself, partook of the disease. The remedies usually employed, are stimulating oils applied to the tumour, and, where suppuration has not taken place, applications of that nature sometimes succeed. But when suppuration and hæmorrhage comes on, the disease requires very different remedies. The bursæ mucusæ, or mucous capsules, are another kind of circumscribed cavity. These bags contain a large quantity of fluid, similar to the oil of joints, and are placed between tendons, and also between bones and tendons. Near the large joint of the hock, immediately above the fetlock, and between the back sinews, there are large bags of the same nature. The mucous bags near the hock generally communicate with the joint. The use of these bags is to prevent friction. Instead of the hard surface of one tendon moving in contact with bone, or touching another tendon, these bags of oil, being placed between solid bodies, diminish friction. It has not been generally understood, that the same bags exist in all horses when first foaled. Before the horse is domesticated, they are seldom visible but by dissection; and from hence it has been inferred, by men unacquainted with the subject, that these bags are first formed in consequence of disease; but, in truth, the fluid is only increased in quantity from excess of weight or exertion, whereas the mucous bags are original parts, coequal with the formation of the animal. When the horse has been over-weighted, or done more work than he is able to support, then these bags are enlarged; in which case they are distinguished by the name of wind-galls. They have probably been termed *wind-galls*, from the false supposition that they contained air, and resembled the vegetable production of the same name. Technical phrases are frequently of little moment, but, in the present instance, they have sometimes led to erroneous and fatal practice. When mucous bags enlarge at the sides of the hock, they are commonly called thorough pins; at the anterior part of the hock, bog spavins. The former have probably had their name in consequence of the tumour extending through the hock; the latter, from its being near the seat of bone spavin, and yielding very considerably to pressure. Men, not well acquainted with the structure or functions of mucous capsules, have occasionally opened them, and let out the fluid. The immediate effect of this operation is the total disappearance of the tumour. But if the edges of the wound do not unite by the first intention, great inflammation speedily takes place. And if the wound heals in the most favourable manner, the internal surface of the bag will

continue to secrete a fluid, and the part will become as large, if not greater, in bulk, than before. The operation, therefore, of letting out the contents of mucous capsules, or in other words, the opening of wind galls, cannot succeed, and sometimes the inflammation will be so great as to endanger the life of the animal. These cavities have ocassionally been opened by farriers with a sharp-pointed iron, made hot: this mode is far less objectionable than others, as the coagulation of the fluids, from the application of the cautery, generally closes the orifice and restores the cavity; and as the mouth of the sac is inflamed by the hot iron and closed, the greater part of the contents of the sac, after the operation, remains entire. Setons have sometimes been recommended and passed through these bags with a view to create inflammation, and to fill up the cavities with granulations. The irritation occassioned by this practice is not only dangerous, but if the animal survives, the cavity being filled up with a fleshy substance instead of an oily fluid, the function of the organ is lost, and probably will remain as large as before. When the mucous capsules are opened by accident, the wound is generally more violent and the consequences more dangerous; and, as it has not been generally understood, that exposing the cavity of these organs is attended with more mischief than wounds of other soft parts, proper remedies have not usually been employed. The theca or sheath of the tendons of the fore and hind extremities is occasionally wounded; and when this accident occurs, the animal suffers all the inconveniences of an opening into a joint. The sheath is a circumscribed cavity beginning about one inch above the fetlock joint, and extending downward to the sensible frog. The whole internal surface of the sheath is lubricated by a fluid, so that the principal tendon within never touches the sheath.

The use of the sheath is to bind down the tendon within; and by the intervention of the fluid within the sheath, friction is prevented. Whenever an opening is made into a sheath, the fluid escapes, and the solid parts of the tendons come into contact. Inflammation to a great extent soon takes place, and the irritation is so much increased at every motion of the limb, that unless the wound be speedily united, the event is sometimes fatal.

In all these parts a cavity is exposed, which will be attended with more or less danger as the wound is sooner or later closed.

In the human subject, poultices and fomentations are the chief local applications commonly employed; and in all cases where a joint is opened, the patient is placed in such a position as to be most favorable to prevent the escape of the fluid; for unless the wound speedily unites,

the secretion will be increased; and so long as any fluid continues to escape, a foreign body is placed between the lips of the wound, and prevents the union. In the human subject, the parts may be kept in a great degree at rest; but in horses, every motion of the limb forces out the oil, as it is secreted, which tends as much to prevent a union as injecting water, or any other foreign body, between the lips of the wounded cavity. Where divided parts unite, a quantity of coagulable lymph is thrown out between the edges, and by its glutinous quality forms a bond of union, and prevents, where a joint is opened, the escape of the synovia. But this junction, without artificial means, is not likely to take place in a joint constantly in motion. Where a joint, a mucous capsule, or the sheath of a tendon is opened, the first application necessary is the actual cautery.* The instrument most proper for the operation should be made of iron, two feet in length, rounded at the extremity about the size of a small button, with a wooden handle. The temperature of the iron should be moderately red. If it be black, the heat will not be sufficient to produce a proper discharge of lymph, to close up the wound; and if it be white, it will destroy too much of the surrounding parts, and perhaps do mischief to the ligament. Although the operation in itself is very simple, yet some knowledge of the structure and economy of the parts, for the purpose of applying the cautery with the best possible effect, is necessary. The object in view is to produce a glutinous substance to close up the cavity, and before the slough is removed, for granulations below to supply the place of the lymph; but if the ligament itself be destroyed by the cautery, it must, like other dead parts, separate from the living, and come away, and then the joint will still be opened. It is therefore of importance not to destroy the ligament of joints with the hot iron, but confine its application to the external soft parts. In these cases, it is generally proper to cauterize the whole external surface of the wound; and if the discharge is not immediately stopt, the iron has probably not been applied sufficiently deep, or too cold, to produce a proper discharge of lymph. Where a cure is possible to be effected, the actual cautery will frequently close the cavity and stop the discharge. Sometimes, however, in the course of one, two, or three days, the discharge appears again by the sides of the lymph, and then the same operation should be repeated. In some

* The very name of actual cautery is a sufficient reason with some people, unacquainted with its effects, to object to the operation. But in regard to the pain, common spirits of turpentine, in which, without any unpleasant sensation, the human subject can wash his hands, produces more irritation to the skin of the horse than hot water, or even the hot iron.

instances, the professor has had occasion to apply the hot iron five or six times, and, nevertheless, succeeded ultimately without the least lameness. The same treatment is likewise to be recommended for penetrating wounds into the chest and abdomen. The lips of the wound should be cauterized, and, if requisite, repeated in the same manner as is recommended for wounds of other cavities. When the cavities of veins become inflamed, some little variation is necessary in the treatment, as accidents of that nature are frequently attended with consequences different from the opening of other cavities, and require a trifling alteration in the treatment. When a hæmorrhage takes place, it may very generally be stopt by the application of the cautery; but if this fail, and the parts are too much swelled to admit of a pin, there is no other remedy than to take up the vein by a ligature above the diseased parts; and there may be instances in which it may be advisable to tie up the vein below. In general, however, the actual cautery will prevent the necessity of a ligature; and if it fail, tying up the vein will succeed only in those cases where the vein above is free from disease. In general the vein is thickened and inflamed, and if a ligature be applied on a vessel in a state of inflammation, the disease will be increased. Abscesses will be likely to be formed, and the vein inflame above. In a case that occurred to Mr. Goodwin, veterinary surgeon at Oxford, where the jugular vein was tied, an abscess took place over the occipital bone, commonly termed the *pollevil*. That disease, however, most probably did not originate in consequence of the tube being obliterated; for in most successful cases of inflamed veins, the sides of the vein unite and destroy the cavity. After the orifice of the inflamed vein, from the application of the actual cautery, is closed, a considerable degree of swelling frequently remains, and this may be removed by a blister. When abscesses form in the adjacent parts, they should be treated in the same manner as common abscesses. In support of the opinions here advanced, the professor has added several cases, which, from the remedies recommended, have terminated successfully; he has seen no instance of any inconvenience taking place from the vein being impervious from any cause, as the other jugular, together with the two vertebral veins, are completely equal to carry on the circulation. Indeed, where the internal surface of the vein becomes inflamed, and the inflammation is succeded by suppuration, whatever treatment be adopted, if the animal lives, the vessel will probably be lost. In the human subject, few persons would consent to the application of the actual cautery, although in surgical operations it was the common practice, even from the days of Hippocrates. The professor has never seen the same remedie-

tried in the human subject; and although the general laws of the animal economy are alike, yet in many instances there is a remarkable difference of effect, from the same cause, in different animals. Nevertheless, as the opening of circumscribed cavities in the human subject is frequently attended with danger, and as the cautery is found successful in horses, applications of a similar tendency in similar cases, after other remedies have failed, may possibly be thought worthy of trial.

To the Editor of the FARRIER *and* NATURALIST.

SIR, *Feb.* 12.

ON looking over the Jockey Slang in your last number, I was much disappointed at not finding our College or Lecture Slang included; for we have a great many rum words and sayings often made use of, and not being a *Latin* scholar, perhaps you will take the trouble to give me the meaning, in English, of a little of that which is most in vogue, and by so doing you will much oblige,

Sir,

Your humble servant,

E. G. D.
A Veterinary Pupil.

Pur see.
Ar priary.
Ergo.
Visy vir Sir.
Ab ore gin.
E contrary O.
Pur zaltum.
Bony fidy.
Post mortum.
Ad infinidum.
Ar fortiory.
Pro former.
A Posterory.
Suijenneris.

ROYAL VETERINARY COLLEGE.

In no establishment with which we are acquainted, appropriated for the treatment of the diseases, either of human beings or of brutes, is there difficulty experienced in obtaining information, equal to that found at the Veterinary College. This is a circumstance to be attributed to mismanagement, neglect, and want of system, on the part of its medical officers; but whether from motives of policy or otherwise, we shall not at this time stop to inquire, but simply state the facts. The names of the different diseases are rarely given; and if ever, in a vague, indefinite manner. Were they attached to the stalls, where every pupil could see them, or regularly and properly entered in a book (if the horses were not removed or changed from stall to stall, without its being noticed in a proper manner), it would answer nearly the same purpose. It is true that a register is kept, and cases entered by an officer of the establishment, but to whose department it does not strictly belong, and he is not even a veterinary pupil; being prevented by the laws of the College from engaging in that profession, that it may not interfere with his other duties: consequently he is rather an unfit person to go round the stables and enter cases—leaving out of the question the chance of his being right or wrong. We have been informed that this neglect is on the part of the Professor's *Assistant:* this we connot wonder at, when his various avocations and disposition is taken into consideration; but as this is a subject of the first-rate importance, we shall enter more fully into it hereafter, and endeavour to rectify this part of veterinary education, so important to the interests of the student.

Another great evil, is that of nearly all cases which are admitted having the general term *lameness* applied to them, without even defining the part or parts which are suffering from disease. Again, the lectures on *diseases* are given only once in a year, and that at the end of the course; so that a pupil must remain seven or eight months before he knows any thing of Pathology, and may possibly, by the *grinding and favourite system*, leave the College without hearing many diseases explained, as no stable or practical lectures are ever delivered.

Can, or ought, such a system to be any longer tolerated?

CASES.

Bay Gelding.

Feb. 7, 1828. Admitted, with lameness in both fore-feet.
Shoes directed to be taken off, and the feet *pared* out.

8. To be bled in each fore-foot to the quantity of six pints.

A poultice to be applied every night.

9. Ordered to stand on wet straw during the day, and the poultices to be applied at night.

Tincture of myrrh to be applied to the soles; and to be shod with plain shoes, with leather between the hoof and shoes.

11. Slight cracks appear in the heels.

Compound tincture of myrrh to be applied to them twice in the day.

14. Common tar to be applied to the soles, and solution of alum to the heels.

15. Nitrated ointment ordered to be applied daily to the heels.

18. Taken from the College.

An Aged Gelding.

Jan. 30, 1828. Admitted, lame.

Sole of the fore-foot ordered to be well thinned.

Poultice to be applied every night.

31. To stand in wet clay during the day; and the poultice to be continued at night.

Feb. 2. Taken from the Infirmary.

A Bay Gelding.

Feb. 2, 1828. Admitted, with sore heels.

Compound alum ointment directed to be applied to the sores on the heels.

To take six drachms of aloes in a ball, and have mash diet.

3. Ball has operated, and continues to do so frequently.

Alum ointment to be continued, and applied daily to the heels.

7. Compound tincture of myrrh to be applied to the soles twice a-day.

9. Solution of alum to be applied to the sores every day.

12. Dismissed from the College.

Bay Gelding—Five years old.

Jan. 3, 1828. Admitted, with inflamed lungs.

Symptoms as follow:—Pulse 70, and feeble; respiration very quick and laborious: extremities and ears cold; the membrane lining the eye-lids and nose much inflamed; the anus relaxed; dung discharged often; appears very much debilitated, and the carcass drawn up.

Directed to be kept loose in a large stall, and to be bled. A rowel to be inserted into the chest.

Blood very much inflamed.

4. Respiration continues quick: the pulse varies but little since yesterday.

A common glister to be given; the legs to be stimulated with the common liniment, and then covered with bandages.

To take three drachms of aloes in a ball.

The rowel to be dressed with the turpentine ointment, and to have the gruel diet.

5. The pulse much the same as yesterday. The glister to be repeated frequently. Dung covered with mucus.

To have the carrot diet, &c.

The extremities are become warm.

10. Horse much better.

12. To take a ball with three drachms of aloes.

15. To take turpentine one drachm and a half, aloes two drachms, in a ball.

Discharged.

Brown Mare—Eight years old.

Jan. 30, 1828. Admitted, with inflamed lungs.

Symptoms:—Ears and legs cold, great debility, and refuses to eat. Pulse 56: bled before brought in.

Ordered a mash diet, and to take aloes three drachms, in a ball.

Flannel bandages to be applied to the legs.

A rowel to be made in the chest.

31. The rowel to be dressed daily with the turpentine ointment.

Feb. 2. Horse feeds better. To have carrots, and a small quantity of corn.

4. Legs become warm. The bandages directed to be left off.

6. Nearly recovered.

7. Discharged.

A Three Year Old Horse.

Feb. 1, 1828. Admitted, to be castrated.

Ordered a mash diet.

2. Operated on by the Professor's assistant. It occupied more than an hour—"*rather a long ceremony!*" We have seen the horse thrown, this operation performed, and the animal liberated, in the short space of ten minutes, by a country clown.

3. Parts much swollen, and accompanied by irritation.

Eight pints of blood to be taken from the jugular vein. Blood slightly inflamed.

Aloes half an ounce, to be taken in a ball.

4. Swelling of the parts diminished: horse going on well. Ordered walking exercise, an hour every day.

6. Suppuration commenced—fomentations to be continued.

18. Nearly well.

DIRECTIONS FOR KEEPING A COW IN LONDON,

In any Yard or Out-house Ten Feet Square.

BY MR. COBBETT.

I HAVE, in my "Cottage Economy," shown how a labouring man may, to his great advantage, *keep a cow;* but there are *thousands* of gentlemen, in the outskirts of London, and even in the WEN itself, who want a lesson upon this subject. *Milk* is an article very nearly indispensable; and it is one of those things which must be had *every day in the year.* People *may* keep house without it; but what sort of housekeeping would it be! Yet, what a plague is there in getting *good milk,* to say nothing of *cream,* without which latter, mind, a gentleman's house, or any thing approaching a gentleman's house, cannot get decently along. We cannot live near London without knowing what is said about the *tricks* of milkmen. The temptation is too strong to be resisted by a man or woman who carries milk about. The WEN is so well supplied with *water,* that it would be to be a fool to suppose, that this element will not be invoked in aid of the cow. Not by the *cow-keepers,* for it is their interest to have their milk as good as they can get it; but by the retailers, who are here to-day and gone to-morrow. In short, it is notorious, that the complaints on this score are universal, and are well founded. Then though the milk is high in price, the cow-keeper cannot afford to make it really good. He must have cows which produce *quantity;* his food must have *quantity* in view; and then there comes the profit of the *retailer;* to say nothing about the too frequent costly collusions between this latter and "Mrs. Cook," by which two strokes on the tally are produced instead of one; and Mrs. Cook's "*headekeashon,*" though got at a Sunday-school, enables her to ascertain, that, by the double score on the tally, she may add (at 2½*d.*

a day) 3*l.* 16*s.* a year to her wages, a part of which she may spare to defray the expense of "*Missions to the Heathen.*"

But *how* to get rid of all this, or of any part of it? *By keeping a cow.* "But," answer thousands of persons, "I have *no land.*" Why, if you have no garden, no yard, no stable, no out-house, *ten feet square,* then, indeed, you cannot keep a cow; and you must go without *cream* and *custards,* and all the other nice things that a cow gives us; or your milk and cream bill must amount (to keep a good house) to more than *fifty pounds a year!*

Now hear *my story.* I would not live anywhere without *plenty of milk.* I would put up with any inconvenience rather than not *keep a cow.* I keep one; and here is my statement of the effects of doing this. When I had the convenience, I kept four or five at this place. I now keep *one.* She is a little *Alderney cow,* about seven or eight years old. I have no means of weighing her *alive;* but I guess her dead weight at *fifty-two* or *three* pounds a quarter, which is about half the average weight of fat hogs, and about twice the weight of a fat Leicester sheep. Any strong man would carry her alive, if she could be put up so as to lie quietly on his back. She calved about the middle of January. She now gives, on an average, *fourteen quarts of milk a day;* and her average yield, *throughout the year,* is about *ten quarts a day.* To some neighbours, who send *regularly,* and give us no *trouble,* we sell *four quarts* every day; and the rest we use ourselves. Puddings, pies, custards, bread, tea, coffee, chocolate, all proclaim the praises of this little animal; and, after all, though we never spare *cream,* we make *some butter;* at this time about *two pounds a week.*

Now, what is the value of *ten quarts of milk?* It is ten times four-pence halfpenny, or 3*s.* 9*d.* a day; that is 1*l.* 6*s.* 3*d.* a week; and that is 68*l.* 6*s.* 3*d.* a year. Aye, but what is the *cost?* Why, upon the face of it, it cannot cost *a third* of this money. "But you have *land,*" the reader will say. That is true; but *not one inch to put this cow out upon.* I had a bit of grass land; but that is turned into a nursery. So that my cow has never been out of her stall since the *first day of March last,* except *once* for about *an hour.* She stands tied up, in a stall in the stable, and is only taken out now and then, as the horses are, to be tied up at the door, while the stable is, of a fine day, aired and dried. Her food is about 8 lbs. of hay a day, and half a Winchester bushel of coarse pollard; or half a Winchester bushel of *grains,* mixed with three gallons of pollard. The cost of the hay is seven-pence halfpenny, and the cost of the pollard (supposing her always to have pollard without grains), is sixpence; her litter is the

cleanest that comes from the horse stalls; but, suppose her to have a truss of straw in a week, which, with proper management, is quite enough, that is 8*d*. a week. So that the whole weekly cost, is 8*s*. 6*d*. So that the profit, at ten quarts of milk a day, is 17*s*. 9½*d*. a week; and the four quarts a day, which we now sell, pay for the food and litter of the cow, give us two shillings in money, and leave us (at this time) *seventy quarts of milk a week for our own use*. Mine is a family of fourteen grown persons in all; but still, seventy quarts of milk a week is a great deal; and, in spite of every thing, there is *skim milk*, and here must be *butter milk*. These go to a sow and her pigs. She has two farrows in a year of about eight each. Four of each farrow became *roasters*, the other four *porkers;* so that here are about 400 pounds of pig-meat brought into the house in a year, and it is done at a very moderate expense in consequence of the *cow;* for the pigs, when taken from the sow, have all the skim milk, mixed with fine pollard or barley meal; so that they *never cease to be fit to kill;* and they are killed, during the *four months* that the sow is preparing another farrow; and, during those four months, the sow lives on the pot-liquor of the house with some pollard in it; and is, thus, *kept well* at a very trifling expense. You cannot have it both ways; but, if *poultry*, and not pigs, be your taste, there is nothing equal to *curds* for poultry, young or old, as I have stated in "COTTAGE ECONOMY," paragraph 172. See also paragraph 180, for *fatting fowls*.

The *care* of the cow is of little cost; but, mind, the keeping of a cow always supposes that *a man* or a *stout boy*, is kept; for, as I am speaking of gentlemen living near the WEN, to get one of the "*ladies*," who have had "*headekeashons*" and who want "*siteheashons*" and not "*services*"—to get one of these to *milk* (though she may have done it in the country) is next to impossible. Much less will she *feed pigs*. But, look at the *account* of milk and pig-meat, or, indeed, of milk alone; and you will find, that the man, or boy, *even if he did nothing else*, would pay you amply for his wages and board; but cow and pigs would not take him more than *three hours a day;* and you *must have him* to clean *knives* and *shoes*, and to do many other things, even if you do not keep a *horse*. But, in hiring the man, or boy, take care to ascertain that he *knows how to milk*, for a cow is *very soon spoiled* if not milked *quite dry every time;* and besides this, mind, the last *half pint is twelve times as valuable as the first half pint*. See "COTTAGE ECONOMY," paragraph 114.

I am writing chiefly for the information of *tradesmen*, who, after 20, 30, or 40 years of industry, such as is seen in no other country in

the world, get out of the smoke of the WEN, settle on its skirts, and are there "paying through the nose" for a scanty supply of that which they might have in abundance, and at an easy rate. Let me now speak of the *sort of cow*. No cow, that I know of, but an ALDERNEY, is fit for the purpose. She eats not half so much as a large cow; her milk is beyond all comparison richer than that of any other sort of cow; other cows will not bear confinement so well; and the ALDERNEY is gentle as a dog. The ALDERNEY will give milk to *within a week of calving time*. I had one at Botley, that gave five quarts of milk in the evening, and that calved in the ensuing night, and had a perfect calf, that was so fine as to be kept for a bull. Other cows are not milked for six weeks, or *two months*, previous to their calving; and this is a great inconvenience. When SIDMOUTH'S and CASTLEREAGH'S Power-of-Imprisonment Bill sent me to Long Island, in 1817, I left a dairy of the most beautiful ALDERNEY cows that man ever set his eyes on. One of these cows multiplied herself into *seven cows* in the space of *two years*. She had *twin cow calves*. Before that day two years she had two more cow-calves; and the twins had each a cow-calf before they were two years old. Other cows do not, in general, have calves till they are *three* or *four* years old.

As to the means of *getting the cow*, I cannot speak quite so positively as I could have spoken a year or two ago. MR. WILLIAM ROGERS, of Southampton, used to be a great importer of ALDERNEYS, and used to send them to all parts of the kingdom; and his character for probity and fair dealing (which he derived from his father) was such, that it was just as safe to trust to his word as it would have been to trust to his bond. But I see, by an advertisement in the Southampton Newspaper, that he has quitted the business, and transferred it to his brother-in-law, MR. JAMES ROBERTS, of ABBOTSTON, near ALRESFORD, Hampshire. Of Mr. Roberts I do not personally know much; but I have heard that he is a very punctual and honourable man; and this I presume to be the case, from the circumstance of his succeeding MR. ROGERS, whose recommendation will be quite sufficient with every one that knows him. Mr. ROGERS has sent hundreds upon hundreds of cows to gentlemen who never saw him: a letter to him was enough: he was sure to deceive nobody: and his men were of that trusty character, that disappointment scarcely ever attended any one that wrote to him for cows. About the *present prices* I know nothing. Mr. ROBERTS does, I suppose, as Mr. ROGERS did, send the cows by *his own men* to those who order them. I paid, for one sent to me at Kensington, *5s.* a day for the man, and *1s. 6d.* a day for the cow.

The whole expense of bringing her to Kensington from Southampton was about *two pounds*. Mr. ROBERTS is twenty miles nearer London than Mr. ROGERS was, so that the expense may now be a little less. However, the great thing is, the *character of the man you deal with;* for, if the cow has had a calf, she may have some defect, or may not be in calf again. If a heifer, she may not be in calf. In short, there may arise great disappointment and injury, unless the dealer can be *relied on*. I should prefer a *heifer in calf*, that would calve in a few months. Then you have her from the beginning, and she may last you *twenty years*. However, if Mr. ROBERTS were written to, he would say *what he had*, and what he thought was best to suit the purpose of the person applying.

Though I keep my cow at stall, that need not be done where there is land: in which case, be the bit of grass ever so small, the cow might be *tethered* out to eat the grass, and moved over the ground till all were eaten. See "YEAR'S RESIDENCE IN AMERICA," paragraph 132, for an account of my *tethering* of ALDERNEY cows. I have said that hay and pollard and grains are sufficient, and so they are; but if you have a *garden*, there will be *cabbages* sometimes; and you may have *mangel wurzel* near London at a cheap rate. A great weight of it will grow on *ten rods of ground*. It is *very good* as a bait for the cow *now and then:* once in two days: but not as a constant food. It *refreshes*, and produces an abundance of milk; but it must be given *with hay*, or *dry food* of some sort.

I should observe, that though these cows are called ALDERNEYS, they generally come from JERSEY or GUERNSEY.

[This article is taken from a Number of the *Register*, published in December, 1825.—We consider that the inhabitants of London, as well as those of other large towns, are very much indebted to Mr. Cobbett for this valuable paper. It contains no visionary scheme, but, on the contrary, a plan that is easily executed, and which is followed by the most beneficial and satisfactory results.]

INDICATION OF DECAY IN TREES.

M. BAUDRILLAC has remarked the following signs, as always indicative of decay in trees. When the top branches are withered, the decay of the *central* portion of the wood has commenced; but when the bark detaches itself from the wood, the progress of destruction has made great advances. When the bark becomes loaded with moss or lichens, it is

also a proof that the tree is in an unhealthy condition; but which may in some measure be overcome, by detaching these parasitical fungi from the surface. But if the sap flow out freely from cracks in the bark, it is a sign of early destruction of the tree. These observations are worthy the attention of the horticulturist and others.

SUFFERINGS OF THE POST-HORSE.

Could the poor Post-Horse tell thee all his woes—
Show thee his bleeding shoulders, and unfold
The dreadful anguish he endures for gold—
Hir'd at each call of business, lust, or rage,
That prompt the traveller from stage to stage,
Still on his strength depends their boasted speed,
For them his limbs grow weak, his bare ribs bleed;
And though he, groaning, quickens at command,
Their extra shilling in the rider's hand
Becomes his bitter scourge.—'Tis he must feel
The double efforts of the lash and steel,
Till when up hill the destin'd inn he gains,
And trembling under complicated pains,
Pour from his nostrils darting on the ground,
His breath emitted floats in clouds around;
Drops chase each other down his chest and sides,
And spatter'd mud his native colour hides;
Through his swoln veins the boiling torrent flows,
And every nerve a separate torture knows.
His harness loos'd, he welcomes, eager-eyed,
The pail's full draught, that quivers by his side;
And joys to see the well-known stable door,
As the starv'd mariner the friendly shore.

Ah! well for him, if here his suff'rings ceas'd;
And ample hours of rest his pains appeas'd;
But rous'd again, and sternly bade to rise,
And shake refreshing slumber from his eyes,
Ere his exhausted spirits can return,
Or through his frame reviving ardour burn,
Come forth he must, tho' limping, maim'd, and sore;
He hears the whip—the chaise is at the door.
The collar tightens, and again he feels
His half-heal'd wounds inflam'd—again the wheels,
With tiresome sameness, in his ears resound,
O'er blinding dust, or miles of flinty ground.

Duckworth and Ireland, 76, Fleet Street.

J. Parkinson Archt. Whittock & Goodman Lithog.

THE NEW HORSE & CARRIAGE REPOSITORY

THE

FARRIER AND NATURALIST.

No. 4.] APRIL. [1828.

LONDON

HORSE AND CARRIAGE REPOSITORY,

AND

TURF BETTING ROOMS.

THIS Establishment (exhibiting a *Repository* for the sale of Horses and Carriages on a *grand scale*) is situated at the Eastern extremity of the New Road, at the bottom of Gray's Inn Lane, and junction of those roads with the Highgate, Hampstead, and City Roads; having a Carriage and Private Entrance from Gray's Inn Lane, and another Carriage Entrance from Derby Street. It is erected on the most eligible spot that could be obtained, nearly equi-distant from the splendid circle of Rank and Fashion in the West, and the busy Emporium of Eastern Wealth.

The centre of the South-east Perspective exhibits a noble Edifice, in which are numerous Suites of Rooms for Consultation, Public or Private Meetings, Refreshments, Tables d'Hôte, or such other uses and accommodations as may be ultimately found requisite.

The whole of the principal Story is occupied by *one splendid Room*, lighted by three lofty Windows in front of the Arena, and two elegant Dome Lights, and is equal in magnificence to any thing of the kind in the United Kingdom.

This Grand Room is intended as a Betting or Assembling Room, for Subscribers only, who will form their own Laws and Regulations, and have ingress at all times.

The Rules state that a regular correspondence will be kept up with, and the earliest intelligence obtained from, the Sporting Districts; and that all the Periodical Sporting Publications, Pamphlets, and Papers, will be laid on the Table for the use of Subscribers.

VETERINARY COLLEGE.

ALTHOUGH the corrupt state of the Veterinary College had been felt and acknowledged by all who were acquainted with the Institution, yet it was with no little care and precaution that we undertook, in our last Number, a categorical exposure of its abuses. It appeared to us a task somewhat fearful, whatever our readers may think of it, to arraign before the public tribunal, a national establishment so privileged in error; to show that its laudable and highly useful objects and purposes were wholly subverted, every trace of its original constitution destroyed, and its power, patronage, and emoluments, devoted to the aggrandizement of mercenary men.

The Veterinary College may be compared to the Inquisition, of which initiated members dare not be the first to speak; but when once boldly exposed, every sufferer will add evidence to its enormities. Thus we find not the slightest shadow of defence has been urged by the delinquents in power; but we have received several communications from members of the profession, exhorting us to persevere in the work of reformation, and pointing out defects which escaped observation in our former Number.

We allude to the Letters of Mr. Bryer, the "Veterinarians," &c. The first is particularly worthy of attention. It complains, with great justice, of the disadvantages under which the writer laboured, when a student, from the total want, or absence rather, of a Demonstrator, and the difficulty of obtaining proficiency in the practice of surgical operations; neither of which important defects has been in any degree amended to the present time.

We shall therefore, having hitherto grounded our strictures on a firm foundation, proceed to lay down the original laws on these subjects, and show the unfortunate pupils what were the intentions of the worthy and scientific founders of the College.

"The knowledge of the Animal Economy being indispensable to those who would make any progress in the art of healing, the pupils shall be first *instructed* in Zootomy." *

First Course.

"The study of Zootomy shall begin in November, and end in April of the following year; to be succeeded by the study of the exterior knowledge of the Horse, in which the pupils *shall be taught* good and bad conformation of the animal."

Here was a plan of instruction laid down for the school, of

* The Anatomy of Brutes.

which those who have the misfortune to study under the present irregular system will know how to estimate the advantage. No mention was made of a Demonstrator, because, at the early commencement of the College, the Professor was supposed to have leisure to perform this duty; but we apprehend it was far from the thoughts of the Original Committee of Governors, that when the school should increase to eighty pupils, a person holding a plurality of offices, like Mr. Sewell, should receive also the appointment and salary of Demonstrator, and from one month's end to another, with all these inquiring pupils in want of direction, he should never once show his face in the dissecting-room. *Instruction* was intended to be given, and its necessity to the student in Zootomy will not be denied; and if this gentleman finds himself too much occupied, or incapable of communicating it, why does he hold, or why do the Governors permit him to retain, the situation? We by no means assert that his presence there tends very much to enlighten the pupils, for it appears to be a case of total neglect, combined with symptoms of incapacity (Veterinary inanity it might be called): but the decision of this point we leave to those who may have been fortunate enough to hear him attempt a demonstration; for, in general, he most carefully avoids giving us an opportunity to judge of his powers.

Our correspondent has not fully stated the only means of acquiring anatomical knowledge which is at present enjoyed by the Veterinary pupil. He has the privilege of bringing his own Jack Ass (the Horse is seldom or never resorted to) to one of the benches in the dissecting room; and after cutting and slashing—without much nice discrimination, it may be supposed—until he begins to think he has "found something:" he may then refer, having no Manual of Anatomy, to one or all of the imperfect Works on this subject by different authors; and after labouring in vain to reconcile the conflicting descriptions and absurd synonyma too often given, he cuts away such muscles as he cannot make out, and goes *deeper into the subject*. When, by dint of perseverance, he has become tolerably proficient in Anatomy, and has attached certain names to the various parts, it comes next to be considered, whether they are in accordance with the opinions of the Professor, and will be admitted or not by the Non-veterinary gentlemen who form the Examining Committee.* With such obstacles in the path of knowledge, it is not surprising that few pupils gain more

* A new Nomenclature for the Anatomy of the Horse, which would form a standard Synonyma of Zootomy, is much in request. All the inappropriate Asinine names should be discarded, and their place supplied by others.

than a smattering of the subject. Even those who may be sincerely desirous of acquiring information, are probably deterred by these annoying difficulties, and content themselves with learning, from those who have passed the mock examination, the answers to a few leading questions on controversial points,---which may serve, by a slavish acquiescence with the opinions of the College rulers, to procure the much desired Diploma; which, when obtained by such means, must be a most despicable document in the eyes of all well-informed men.

In answer to Mr. Bryer's last observation, we cannot do better than quote the original rule.

Third Course.

"The course of operations shall occupy three months, and afterwards the pupils shall put in practice those surgical operations which they shall have been taught in the preceding course of lectures. This shall employ them the mornings only; in the evening, they shall be instructed in the Materia Medica."

Such was the plan sketched out at the commencement of the College; and, we have no other remark to make respecting the remissness of the teachers in explaining the surgical operations, than, that it is of a piece, and in keeping, with the whole of their conduct.

Fourth Course.

"The pupils shall attend a course of Pharmacy, to obtain a knowledge of the different preparations."

Fifth Course.

"A knowledge of the common plants and herbs being necessary to the Veterinary practitioner, the pupils shall attend a course of Botany relative to Veterinary Medicine."

It is not apparent in what manner the student contrives to make himself acquainted with Pharmacy, as no Lectures are now delivered on this important subject; but it has been the practice to reward the College Dispenser with an extra douceur for a sufficient private grinding to serve *diplomatic* purposes.

Sixth Course.

"It being necessary that the shoeing of Horses should be perfectly understood, the pupils shall attend the Forge," &c.

This most useful branch of the profession is, if possible, more neglected than any other.

An excellent regulation prevails at the French Colleges, requiring each pupil to learn to make and put on a shoe, before he can receive

his Diploma; and the above rule was probably proposed by St. Bel, with the same intention; but those at our College who have not previously been engaged in the shoeing department, are very improperly permitted to pass, without any other testimony to their knowledge on this subject, than a few admissions of the necessity of *frog pressure:* but this deserves, and will receive, our earliest undivided attention. There is, in fact, only one channel of information—and that a very equivocal one—at the College,—Mr. Coleman's Lectures; which, admitting them to be comprehensive, are deficient, as may be expected, in many points of consequence, and we may observe, are equally delusive in others also.

"There shall be a Library at the College, comprehending all such Works as may contribute to enlarge or improve the Veterinary Science; the care of which shall be committed to the Professor, as Librarian to the College."

The Professor, we doubt not, has a good account to give of this Library. A nucleus was formed for it by the Odiham Agricultural Society, who presented all their papers and essays to the College at its commencement; if the collection has been increasing for the last thirty years, there ought now to be a respectable number of books for the use of the pupils; and a good library would be some set off to them, for the want of direct instruction, and the neglect of their nominal Demonstrator.

A DESCRIPTION OF VETERINARY MEDICINES,

WITH THEIR

Latin and Common Names; including the best Modes of Exhibition and Application; also the Adulterations they are liable to, new French Preparations, &c.: intended to form a complete Practical Pharmacopœia.

THE vague, uncertain, and contradictory state in which we find Veterinary Medicine involved, and thirty years having passed away without a single line on the subject from the College, have induced us to commence the subject; and trust, by the plan which we shall adopt, that we shall be able to place it in a more useful point of view than has hitherto been accomplished.

In order to render a description of medicines as short and comprehensive as possible, it is necessary to use certain single terms to convey meanings to the mind, and preclude the necessity of repetition; thereby not only saving the time and trouble of the reader, but, by

placing it in a clearer light, render it much more forcibly impressed on the memory.

With this view of the subject, we have given, as an introduction, the terms which we shall have recourse to in the progress of our labours, in describing the different drugs used as Veterinary* medicines; comprehending, as far as is known, their modes of action, and their effects.

1. *Alteratives.*—Those medicines are called *Alteratives*, which produce a gradual change in any morbid or faulty secretion, or which remove diseased action by slow degrees. As all medicines, in a general sense, may be considered alterative, the term is not without objection; but being a name so much in use, and commonly adopted, we retain it as best calculated to be understood by the general reader. When a medicine is given as an alterative, it should not act violently on any organ; or its effects are worse than useless, and the object of its exhibition defeated.

2. *Anodynes* are medicines which diminish or remove pain or irritation; and, in over doses, produce stupor, and even death.—See *Sedatives.*

3. *Antacids*, or *Absorbents*, are medicines which act chemically---neutralizing acids in the stomach and bowels, and thereby diminishing or destroying their irritative effects. They can only be considered as palliatives, and require to be combined with other medicines to have a permanent beneficial effect.

4. *Antiseptics.*—This class of medicines prevent putrefaction from taking place in animal substances, and have the power of checking it when commenced.

5. *Antispasmodics.*—The operation of medicines which come under this class is not well or clearly known, but their effects allay violent pain and increased muscular action, without producing that stupor that is observed to result after the use of narcotics. In spasms from debility, a tonic, or any remedy which may remove it, acts as an antispasmodic: when they arise from irritation, as in the case of wounds, &c., purgatives and narcotics may act as antispasmodics.

6. *Astringents.*—The action of those medicines which are denominated astringents, appears to be, in great measure, local and mechanical: their effects appear to result from corrugating the fibres of the part to which they are applied.

7. *Carminatives* are medicines which expel wind from the stomach and intestines, by stimulating their muscular coats.

8. *Cathartics*, see *Purgatives.*

* Under this term we include those of cattle, and all animals.

9. *Caustics* are those substances which destroy or decompose the texture of living animal matter to which they are applied.

10. *Cordials.*—Those medicines usually denominated cordials, are, more properly speaking, *stimulants*, and act on the system by rousing its energy, and by supporting the languid or sinking powers of life.

11. *Demulcents.*—Those medicines, which prevent or obviate the action of stimulating or acrid matter, are termed Demulcents; they cover and sheath, as it were, the surface exposed to their action, and thereby prevent the sensible membranes from being irritated.

12. *Diaphoretics.*—Medicines which, taken internally, act by increasing the secretion from the skin, generally termed sweating.—See *Sudorifics*.

13. *Diluents* are those substances which increase the proportion of the fluid in the blood, as water.

14. *Discutients* are substances applied externally, to repel and resolve swellings and morbid enlargements.

15. *Diuretics* are such medicines as increase the quantity of urine, which they effect by stimulating the secreting vessels of the kidneys.

16. *Emollients* are those substances which, when applied to the external parts of the body, render them softer and more supple.

17. *Escharotics.*—A term applied to those substances which possess a power of destroying the texture of the various solid parts of the animal body. They may be divided into eroding and caustic escharotics.

18. *Errhines* are those substances which, when applied to the mucous membrane of the nose, produce irritation, or increased secretion from the part.

19. *Expectorants.*—Those medicines are usually denominated expectorants, which promote the excretion of mucus, or of pus, from the lungs, trachea, and bronchial tubes.

20. *Laxatives* are medicines which act for the most part by unloading the intestines of accumulated or offensive matter, without producing any considerable effect, either on the exhalent vessels of the intestines, or on the secretion of the liver and pancreas. They seem to act, therefore, by stimulating the muscular fibres of the intestines, whence their peristaltic motion is augmented, and the contents of the bowels more quickly and completely discharged.

21. *Narcotics* are medicines which diminish or remove pain.—See *Anodynes*.

22. *Purgatives*, or *Cathartics.*—Under this class are comprehended those drugs which act on the intestines by stimulating the vessels of their mucous coats, and produce increased peristaltic motion.

23. *Sedatives* are those substances which depress or diminish the vital powers, by reducing the action of the nervous and vascular systems.

24. *Stimulants.*—Those medicines which possess the property of rousing the energy of the system, and supporting the sinking or languid powers of life, are called stimulants. They are also termed *Cordials*.

25. *Stomachics.*—This is a term usually applied to those substances which act directly on the coats of the stomach and its secretions, including stimulants and tonics, which are, indeed, the more definite and proper terms.

26. *Sudorifics* are such medicines as promote the secretion from the skin.—See *Diaphoretics*.

27. *Tonics* are those remedies which dispose the heart and arteries to more forcible contraction: they tend to counteract debility, to give strength and energy to the fibres, but they do not stimulate to any great extent.

21. *Vermifuges.*—Medicines which expel or evacuate worms from the stomach or intestines.

[*To be continued.*]

HORSE CAUSE.

Lincoln Assizes, Thursday, March 13, 1828.

BEFORE THE CHIEF BARON ALEXANDER.

BOUCHERETT, of Willingham, *v.* GREETHAM, of Fiskerton.

MR. SERJEANT ADAMS stated the case to the Jury. The plaintiff, who was a gentleman extremely well known in the county, had brought the present action against the defendant, to recover the price of a horse sold by him to the plaintiff upon a warranty of soundness (which was a false one), and the expenses and losses to which the plaintiff had been subjected, by reason of such sale and false warranty. The case was attended with many extraordinary circumstances, and required their most serious attention. The sale of the horse to the plaintiff took place as far back as December, 1825; and although the present demand was made at so late a period, yet, in point of law, the plaintiff would be entitled to their verdict, as he should prove the horse to have been unsound at the time of the sale. The plaintiff was a gentleman of fortune, fond of the sports of the chase, gave a large price for his horses, and looked out for the best. He employed (understanding the defendant had a horse for sale) a veterinary surgeon, named Hargrave, to inspect it; and it was in the month of November, 1825, that Hargrave went to the defendant's residence to view and examine it. The

horse had its leg bandaged and bound up in the evening on which Hargrave viewed him, and on the next morning he was taken upon the turf. The defendant said he was sound, and of course Hargrave, not having any reason to doubt his assertion, returned such a report of the horse, that the plaintiff ultimately purchased him for 150 guineas. The horse, in about ten days or a fortnight afterwards, was delivered by the defendant's groom to the plaintiff at Saxilby Cover, just as the hounds were throwing off. The plaintiff mounted and rode him on that day, and the horse came home lame in the evening in the flexor tendon of the near fore leg. The plaintiff concluded that the horse contracted his lameness in the exercise he had undergone in hunting, and therefore, with that sense of honour which did him credit, made no application to the defendant to take the horse back, but sent to Hargrave to attend him. Through the attention of the latter, and by resting three weeks, the horse became sound again. He was not a good one at a fence, neither had he a good constitution; and the plaintiff, wishing to dispose of him, sent him to Horncastle fair, and instructed his groom to sell him for ninety guineas, and give the purchaser a warranty,—upon which he was sold. Nothing was heard of him for four months; at the expiration of which time the plaintiff received a letter from Mr. Barkworth, the gentleman to whomhe was sold, informing him that the horse came home lame soon after he was hunted by that gentleman, and that he should return him. The plaintiff, however, refused to take him back, and expressed his surprise at Mr. Barkwork thinking of returning him the horse after having kept him four months; and Mr. Barkworth brought an action against the plaintiff, to recover the value of the horse. Upon the trial, and upon the evidence of Hargrave (who also attended the horse when lame in Mr. Barkworth's possession), the jury entertained no doubt it was a continuance of a lameness which he had when in the possession of Mr. Boucherett, and Mr. Barkworth consequently recovered a verdict against the present plaintiff. Now if the defendant (Greetham) had kept his own counsel, the probability was, that this action never would have been brought; but, not satisfied with having imposed upon Mr. Boucherett, he stated that the horse had been lame whilst in his possession. Mr. G.'s groom, who lived with him at the time of the sale, disclosed, that when the horse went to hunt at Brattleby, he returned home lame: the leg was bandaged, and upon Hargrave coming to view the horse for Mr. Boucherett, Mr. Greetham directed his groom to take the bandage off the lame leg, and place it upon the sound one, that Hargrave's attention might be drawn to the sound leg, and not to that which was bandaged: and this very same story was afterwards told by Mr. Greetham to Mr. Brooks, the person who pur-

chased the horse for Mr. Barkworth. These were the facts of the case; and a jury had already found, and had found justly, that the lameness which took place whilst in the possession of Barkworth, was a continuance of that lameness which appeared on the 13th of December, 1825—at the time Hargrave first viewed him in Mr. G.'s possession. After stating the expenses incurred in that action, amounting to £375 15s., the learned counsel said he claimed them at the hands of the jury. It would probably be said by his learned friend (Mr. Balguy) that they ought to have given notice to Mr. G. to defend the action. If they thought Mr. G. could have been guilty of such conduct—if they had known Mr. G. had bandaged the wrong leg of the horse to create deception,—in such case notice would have been given: but, having no suspicion of this, it was for them to say whether Mr. G. had any right to ask for such notice. After a few other observations, the learned Serjeant said he should establish, beyond a probability of doubt, that the horse was unsound at the time of the sale.

The following witnesses were then called in support of the plaintiff's case.

William Hargrave, veterinary surgeon, was at Mr. Greetham's on the evening of the 23d of November, 1825. I examined the horse next morning at Mr. Greetham's stables; the off fore leg was bandaged: I made the observation; I said to Mr. Greetham, "Of course you warrant the horse perfectly sound;" and he replied, "O, certainly!" I mentioned an enlargement on the near leg, but he said it was of no consequence; the horse's legs had been full of thorns. I attended him when in the possession of Mr. Boucherett, on the 14th of December: he had an enlargement of the tendon; I thought the lameness proceeded from the puncture of a thorn. In January following he bruised his knees. I attended him: he appeared sound, but there always was an enlargement left upon the tendon. I saw him in December, 1826, at Mr. Barkworth's, when the near fore leg was swelled and inflamed in the same place where it had been lame before: it was a small round swelling, and sore on being touched. I think it probable the lameness now proceeds from the same cause.

Cross-examined by Mr. Balguy.—When I saw him at Mr. Greetham's, I had him trotted out and examined, and I considered him perfectly sound. Mr. Boucherett is a hard rider. He rode him the whole of the hunting season, and in the summer as a hack.

Did you, upon your examination at the last assizes, say any thing of having observed any little hump on the near fore leg when you looked at him at Mr. Greetham's?—I don't remember saying anything about it.

Edward Melton, Mr. Boucherett's groom, paid 150 guineas for the

horse. After the first hunting the horse appeared lame. I took him to cover on the 12th of January, when he met with an accident in his knee by leaping over a stone wall. Mr. Boucherett kept five hunters, and this horse, with one or two exceptions, took his regular turn during the hunting season. I sold him at Horncastle fair to Mr. Brooks for 90 guineas, with a warranty.

John Peart.—I lived with Mr. Greetham until May 12, 1826. I was six years in his service. Mr. Greetham purchased the horse at Horncastle August fair, 1825. I rode him home. Mr. Greetham had him out the next day: he was ran out. Mr. G. said he stood badly on his fore legs in the stable, and thought he was lame. He ordered me to get ready to take him back to Horncastle, but he afterwards said, "John, I'll see the horse out again." He did so, when he said, "It may be his way of going; I'll keep him on." At that time I observed no lump on his back sinew; I afterwards noticed it. I remember Mr. Greetham hunting him at Burton Kennel; he did not then come home lame. He hunted him at Brattleby, when he came home lame in the near fore leg. Before he went to Brattleby I observed a lump upon the near fore leg, and I applied mercurial ointment to it. The horse never was rode again until sold to Mr. Boucherett. I remember Hargrave viewing the horse. I took the bandage off the near fore leg, and put it upon the off one. I took him to Saxilby Cover to meet Mr. Boucherett. Before I went, Mr. Greetham said, "Now, John, don't be too soon; if he is groggy, some of the gentlemen will be looking at him, and find it out; but if you are late, Mr. Boucherett will get upon him and hunt; and if he finds him return home lame, he will think he lamed him himself." Mr. Greetham was at the hunt that day, and when he returned he said to me, "I have seen the horse; I expect him back; they have crushed his knee. Now they've lamed him they may take him themselves: we'll Jew them, if we can."

Upon cross-examination by Mr. Balguy, he said:—I'll swear there was no complaint against me by Mr. Greetham, for stealing his corn, which was not the reason I was turned away; but it was through a disagreement between myself and Mr. Greetham respecting the situation of a female servant in the house. Witness then said—After leaving Mr. Greetham, I did not obtain a situation as a groom, but went as an understrapper in Sir Richard Sutton's stables, the groom of which gave me a character, and I obtained a situation under Mr. Betts, of Cainby, with whom I now live.

Thomas Brooks lives at Caborn, near Caistor: purchased the horse of Mr. Boucherett, for Mr. Barkworth. I saw Mr. Greetham after-

wards; he said, "When Hargrave came to look at him, I ordered the bandage to be taken off the near leg, which was lame, and put upon the off leg, which was not lame." Mr. Greetham said, further, he had hunted him twice, and that he was lame both times. I told this to Mr. Barkworth, but gave him no advice. I did not say one word of this at the last assizes.

Mr. Barkworth was called.—He received the amount of damages and costs of the late trial, amounting to £249.

Mr. Wm. Daws, veterinary surgeon, of Lincoln, saw the horse last assizes. He is afflicted with a continuing lameness, which will be always exhibited when he is worked.

Mr. Henry Sexton produced an examined copy of the judgment in the cause "Barkworth *v.* Boucherett," to which Mr. Balguy objected, on the ground that Mr. Greetham ought to have had notice of that action, that he might have had an opportunity of furnishing Mr. Boucherett with an answer to the action brought by Mr. Barkworth. After an observation from Mr. Denman, the Judge overruled the objection. The damages and costs in that action were then stated to be £375. 15*s*.

Mr. Balguy now rose for the defendant, and addsessed the jury in a most able and energetic speech.—Mr. Boucherett, in answer to a letter from Mr. Barkworth, claiming the price of the horse when he turned out lame at the expiration of four months, said he should resist that claim, and expressed his surprise at a complaint of unsoundness, after having had possession of him for so long a time. Though he could feel much surprise at Mr. Barkworth's calling upon him after *four months'* lapse of time, he feels no difficulty in calling upon Mr. Greetham after a lapse of more than *two years*. It was proved, by his learned friend's case, that the contract with Mr. Boucherett was made in November, 1825,—that Mr. Boucherett rode the horse during the whole of the hunting season,—that he rode him as a hack during a whole summer, and then sold him at August Horncastle fair, 1826,—that he was called upon four months afterwards to answer a charge for breach of warranty, —that the case was tried last assizes between Mr. Barkworth and Mr. Boucherett,—that a verdict was obtained by the former,—that Mr. Greetham had no intimation made to him, either on the action being brought or the case being heard, until after a certain number of months had expired,—that a verdict was recovered in July, 1827,—and that no claim was made upon Mr. Greetham until the commencement of the year 1828. Now he (the learned counsel) would ask, had Mr. Greetham been fairly and candidly dealt with? He was quite sure that no individual who then heard him could conscientiously reply in the

affirmative. Mr. Greetham purchased the horse at Horncastle fair, previous to selling him to Mr. Boucherett, at a price of 100 guineas. Mr. G. then sells him for 150 guineas, after the trouble of getting him into good condition. He sells him with a warranty of soundness, because at the time he sold him he knew him to be sound; and he would repeat his conviction, that he was sound at the time he was transferred from Mr. Greetham to Mr. Boucherett. Did they think Mr. Greetham,—a neighbour of Mr. Boucherett's—a gentleman extremely well known to Mr. Boucherett, and constantly meeting him in the field,—did they think, if he had known the horse to be unsound, he would have singled out Mr. Boucherett as a purchaser?—Would he have been such a madman as to warrant such a horse? or would he have put a doubtful horse into the hands of Mr. Boucherett, whom he knew to be one of the hardest riders in this country? or would Mr. Greetham have been such an idiot as to have warranted this horse, and subjected himself to all the consequences of an action for breach of warranty, if he had not known him to be sound? Then, in point of fact, he is sold and passes into Mr. Boucherett's possession in November, 1825; soon after Mr. Boucherett rides him a day's hunting, and in the evening he returns home lame. Every man who knew any thing of hunting must know that a horse is subjected to danger, and the harder a man rides the more a horse is exposed. It did not appear that the horse was a perfect hunter at the time of the sale; for one of Mr. Boucherett's objections was, that he was apt to run *through* fences instead of leaping them, and thereby subject to falls. Such a horse, therefore, was most likely to become lame in the way he did—by a thorn. The first time Mr. Boucherett rides him, he is lame. Who attends the horse?—Hargrave. Upon whose judgment was he purchased?—Upon Hargrave's, who had seen him over night, and on the following morning subjected him to the strictest inspection, to enable a skilful man to detect infirmity of any description, and upon whose judgement Mr. Boucherett ultimately bought him. Mr. Hargrave, who was a witness in the cause "Barkworth *v.* Boucherett," states to-day, and for the first time, that upon looking at the horse before Mr. Boucherett purchased him, he had some small enlargement upon the near fore leg. Now it was extremely important for him, being, as he was, a witness for Mr. Barkworth at the late trial, to have stated, not only that he was lame when he went over to Hull to inspect him, but when Mr. Boucherett bought him; that he observed the enlargement upon the fore leg, but his attention was drawn from the fact by Mr. Greetham's warranty. Why did he not state this when he was the witness of Mr. Barkworth? Was he seeking to keep this back, to protect Mr. Boucherett? If so, what confidence can you have

in his testimony? If he had been examined as to attending the horse within a few days after its arrival at Mr. Boucherett's, it would have led his attention to the state of the limb previous to the horse getting into Mr. Boucherett's service. If he had had the slighest ground for supposing that the lameness he had seen after Mr. Boucherett got him, was not through hunting at Saxilby, it was an extraordinary thing that Hargrave did not direct Mr. Boucherett's attention to it—"I believe your horse is lame to-day, and I am bound to tell you, as you confided in me to examine him, that in this very spot, when in Mr. Greetham's possession, I perceived an elargement about the size of a pear." It was Mr. Hargrave's duty, if he had had the least reason to suppose that Mr. Boucherett had bought an unsound horse,—if Mr. Greetham did not—to tell him so. He would have acted properly, and Mr. Boucherett would have been most sensibly alive to it. He would say, it was clear, if he had the least claim to character, that he would have expressed his doubts to Mr. Boucherett; and then some appeal would have been made to Mr. Greetham, which would have placed Mr. Greetham in more favourable circumstances, and in a situation to give a better account of the horse. This man was bound to give Mr. Boucherett that information, and Mr. Boucherett was bound to act upon it. The next witness was Melton. He would not have wished for a better. He proved the learned counsel's (Mr. Balguy's) case. If there was the slightest pretence for his learned friend imputing some old disease, latent in the horse, he would say, that the horse was subjected to a test which any horse that had a leg to go upon could not perform without betraying the disease. The diversion of hunting was most laborious to a horse: we are surprised the animal is not more frequently lamed: every muscle, every artery, every fibre, the whole frame, underwent the most violent exertion, and frequently at a period when the animal functions were beginning to decay, and then, of all others, those horses which are subjected to lameness, are tried, and especially by those who ride in the front of the battle, pushing on their horses and tiring them to the utmost. A horse in that state was much more liable to contract lameness, and still more liable to manifest latent disease. Mr. Boucherett lamed him: he was lamed when Mr. Boucherett rode him. After some other remarks upon the testimony adduced, the learned gentleman proceeded. Thus Mr. Boucherett buys a horse, warranted sound; rides him a hunting during the winter—as a hack throughout the summer. During the whole time he is sound, with the exception of the two accidents that happened; and Mr. Boucherett is so perfectly satisfied with his soundness, that he warranted him to Mr. Barkworth. Would Mr. Boucherett have war-

ranted him if he had had the slightest distrust of what had passed between himself and Mr. Greetham? The inquiry they were to make was, whether at the time the horse was sold to Mr. Boucherett, there was a latent unsoundness, and whether all the unsoundness they heard of was to be aseribed to that cause? With respect to the witness Peart, he regretted that Mr. Boucherett should have attempted to rest his case upon the evidence of such a man. Could they, for one single moment, credit the testimony of a man of this description?---a discarded groom! He took care, though, to hold these conversations with Mr. Greetham alone.—The learned counsel could not contradict or thwart his string of evidence there. No!—[After deprecating the plan of his learned friend resting his case upon the evidence of this man, Mr. Balguy proceeded:]—If he were to yield to the wishes of Mr. Greetham, he should not rest his case upon the evidence adduced by his learned friend, or upon any observations he could make, but should call witnesses. [Mr. Denman interposed.—The Chief Baron: "He must either call the witnesses, or abstain from alluding to them."—Mr. Balguy resumed]—He was not at all surprised to hear his learned friend make the objection; he felt the feebleness of his case, and therefore was exceedingly anxious to stop any observations against it. The learned gentleman then commented upon the evidence of Mr. Brooks. Mr. Brooks stated, that at Horncastle fair, 1826, when he bought the horse of Mr. Barkworth, Mr. Greetham said "the horse had been lame of his near leg." Mr. Greetham might have said so. He did not say he did not: he would suppose he did. Did that prove that the horse was an unsound one at the time Mr. Greetham sold him to Mr. Boucherett? Every horse that went a hunting was subject to occasional lameness. Did that make him an unsound horse? Well, be it so. Mr. Greetham told him, during the time he had him he was lame; aye, and Mr. Brooks purchased him for ninety guineas.—[The learned gentleman then adverted to the testimony of Daws, which, he said, put the thing beyond all doubt.]---Daws saw the horse last year; he had a continuing lameness, and it was clearly proved, that when in Mr. Boucherett's possession, he regularly did his work in the hunting season, with the exception of twice; and it was clear, from concurrent circumstances, that he was sound when sold to Mr. Boucherett.---In conclusion, the learned gentleman said, the time that had elapsed required explanation, which was not given; and therefore he should say, if Mr. Greetham was called upon for a breach of warranty given at so great a distance of time, no man that ever sold a horse could be satisfied and secure; nay, even his executors might be called upon for a breach of contract, though no such circumstance had occurred.

The Chief Baron, in summing up, said, the impression made upon his mind was, that the horse was diseased in the possession of Mr. Boucherett; but under such ambiguous circumstances, that it did not occur to the persons in whose possession he then was, or to the persons whom Mr. Boucherett consulted. The utmost they could go to say was, the disease was of an ambiguous character, and they did not feel themselves authorized to state that the appearance then presented to them satisfactorily proved it was an old complaint, existing at the time when the horse was in the possession of the defendant, and at the time when Mr. Greetham sold him to Mr. Boucherett. After detailing the evidence of Pert and Brooks, his lordship said, if the jury were of opinion there was a latent disease in the horse at the time he was sold, the plaintiff was entitled to their verdict.—Verdict for the plaintiff for £375. 15*s*., with leave to move to reduce the damages, if the Court of King's Bench should be of opinion that the costs of the action Barkworth *v*. Boucherett could *not* be recovered.

This interesting cause tends strongly to prove the inefficiency of the present laws respecting sale and warranty of horses; it goes to confirm an opinion we have long entertained, that the interference of the law in these cases is by no means calculated to further the ends of justice. This decision ought to make men very careful, ere they sign what is in fact a guarantee for the health and soundness of an uncertain animal in another man's service. It seems that the horse is proved by a discharged groom (very suspicious testimony) to have what the Judge calls a *latent* disease while in the hands of Mr. Greetham; he is then examined by a veterinary surgeon, who thinks it nothing; sold to Mr. Boucherett, falls lame, recovers, is hunted and rode for nine months without favour, and sold again with a warranty. Four months after, the last purchaser makes a complaint that the horse is lame; brings an action, on finding that he had been so a year ago; and the jury, in their zeal to punish tricks in horse-dealing, give him a verdict.

Mr. B. having found that his piece of flesh and blood had once been *queer* in the hands of Mr. G., brought his action, and by the present decision has obtained a verdict of near £400.

The Lord Chief Baron's *latent unsoundness*, and Professor Coleman's *seeds of disease*, to us are equally unintelligible.

Both gentlemen were wrong in giving warranty, and both juries have furnished a bad precedent for litigation, considering that so long a period, and so much work, intervene between the dates of sale and return.

NEW NOMENCLATURE OF THE HORSE'S FOOT.

FROM MR. BRACY CLARK'S WORKS.

"THE various parts of any complex object will be rendered more perspicuous and interesting by having names; and, especially, if these admit of the inflections of language, they will greatly facilitate not only the thinking, but the writing or speaking upon it.

"We have ventured to attempt this difficult task in the following manner:—

	Formation.	*Disease, or Affections.*
The leading part of the hoof, the wall	*Onuchus,—*	*onuchal.*
The bars	*Intortiones,—*	*intortional.*
The angle formed at the heels	*Inflexura,—*	*inflexural.*
The elastic processes of horn for support	*Keraphylla,—*	*keraphyllous.*
Those from the foot	*Podophylla,—*	*podophyllous.*

"EXAMPLES.—The *onuchal* part in every animal determines the form of the rest of the hoof. Where it exists singly, it becomes a NAIL. *Onuchal* disease frequently influences the figure of the other parts of the hoof.

"The *keraphyllous* structure generally accompanies the horn which terminates the extremities of animals, and increases in surface as the weight increases, or is more directly brought to bear upon it.

The frog generally	*Furca,—furcaceous.*
The frog-band	*Periople,—perioplic.*
The frog-stay	*Vexillum,—vexillous.*
The cleft	*Lacuna,—lacunar.*

"EXAMPLES.—A *periople*, nevertheless, exists in animals without a frog. The cuticle covering the water-whale of the human nail appears a *perioplic* rudiment, and performs some of its offices.

"*Furcaceous* weakness and disease is with considerable difficulty corrected. *Vexillous* rupture generally leads to the thrush.

The sole	*Solea,—solear.*

"EXAMPLES.—The *solear* structure exists wherever the *onuchal* part, in animals, approaches to the circular form.

The hardened glandular termination of the skin, which enters the concavity in the upper part of the hoof	*Cutidura,—cutidural.*
The cavity in the horn receiving the above part	*Cutigera,—cutigeral cavity.*"

[We have found it necessary to precede the following translation by Mr. B. Clark's Nomenclature on the Foot of the Horse, without which it would have been unintelligible to our English Veterinarians; for, although this scientific arrangement has been adopted by our enlightened Gallic neighbours, it has hitherto, by reason of the Professor's prejudices, been denied admittance into the College at St. Pancras.]

OBSERVATIONS

ON

ABSCESSES OF THE KERAPHYLLA;

BY. MONS. VATEL,*

Clinical Professor of Veterinary Medicine at the College of Alfort.

In the account which has been given of the scientific labours of the Veterinary School of Alfort for the year 1824-5, we have endeavoured to turn the attention of Veterinarians to a cause of lameness which appeared till then unknown; no author having, up to that period, mentioned it. It relates to the *keraphyllocele*, or disease of the *keraphylla*, inside the hoof. The term, though expressive, may not be understood but by those, at least, who have been willing to read Mr. Bracy Clark's excellent work *On the Construction of the Hoof of the Horse.* We use the term to denote a species of horny tumor arising on the internal surface of the wall. This morbid production is the subject of the present article.

The theory founded on the observation of facts ought to precede some of those that we have collected upon the cause of this lameness: what we have to say relative to the cause of keraphyllocele,—as to its developement, its progress, and as to the symptoms which announce its presence, its prognostics, and the treatment, we are to oppose to it.

Observation the First.

Lameness, without any determinate cause; its cessation after employing emollient applications to the hoof. New appearance of the lameness; its obstinacy, in spite of the application of bar-shoes, and greasy applications to the diseased quarter. Discovery of a cylindrical imperforate mass of horn, forked upwards, or at its superior part, ex-

* Rec. de Med. Vet.

tending from the *cutigeral cavity* to the inferior edge of the wall on the *mamelle*,* or internal part of the foot, between the toe and the quarter, twenty-five days after the appearance of lameness. The removal of the wall; local pain and fever of reaction very considerable. The removal of the dressings two days after its application. The exfoliation of a portion of the coffin bone proved a perfect cure.†

A coach-horse, straight and well formed in his legs, and with feet also well figured, fell suddenly lame of the off fore leg. He was brought to my father-in-law, M. Philippine, Veterinarian at Paris, on the 10th June, 1815, to be examined. The shoe being taken off, and the foot pared and sounded with care, presented no trace of alteration to which one could attribute the lameness: nevertheless the animal showed that he felt a slight degree of pain when we rapped the inside quarter. We tacked on the shoe with four nails, and ordered rest, and the application of emollient poultices to the hoof and coronet, often wetted with lukewarm water.

On the 16th the patient was not lame. It was necessary to make him trot, to observe that he was a little tender. We continued the application of poultices.

On the 20th he was submitted to his ordinary work. He accomplished no more than half a stage, and returned home lame.

On the 21st we proceeded to a new examination of the foot, which was in the same state as on the 10th; continued the application of proper means to supple the horn, and left the sick animal to rest until the 10th July, at which period we proceeded to a third examination. The appearance of the frog is less full; the interior quarter is rather contracted and straight. It begins to disunite itself, towards the inferior edge, from the portion of sole with which it is in contact. We applied a bar-shoe *(un fer à eponges réunies)*, and recommend the application of greasy ointments to the coronet, the quarter, and corresponding portion of sole. The patient, although lame, is put to work

* The French use the word *mamelle* to denote the protuberating part between the toe and quarter of the hoof, for which we, in English, have no distinct appellation. It enables them to express and describe their meaning with precision and clearness; and as the word seems without objection, it might be adopted by us with advantage.

† Mons. Vatel is not aware that Mr. Bracy Clark has, fifteen years ago, described this disease, in his valuable Treatise on *Sand-Crack*, under the simple but appropriate term, *the bastard rib of horn*, and has recommended the same treatment.

at the trot. We put in use the same method of shoeing, and employ the same auxiliary means. We remark, at each shoeing, that the quarter and heel insensibly contract, whilst the toe seems to elongate, at the same time that the sole at that part loses its concavity.

The 15th September, the lameness becomes suddenly more violent. The coronet appears rather swelled over the part corresponding to the internal *mamelle* of the hoof. The wall is free from fissures, depressions, and other exterior alterations. Suspecting the existence of some change on the internal surface of the hoof, we pared the foot deeply, as much at the heels as at the toe, and then discovered that the white line, which exists at the place where the inferior edge of the wall unites with the sole, is a little bent out of its course towards the centre of the foot, at that part of the hoof which bears the name of the internal *mamelle*. We then pared deeper in that place with the corner of the butteris. Some of the horny leaves of the internal face of the wall were larger than in their natural state; they formed a white surface, circumscribed, and harder than the other parts of the wall and the sole, of the size which the end of a quill would be when divided lengthways. We took away, with the corner of the butteris, and the point of a sage-leaf knife, a portion of that part—searching in this manner about one-third the height of the wall.

The probe introduced into the cavity which resulted from this slight operation could go no further: it met with resistance. Presuming that a kind of horny column, thrown out upon the internal face of the hoof, is the cause of all these accidents, we proposed to take away the wall at the *mamelle*.

The operation was performed the next day, the 16th of September. A portion of horn was taken away from the coronet to the lower edge of the wall, over an extent of about two inches, carrying on its internal surface a column of horn, apparently formed by the thickening—the augmentation in size—of some leaves of the *keraphyllous tissue*: this enlargement takes its origin in the *cutigeral* cavity, where it is bifurcated. The branches of this fork are distant about three lines; they unite near the middle of the height of the wall, and form a cylindrical body, which, without diminishing, extended to the inferior edge of the wall. The processes which are in the neighbourhood of this enlargement are rather more developed than over the rest of the extent of the *keraphylla*. The portion of the *podophylla*, upon which this morbid production was placed, is blackened, ecchymosed, and soft: but little blood escaped from it; and it presented a depression, corresponding in size to the enlargement of horn which had filled it. The

bone of the foot bore the mark of this alteration: it was dressed in the same manner as after the operation for sand-crack, and the bandage was applied moderately tight.

September 17. The foot cannot be put to the ground. The fever of reaction is violent, and every thing shows that the animal feels much pain in the part which had been operated on. We take away four pints of blood, and direct a spare diet.

18. In the same state, and the treatment the same.

19. The part is swelled above the coronet, with increased inflammation. The sufferings of the animal induce us to take away the first turns of the bandage, in order to see if the compression had not been too strong. We can easily pass the finger between the dressings and the exterior of the wall and quarter: every thing shows that some other cause produced the bad effects which supervened since the operation. We presume that a necrosis of a lamina of the bone of the foot, formerly compressed by the enlargement, acts as a foreign body, and take away all the dressings. A portion of the *podophylla* comes away on the pledget, and gives us an opportunity of discovering a part of the external surface of the bone of the foot, of a blackened appearance, and partly separated from the part beneath it. We take away this extraneous body, and scrape the surface on which it rested; apply simple dressings, as at first; take away four pints of blood, and direct a bland diet. The next day, and the following, the inflammation decreased, and the animal rested a little on the lame foot. We did not proceed to a third dressing until at the end of eight days, and continued them with similar intervals. The regeneration of the *podophylla* took place insensibly with the reproduction of the horn, which, descending with the wall, replaced gradually that which had been taken away. At the end of six weeks the animal is shod, and submitted to light work: after two months he is put to a coach. The foot, examined after the total renewal of horn, presents no trace of alteration, except the convexity at the toe which existed before the operation.

Second Observation.

"Lameness coming on without any apparent cause; its disappearance at the end of some days; and, after the application of emollients to the foot, a fresh attack of lameness after every new shoeing. Discovery, seven months after the first access of lameness, of a fistulous *keraphyllocele*, of a conical form, extending from the *cutigeral cavity* to

the lower edge of the wall, at the quarter. Removal of the wall at that part—exfoliation of the bone of the foot—speedy cure."

A cabriolet horse was brought to the shoeing forge of my father-in-law on the 10th of March, 1819, lame of the off fore leg. The upper part of the limb presents nothing particular; the four feet are flat and wide. We pare that belonging to the lame leg, without perceiving any thing wrong, apply a common shoe, and recommend the use of poultices. At the end of some days the lameness disappears, and the animal is put to his usual work.

The 7th of April following, the horse being newly shod, falls lame a second time. Attempts to discover the cause of lameness are again unsuccessful: rest and the use of poultices again remove it. The same accident occurs afresh after each new shoeing, and yields to the measures before stated. At last, on the 7th of September (seven months after the first appearance of lameness), we observe, on paring the foot, a little black cavity near the white line which separates the sole from the wall at the posterior third part of the quarter. On paring deeper, we come to a resisting body, which is no other than a hollow rib of horn, from the opening of which runs a black offensive matter. We proceed to the operation as in the case before cited. The *podophylla* is ecchymosed and depressed; the enlargement on the internal surface of the wall extends from the *cutigeral cavity* to its lower edge: it is triangular, and largest at its base, forming a pyramid; its hollow penetrates to its origin, that is, to the *cutigeral cavity*: it communicates above by a very straight opening, a little lengthened, following the direction of the leaves of horn, with a very small surface of the *podophylla*, which does not appear sensibly altered. The interior of this fistulous canal is black, and filled with matter of the same colour; an exfoliation or necrosis of a portion of the bone of the foot takes place at the removal of the first dressing, on the tenth day after. On the 12th of October (thirty-five days after the operation), the foot is shod with a bar-shoe, and the horse is employed at slow work, in a cart. A month after, he is put to the cabriolet.

Fourth Observation.

"Lameness suddenly developed; *keraphyllocele* existing only in the superior half of the wall; an internal fissure, without any appear-

ance on the outside; removal of the wall, of a small part of the cutidura, and of some leaves of the podophylla: speedy cure.

A cabriolet horse is suddenly affected, 22d September, 1820, with lameness of the off hind leg. The hind feet are very flat, the toe long; the heels are low, and very open; the lameness is great; the foot hot and tender at the coronet, principally at the part corresponding to the external *mamelle*. The foot having been properly pared out, we discover, outside the white line which separates the sole from the wall, a little black spot between two processes of the podophylla. We suspect there is keraphyllocele; but on cutting deeper, do not meet with the column of horn we expected to find. A deep fissure is to be observed on the internal surface of the wall (the outside presents a natural appearance): it is filled with a black offensive matter. Considering it quite indispensable to take away that portion of the wall in which the hole is situated, we recommend the operation, which is performed two days after. The portion of wall taken away has a conical horny ridge at the upper part, (its base being downwards,) of the size of a large quill at its thickest part, taking its origin at the cutigeral cavity. It extends only about half the height of the foot, and a fissure separates this ridge into two parts: it extends only a certain depth in the thickness of the wall, and continues, as we have described above, to the lower edge of the foot. The cutidura, and the portion of the podophylla corresponding to the keraphyllocele, are deeply depressed. Some leaves of the podophyllous tissue are diseased and blackened. We remove, with a sage-leaf knife, a portion of the surface of the cutidura; and the injured processes we dress with pledgets moistened in proof spirit. No bad symptom occurred after the operation, and removal of the first applications. Four dressings completed the cure; and the animal was sent into the country, 29th October—thirty-seven days after the operation.

The *Recueil de Médicine Vétérinaire* for January last has also noticed the first volume of a new Work, by M. Vatel, entitled "Elements of Veterinary Pathology;" in which he has attempted to class the diseases of animals on a new and more perspicuous plan. The second volume will comprise a description of Surgical Operations, with an account of the diseases in which they are required. A Formulary of Medicine will conclude the Work.

This Work is particularly recommended, from the care which the author has taken to point out the etymology of all such words as he has thought proper to employ, instead of the inexpressive and often injurious names in common use, and which seemed calculated to perpetuate the impression of old errors, which are now considered as such by the majority of well-educated men.

In his new terms of Veterinary Nosology, he has followed the *Anatomie* of M. Girard, and adopted the Nomenclature of Mr. B. Clark, in his "Dissertations on the Construction of the Foot of the Horse," which, the Editor remarks, is well adapted to the present wants of Veterinary science.

Although several names of diseases have, in consequence of their etymology, a signification more exact than is generally supposed; yet no one can deny the utility of substituting for many other words, of which the sense is seldom properly determined, a Nomenclature, well established and well defined.

The Professors of the Royal School of Alfort observe, that this improved Nomenclature ought to be generally adopted by Veterinarians, and recommend it strongly to the notice and attention of the profession.

There being so such thing as a Nomenclature known at our Veterinary College, we anticipate, that when the Professor finds the discoveries of his countryman adopted by the continental schools, he will think it time to lend to this subject his most serious attention; having, at the outset of his career, condescended to borrow his only opinion on shoeing *(Frog Pressure)* from a foreigner, La Fosse, and obstinately adhered to it up to the present moment; though, had the projector of this delusive doctrine lived to see the real construction of the horse's foot explained, we do not hesitate to assert, that he would most readily have acknowledged his errors.

THE HARE.

THE rumination of these animals has been much controverted; and even lately some naturalists have contended that it is only an apparent rumination: but Blumenbach, after repeated observation and experiments, having opened them some hours after they had eaten food, is thoroughly convinced that they truly and actually ruminate.

XENOPHON'S RULES*

FOR THE

CHOICE, MANAGEMENT, AND TRAINING OF HORSES.

[Translated from the Original Greek.]

CHAPTER I.

INTRODUCTION.—*How to judge of a Colt; of the Feet, Legs, and other Parts of the Body; also to know whether a Colt will be large or small.*

1. As we imagine, from having given much of our time to Horses, that we have acquired some knowledge of them, we are willing to show the younger part of our friends how we think they may manage their horses to the greatest advantage. A treatise on this subject has been written by *Simon*, who consecrated a horse of bronze in the *Eleusinium* at Athens, and engraved his actions on the pedestal. We will not, however, leave out those things in which we agree with him, but will so much the more readily notice them to our friends, thinking they will acquire additional credit, since this person, who is so skilled in the management of horses, joins in opinion with us; and those things which he has omitted, we will endeavour to supply.

2. We will first, then, show how any one may be least deceived in the purchasing of a horse. In colts not broke it is manifest that we must examine his *body;* for of his temper he cannot give any certain indications, having never been rode.

3. And in the body, we say, the first thing that ought to be looked to, is the *foot*. For as a house would be of no use, though all the upper parts of it were beautiful, if the lower parts had not a proper foundation; so a horse would not be of any use in war, even though he should have all other good qualities, but have bad feet,—as his good qualities could not be made any use of.

* As the scarce and valuable Treatise of this celebrated Greek writer and General, is occasionally alluded to, and considered the most ancient authority respecting the Horse, we have commenced a translation, not only to show that the Greeks were well acquainted with the Horse, and his treatment, but also to prove that Xenophon's instructions have not been excelled, generally, by any writer of modern date. Xenophon lived about 400 years prior to the Christian era.

4. But any one may judge of the feet by examining the *hoofs:* for *thick* hoofs make a horse's feet better than *thin* ones. It must likewise not be forgotten to see whether the hoofs are *high* or low, and near the ground, both *before* and *behind.* For high ones have what is called the *frog* at a distance from the ground, but low ones tread equally on the hardest and most tender part of the foot, like men who are bow-legged; and good feet, says *Simon,* very properly, may be known by the *sound.* For a hollow hoof sounds against the ground like a cymbal.

5. As we have now made a beginning on these parts, we will hence proceed to the rest of the body. The *pasterns,* or bones immediately above the hoofs, and below the *fetlock,* ought not to be straight like those of a goat (for being such, they shake the rider, and such legs are more subject to inflammation); nor ought these bones to be too low; for the *fetlock* would be chafed and ulcerated, if the horse were rode over ploughed grounds, or among stones.

6. The bones of the *legs* ought to be large (since they are the supporters of the body); not, however, thick with veins or flesh: for if they are not large, when the horse is rode on hard ground, these parts will necessarily be filled with blood, and swellings will arise, and the legs become thick, and the skin separate; and, upon this getting loose, oftentimes the sinews give way, and make the horse lame.

7. If the colt in walking bends his knees freely, you may judge, when he comes to be rode, that his legs will be supple. For all horses, as they grow up, bend their knees with greater freedom; and supple joints are justly commended, as they make a horse less liable to stumble, and not tire so soon, as when his joints are stiff.

8. The *thighs* also under the shoulders, when they are large, appear more powerful and graceful, as in men; and the chest being very large, contributes not only to beauty and strength, but to a horse's being able to continue a long time in one pace.

9. The neck should proceed from the breast, not inclining downwards, like that of a *boar,* but rising upwards, like that of a *cock;* and it should be loose about the bend. The *head* too, being bony, should have a small cheek; thus the neck will be before the rider, and the eye will look before the feet: and having such a form, a horse will be least able to do any mischief, if he should be vicious; for horses do not attempt to be mischievous by bending, but by extending, their neck and head.

10. It should be also seen whether both the *jaws* are tender or hard, or not alike; for those horses are for the most part hard-mouthed,

which have not both the jaws alike. And to have their *eye* standing out, appears more watchful, than when sunk into the head; and such a horse likewise sees much better.

11. And *nostrils* which are wide are not only better adapted for breathing, than those which are compressed, but likewise make a horse appear more terrible. For when one horse is angry with another, or heated with being rode, he opens his nostrils more.

12. And the top of the head being large, and the *ears* small, makes the head appear more elegant. The point of the shoulder likewise being high, gives the rider a firmer seat, and makes that part of the body more compact. A double covering too is softer to sit on than a single one, and has a much better appearance.

13. And the sides being deep, and swelling towards the belly, make a horse in general more commodious to be seated on, and stronger, and better able to digest his food. The broader and shorter the *loins* are, so much the more easily will a horse throw his fore feet out, and bring up his hinder ones; and the belly thus appears small, which being large, not only disfigures a horse, but makes him weaker and less able to carry his rider.

14. The *haunches* ought to be large and full of flesh, that they may correspond with the sides and the chest; and when all these are firm, they make a horse lighter for the course, and fuller of animation.

15. If the *thighs* under the *tail* are distinctly separated, the hinder legs will stand more apart; and, by being so, his movements and manœuvres will be swifter and firmer, and he will be better in every respect. A proof of this may be seen in men; for when they want to take any thing from the ground, they all endeavour to do it by standing with their legs further apart, and not by closing them together.

16. A horse should not have large *testicles*. This cannot, however, be known beforehand in a colt. As for the *pasterns* of the hinder legs, as also the *fetlocks*, and the *hoofs*, the same rules hold good as for those before.

17. I will show, too, how any one may be least deceived in the *size*. When the legs are very long at the time the colt is foaled, he will be very large; for the legs of all quadrupeds do not increase much with length of time, but the rest of the body grows to be proportionate to them.

18. Those who judge of the shape of a colt by these rules, seem most likely to get one that will have good feet, and be strong, and full of flesh, and of a good figure, and large. But if some horses change for the worse as they grow up, we may, notwithstanding, confide in

them in making our choice; for there are many more which, from having been ill shaped, become afterwards well proportioned, than having been once well shaped, grow afterwards deformed.

CHAPTER II.

In what manner a Colt should be Broken. How to make him gentle and tractable.

1. It seems we ought now to show how a colt should be broken, as the breaking of horses is practised in the cities by persons who are opulent, and who have no small share in the government. But it would be much better, instead of breaking colts, that a young man should endeavour to acquire a robust constitution, and a knowledge of horsemanship: or, if expert in it, that he should exercise himself in riding: and for one advanced in years, that he should occupy himself with his family, his friends, and with state or military affairs, rather than with the breaking of colts.

2. And whoever knows as much as I do about the breaking of colts, will unquestionably send his colt out to be broken. This he ought likewise to do in the same manner as when he puts a youth out to learn any art,—by writing down what he is to be instructed in, at the same time that he delivers him over: for these articles will show the horse-breaker what he has to attend to, if he wishes to receive his recompence.

3. Care must, however, be taken, that the colt be delivered over to the horse-breaker gentle, and fond of man; and this is in a great measure to be effected at home, and by the groom, if he should be sensible that a colt, even when idle, is hungry, and thirsty, and irritated; but that food, and drink, and the being freed from what is irritating, comes to him from man: for this being the case, colts must necessarily not only love, but long for the sight of men.

4. And those parts ought to be gently rubbed, with the stroking of which a horse is most delighted. These are such as are thickest with hair, and which a horse can least come at, if any thing should molest him.

5. The groom must likewise be ordered to lead him through a crowd, and to make him approach all kinds of sights, and all kinds of noises. If a colt, however, should be afraid of any of them, he ought

to be taught, not with harshness, but with gentleness, that there is nothing terrible in them: and respecting the breaking of colts, these things seem to me sufficient for a private individual to attend to.

CHAPTER III.

Of a Horse's Age.—How his Good and Bad Qualities are to be discovered.

1. But if any one would purchase a horse that has been already rode, we will lay down rules, which he ought to be acquainted with, not to be deceived in his purchase. First of all, he ought not to be ignorant of his age; for one that has no longer the mark in his mouth, does not delight with the hope of growing better, nor is he easily disposed of again.

2. But when the mark in his mouth is evident, it ought to be seen how he takes the bit in his mouth, and the head-piece over his ears; and this may be easily seen, if the bridle be put upon the horse in the presence of the buyer, and taken off in his presence.

3. It then becomes necessary to see how he receives the rider on his back. For many horses do not easily receive, what they are certain beforehand, when they have received, will oblige them to work.

4. This likewise must be considered,—whether, when mounted, he wish to separate himself from the other horses; or if, looking round to the horses standing near him, he do not carry off his rider to them. There are some horses too, which, from a vicious habit, run away home to their stables from the places of exercise.

5. For those horses whose jaws are not alike, the *chain* exercise, as it is called, shows it, but still more the changing of the exercise;* for there are many horses which do not endeavour to run away with their riders, if they are not instigated both by having a bad jaw, and that they are going towards home. It ought also to be seen if, being put on full speed, he is easily stopped, and if he will turn about.

* It seems difficult to make sense of this passage. The Greek word *pede*, in its general signification, means a chain, or shackle, for the feet. Berenger, in his History of Horsemanship, supposes it may mean here a bit called a Chain. It appears that this word, which occurs again, chap. ix. xiv., has much perplexed the different commentators, who in general suppose it a chain fastened to the feet, in order to make the horse lift his legs, and acquire a lofty action.

6. It is right also to see whether he is equally obedient, on being struck; for certainly a servant and an army, when disobedient, are of no use. A horse likewise, when disobedient, is not only of no use, but often acts like a traitor.

7. But since it is a horse to be made use of in war that we suppose is to be purchased, he ought to be made trial of in all those things which war will try him in. But these things are, to jump over ditches, to leap over walls, to mount eminences, to descend from them, and to ride up steep hills, and down them, and along the sides of them: for all these things show if he be of a courageous nature, and sound in wind and limb.

8. A horse, however, must not be rejected for not being able to do these things perfectly; for many are deficient in them, not from being unable, but from being unaccustomed, to perform them; but having learned, been used, and exercised in them, they will be able to perform all of them well, if in other respects they are sound, and not vicious.

9. But those horses, however, which start, must be guarded against: for horses that are very shy, will not permit the enemy to be hurt from them, but oftentimes risk the safety of their rider, and expose him to the greatest embarrassments.

10. It should be known likewise, whether the horse have any bad habits, either towards horses or towards men; and if he be averse to being handled: for all these things are defects in horses which possess them.

11. But any obstruction to being bridled and mounted, and going through his exercises, any one may much sooner find out, if he should endeavour to make him do again what he has already done: for such as, having laboured, would be willing to undergo labour again, give sufficient indications of a courageous nature.

12. But to sum up every thing at once,—a horse that has good feet, is gentle, sufficiently swift, is willing and able to undergo fatigue, and, above all, is obedient,—such a one will probably give his rider the least embarrassment, and contribute most to his safety in war: but those which, from being sluggish, require a great deal of animation, or, from being fiery, a great deal of soothing and restraining,—give occupation to the hands of the rider, and make him timid in danger.

[*To be continued.*]

THE BEST WAY OF BLEEDING SHEEP.

As sheep are liable to be attacked by several diseases, which may be relieved or cured by bleeding, the following directions for performing the operation will be found very useful:—

The veins which are generally selected for opening, when a sheep is to be bled, are those in the forehead; the veins above and below the eyes; in the shoulder; the ears; below the ham; in the tail; the foot; and the jugular vein. But as it is always desirable, in bleeding sheep, to perform the operation as quickly as possible, and abstract a proper quantity of blood, those vessels must, therefore, necessarily be preferred whereby these objects can be accomplished, and also those parts which have least wool. As the veins in the forehead are but small, and on being punctured give but little blood, and are not very easily to be felt with the finger, little or no benefit can be expected to result from their being opened. From the branches of the angular vein above and below or between the eyes, a sufficient quantity of blood may generally be extracted; but some difficulty occurs in feeling the vein, and it is therefore frequently missed.

The larger veins, as the jugular, those below the ham and the shoulder, have also their inconveniences, either from not being easily found, or being covered with wool, which must be removed, otherwise damaged or spoiled; and the veins of the ears, tail, and foot, are so very small, and bleed so slowly, that it is nearly useless to open them.

M. Daubenton, the celebrated French naturalist, who paid very great attention to sheep and their diseases, has described a very good method for performing the operation of bleeding, free from the objections of the before-mentioned parts, and also affording a sufficient quantity of blood.

"This operation is performed at the lower part of the cheek of the sheep, at the spot where the root of the fourth tooth of the cheek-teeth is placed, which is the thickest of all: its root is also the thickest. The space which it occupies, is marked on the external surface of the bone of the upper jaw, by a tuberole sufficiently prominent to be very sensible to the finger when the skin of the cheek is touched. This tubercle is a very certain index to the discovery of the angular vein which passes below. This vein extends from the under border of the jaw beneath, near its angle, to below the tubercle,

which is situated at the root of the fourth cheek-tooth; further on, the vein bends and extends to the cavity of the eye-brow.

"To let blood in the cheek, the shepherd begins by placing an open lancet between his teeth; he then puts the sheep between his legs, and squeezes it so as to hold it fast; his left knee is rather more advanced than the right; he places his left hand under the head of the animal, and grasps the under jaw, so that his fingers are under the right side of that jaw, near its hinder extremity; in order to press the angular vein, which passes in that place, and to make it swell, the shepherd touches, with the other hand, the right cheek of the sheep, at the spot nearly equidistant from the eye and the sheep's mouth; he there finds the tubercle, which is to be his guide; he can also feel the angular vein swelled below this tubercle: he then takes in his right hand the lancet which he holds in his mouth, and makes the incision from below upwards, half an inch in length, below the middle of the projection, which serves to guide him.

"I do not exaggerate, when I say, that by this method a blind person might bleed a sheep; because, with one of his fingers, he feels the tubercle, which directs him whilst making the incision.

"Bleeding in the cheek, then, is a method equally sure and simple, since the situation of the vessel cannot be mistaken, whilst it is sufficiently large to furnish a proper quantity of blood; for it receives that of the veins of the forehead, of the eyes, the nose, the upper lip, &c. The blood is there retained by the hand of the shepherd, which serves as a ligature at the angle of the jaw. No risk is run of opening the artery; for I have always found some distance between it and the vein at the place of bleeding. One man is sufficient for the performance of this operation.

"All these advantages have determined me to give the preference to this method of bleeding in the cheek above all others, having made the proper comparisons in practice."

M. Daubenton, in his Memoir, read to the Royal Medical Society at Paris, on Diseases of Sheep, also recommends the following remedy for the cure of the scab:—

"Melt one pound of Mutton Suet or Lard; take it off the fire, and add four ounces, or a quarter of a pint, of Oil of Turpentine: stir well together till cold.

"The scabs are to be removed from the part with a bone knife, and the ointment to be carefully applied with the finger."

To the Conductor of the FARRIER *and* NATURALIST.

SIR,

CONNING over the advertisements of literature in the newspapers some time since, I observed the announcement of a small, cheap Periodical, under the title of "The FARRIER and NATURALIST." The vulgar term "Farrier" immediately choked me, and I instantly blurred out—pooh!—some low-priced trash, I suppose, which will survive two whole Magazine days, and then, like the myriads of its predecessors, find its way, silently and smoothly, to its last home,—the infernal regions of paper. The accidental meeting, however, with a professional friend, and his opinion, gave me a very different idea, both of the *title* of your Work and the value of its contents. With regard to the title, we agreed that the adoption of the ancient term, yet very general in the country, was politic, as calculated to attract the notice of a numerous body of men, beyond most others in need of instruction: and, with respect to the contents, on a perusal of your last Number, I was most agreeably disappointed to find Veterinary science and practice of a superior order, fully entitled to take the lead in a professional department of peculiarly great consequence in this country.

But I also found a subject, if possible, even of superior attraction. A bold, categorical, and honest investigation of the mode in which the regulated institutional transactions of the Veterinary College have been carried into execution by the managers,—I say, honest; because you have preferred no accusation unaccompanied by point-blank, incontrovertible proof and fact. I must own, considering the state of the public mind in our days, and our almost universal subservience to station, opulence, and the power of conferring benefits, it has excited my utmost surprise to find a private professional person, or persons, endowed with a hardihood and honesty,—temerity others will style it,—sufficient to excite them to the attack of corruption, however gross, bolstered up and supported by overbearing opulence, influence, and connexions. Why, Sir, considering how public affairs are managed among us, and the immaculate character of our Boards, Commissions, Charities, Corporations, *et id genus omne*,—I cannot utter a wish more beneficial to the public at large, than that your little *brochure* may experience universal attention, from the striking, confident, and laudable example it exhibits.

I am about, however, to demonstrate to you that I am not a mere

common-place panegyrist—a very suspicious character; but disposed to act impartially, by stating my doubts on topics, the handling of which has not engaged my entire conviction. You will observe that I commence this part of my task somewhat ludicrously; that I am not trading on my own bottom, but depending on the authority of a friend, more conversant on the subject than myself. I allude to your and our common English mode of orthography in regard to the name *Saintbel*. He was known to an old friend of mine and myself on his first arrival in this country, and previously to his appointment to the Professorship; and my friend, who was in the habit of residing much in France, used to laugh at our strange mode of spelling his name, which, he insisted, led to a false pronunciation, quite unknown among the French, where the name is invariably pronounced SAINT*bel*, the stress being laid upon the first, instead of the last, syllable, whereas we place it upon the last; on which my friend humorously observed, the French, by way of being quits with us, ought, by all means, to call Professor Coleman—COLE*man*. I have not attended sufficiently to the French pronunciation of the word to ascertain whether or not my friend's joke will hold water.

To proceed to a topic of a more serious and important nature,—I apprehend you have not been successful in your implicit adoption of Professor Coleman's gratuitous theory concerning those circumscribed cavities, designated *bursæ mucosæ* (Farrier, p. 131)—in the vocabulary of the stable, wind-galls. You maintain decidedly, after the Professor, that "men, not well acquainted with the structure or functions of mucous capsules, have occasionally opened them and let out the fluid. The immediate effect of this operation is the total disappearance of the tumour. But if the edges of the wound do not unite by the first intention, great inflammation speedily takes place. And if the wound heal in the most favourable manner, the internal surface of the bag will continue to secrete a fluid, and the part will become as large, if not greater, in bulk than before. The operation, therefore, of letting out the contents of mucous capsules *cannot succeed;* and sometimes inflammation will be so great as to endanger the life of the animal."

This whole passage, in the first place, is purely speculative,*—un-

* Our veteran correspondent has here totally mistaken us. Mr. Coleman is alone answerable for any opinions, speculative or otherwise, which may be found in the famous College Transactions, republished in our last Number. We are glad to see the reasoning of Mr. John Lawrence, on this subject, but require many more *facts* before we "implicitly adopt or recommend" any man's *theory*.

attended by a single case or example in the shape of proof. It may, indeed, be deemed scientific, but, if the phrase be allowable, fact is the elder brother of science, as necessarily commanding precedence. Science, moreover, is sufficiently often conjectural. In reply, men also, *well* acquainted with the structure and functions of mucous capsules, have opened them, and with the most decisive success. I shall first instance Dr. Bracken (edit. 8, vol. ii. p. 214), without the least fear of being accused of temerity, when I assert that the Doctor's science and skill in these matters were to the full equal to those of Professor Coleman, at the period of his first publication. Bracken had a colt lame, and utterly useless, from a bog spavin. He operated upon it himself,—pierced the capsule, eliminated the gelatinous fluid, and, with some little trouble from inflammation, made a perfect cure. The case reported by Mr. Lawrence, in his Treatise on Horses (edit. 3, vol. ii. p. 345), surely merits some consideration. He appears to have put himself to the expense and trouble of the experiment on public grounds. The subject, it appears, was chosen at Tattersall's, out of a hundred or two of horses, as being aged and most afflicted with wind-galls. Nine incisions were made in her four legs, and the mucus evacuated from the bags, or *bursæ;* these being subsequently and completely destroyed by a corrosive powder, for which the recipe is given. No inflammation ensued; the wounds were well conditioned, and healed speedily. The mare was turned off for a considerable length of time, came up with her legs perfectly fine, and the marks of the operation scarcely visible. She subsequently won a match in Nottinghamshire, carried a lady, and remained sound, no wind-galls re-appearing.

There is no doubt but the prognosis of danger in meddling with encysted tumours may be often rational; but, in extreme cases, some risk is unavoidable. Yet the old farriers were in the habit of opening these capsules; and though the success of their imperfect operations is not recorded, we find no accounts of any concomitant danger. Professor Coleman obliged us with his *dictum,* that the same bags exist in all horses when first foaled. In the mean time, who has found, and specifically pointed them out? Not the Professor, surely; or he would have been more explicit. But I suppose the mucous glands, of the existence of which no one doubts, have, on the authority of the Professor, taken on the guise and term of mucous capsules. Still there is no impropriety, or breach of analogy, in the supposition, that on the excessive straining of the tendons, and the overflow of the *(vulgo)* joint-oil, a sac may be gradually formed for its reception from the

external tendinous coat. To the main business in hand, however, the cure, this discrepancy is of the smallest possible consequence; and they who have made the discovery are perfectly welcome to enjoy their triumph. Of as little import is the assertion, that wind-galls will reappear: assuredly, if the animal be again worked to an excess sufficient to produce them; but, in all probability, on other parts of the legs or joints; since those individual sacs, which have been corroded and their substance destroyed, are not very likely to encounter resurrection. In fine, it is a practice not fit for the handling of every bungler; but, skilfully performed and due rest subsequently allowed, particularly when the horse is valuable, it has been, and may be, attended with the most beneficial effects. With the bog spavin this practice is of peculiar importance, since it sometimes happens, and the present writer has witnessed it in a number of instances, that the sac is so large as totally to impede action, and render utterly useless an otherwise able and well formed horse. The evacuation of the tumor procures instant relief. As to the practice of the farriers of applying the fire, I have never known it succeed: on the contrary, it is well calculated to produce stiffness and soreness in the legs; and as Osmer, who no doubt spoke from actual experience, observes, "the outer tegument is rendered rigid and indurated; hence the pain occasioned by these tumors is rendered greater than it was before." I ought not to omit poor White's assertion, that, on dissecting the leg of a horse, he could find no bags, or capsules,—all was plain and pervious, from one end to the other.

VETERINARIUS.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

I AM happy to find that such a vehicle as the "Farrier and Naturalist" has at last appeared; because I am certain it has not only been the anxious desire of many persons in the Veterinary Department, but is also highly calculated, in my opinion, to bring to light talents which might have been buried in obscurity, and expose to our view the lamentable ignorance still discoverable among the unqualified practitioners of the day. Being, therefore, conscious of the many visible advantages arising from such a publication, and feeling at the same time desirous of seeing an effectual reformation in the consti-

tution of the Veterinary College, I am induced to solicit the insertion of a few remarks which I wish to make (by way of thanks and congratulation to the writer) upon the article describing the above Institution, "as originally constituted, compared with its present mismanaged and corrupt state." It is not for me to reiterate the defects and corruptions of the Veterinary College *numerically*, because they have been already enumerated in the "Address to his Majesty, as Patron, and the Subscribers of the Institution:" suffice it therefore to observe, that if the statement recorded in your last Number be *correct*, the pupils must evidently labour under many disadvantages. The original design of this Institution was, without a doubt, to exalt the Veterinary science to the highest pitch of perfection, and bring it out of that horrible pit of ignorance and insignificance in which it was previously buried: but if the rules upon which the "Veterinary School" was primarily founded, be neglected and not attended to; what, I ask, can we expect but its ultimate ruin and degradation. If, instead of "Weekly Meetings," to hear, read, &c. philosophical and other papers pertaining to Veterinary science," the subscribers are "*silent*," because they carry not the authority of the "ruling powers;" how can we anticipate the good result which must necessarily arise from the *free* and impartial discussion of philosophical subjects? In attending the "Pancras School," a pupil expects, or at least *ought* to expect, a more copious measure of tuition, than if only under a regular practitioner; but if, by attending thereto, he derive little or no benefit, he may as well, I presume, keep *out* of the College walls, and improve himself by reading the most approved Veterinary publications, and confirm his inquiries by practical observation and experience. I myself thought of entering my name as a pupil in the Veterinary College; but as it appears that no ostensible benefit is likely to accrue from so doing, in consequence of its present mismanaged and corrupt state, I shall desist from it. I do not mean to undervalue the Veterinary College as an institution (if it be properly regulated); far from it: but if the Veterinary student can acquire professional information by studying the most eminent writers, and is in the way of establishing his speculative knowledge by practice and observation, it is fruitless for him to expend money in attending the above school, if no material improvement can be derived. Respecting the "admission of improper persons," I cannot help saying a few words. I certainly concur with the writer of the beforementioned article, in considering, that individuals so unqualified as many have been—so utterly destitute of all preliminary knowledge,—

ought not to be admitted, or at any rate allowed their "diploma." If such persons as "shoemakers," "paper hangers," "linen drapers," &c. whose time is not (as it ought to be) *exclusively* applied to Veterinary subjects, are allowed admission, and been sanctioned, with a testimonial as a recommendation (without a perfect acquaintance with the different branches of anatomical, physiological, and pathological knowledge), to impose upon the credulity of the public, what can we expect but the ultimate disrepute of the science in general; that is to say, if they be sent forth into the world, their professional ignorance is soon discovered, and by their manifest inability reflect (as it were) a dark shade upon the more scientifically and practically informed Veterinarian;—because they can boast of being the "representatives of the College." I trust I may venture to say, I have been taught my profession in a scientific manner —have been employed in an extensive range of practice with my father—have had frequent opportunities of putting my anatomical studies into execution, by "post mortem" examinations, and have, I flatter myself, had every direct and indirect means to learn my business with credit to the person under whose tuition I am placed:— but, with all this, I cannot stand high in the estimation of some people, because I have not, forsooth, "passed the College," as they term it; and as I have not been a Veterinary pupil in the "Metropolitan School," it is impossible for me to attain to the *high* professional character of the "College Graduate:" I merely make these remarks to show the impropriety of giving a testimonial to persons so unqualified to practise this profession, and not with a view to enhance myself in the estimation of others. My design in thus writing is to thank the individual who wrote the article I am now treating of, and spur him (with others) up to a more clear exposure of those corruptions under which the "Veterinary College" now groans, and thereby, if possible, effect a radical reformation, which may turn out to the advantage of its pupils, and the elevation of the profession at large.

VETERINARIUS.

Huntingdon, March 4.

[We applaud this young gentleman's professional spirit, and by no means recommend him to compromise his principles, or degrade himself, by possessing a diploma, which it shall be our business to prove to the public and his friends, is, at present, a document that can reflect no credit on the Veterinary practitioner.]

To the Editor of the FARRIER *and* NATURALIST.

SIR,

HAVING perused, with much pleasure, an article headed "Present State of the Veterinary College," in the last Number of your Publication, I am induced to offer a few observations on the great disadvantages under which the Veterinary pupil labours in the attainment of Anatomical Knowledge. Mr. Sewell is the *nominal* Demonstrator, for which, I have no doubt, he receives a handsome salary,—then, why is he not enforced to devote a portion of his time in the dissecting room? It will scarcely be credited, that during the time I was at the College, I did not see him in it more than twice or thrice; and then it was to seek some information for himself, such as the seat of "String Halt," &c. If Mr. S., from the multiplicity of offices which he holds, or some other cause, is unable to give the necessary attendance, why is not some one appointed, both competent and willing to render that assistance to the pupils in the prosecution of their studies, which they have a right to demand and expect? I have known many go over subject after subject, without obtaining any further information (for want of a Demonstrator) than the mere origin and insertion of a few muscles.

There is a person, of the name of Vines, who calls himself "Assistant Demonstrator," (whether he has any claim to that title, I know not;) but he prizes what little knowledge he possesses so highly, that he never imparts it to any of the students without an adequate remuneration. This said Mr. Vines is also Joint Conservator of the Museum, without whom no pupil is allowed to enter it; and, unless you happen to be intimate with him, access is not a little difficult. I recollect I once wanted particularly to see a preparation, showing the distribution of the arteries: accordingly, I made application to Mr. Vines; but was refused, on the ground of his not being able to accompany me, although I knew positively that he was not otherwise engaged.

There is also another important branch of the profession which is much neglected at the College, viz. a "Practical Knowledge of Operations." The best theorist will find himself at fault when called on to perform an operation he has never seen performed (and that such is frequently the case I have not the slightest doubt); and should he betray a want of confidence, or make the least error, his fame is, in all probability, blasted for ever: for there are many grooms, and other ignorant persons, who estimate a man's knowledge of his profession

solely from the manner in which he uses the Firing Iron (an instrument, though obsolete at the College, which yet a Veterinary surgeon will often be called on to use). In my humble opinion, every operation to which the horse is liable ought to be performed and explained, either on the living or dead subject; instead of which, the pupils are told to go to the Knackers for practice, without any one to assist them,—where they mangle the carcase of some unfortunate animal, whose feelings they fancy they have a right to trifle with, because it is soon to be destroyed.

I think, Mr. Editor, you will allow, with me, that the above are very essential points in the Veterinary art,—an ignorance of which will place the regular Veterinarian on a level with, if not beneath, the self-dubbed Farrier.

I beg to remain,

Your obedient Servant,

Cheltenham,
14th March, 1828.

W. W. BRYER, V. S.

[We have inserted this gentleman's strictures on the official conduct and character of Mr. Vines, (but not his personal remarks,) because they afford us an opportunity of explaining the situation in which this young man is placed. The only office that he really holds is that of Assistant to Professor Coleman, for which that liberal monopolizer of emoluments allows him the *extraordinary stipend* of £25 per annum, and a similar sum he receives from the College funds. With such a contemptible salary, can he be expected to perform the neglected duties of his superior, Mr. Sewell, without an adequate remuneration. But because Mr. Vines, by his assiduity and research, has shown himself worthy of a higher situation, and is more ready to communicate knowledge than any other person at the College, he is made the scapegoat for the real culprit above him.]

To the Editors of the FARRIER *and* NATURALIST.

GENTLEMEN,

THE following extraordinary mode of operating upon the eye is extracted from Hobhouse's Journey in Turkey, Letter 36.—"It cannot be thought that a people, who have no physicians that can cure the diseases of men, should understand the treatment of maladies in

horses: yet the Turks are successful in some cases which might puzzle an European practitioner. Total blindness is not unfrequently removed in the following manner:—They run a needle and thread round the back part of the eye; then, by means of the thread, they draw the eye almost out of the socket, so as to reach the back of it, and, with a razor or knife, cut off the horny excrescence, which is the cause of the disease. Washing the wound with a little salt, they afterwards return the part to its position, and consider the horse as sufficiently recovered to be used the next day."

A Veterinary Work has lately been published by John Hinds—an assumed name, as it is reported,—and the author has acted prudently in concealing his real one, since, though the volume be not entirely devoid of merit, it abounds with absurdities, ignorance, and vulgarity.

The following are a few specimens:—Page 104—"Mr. White is said to be the plainest spoken among the moderns. Indeed, were he any thing but a good one, I should not have deemed him worthy of this rebuke." P. 489—"The smiths ruin the horse by a quicker mode than thumbing and cutting, and cutting and thumbing." P. 481—"Letters of puff, or volumes of stuff—these patents are not worth a straw, except for cutting into tailor's measures." P. 383—"If the medicine make his guts to grumble." P. 243—"If the dung comes forth in small quantities, the arse-gut must be cleared." P. 183—"The lumps in the rectum appear like so many gingerbread nuts. Hard-up and hard-baked are goodly descriptive of this disorder." Diuretics are universally termed pissing-balls. P. 8 of the Preface, he says—"I take credit for having sedulously avoided the use of technical phrases, and terms of science." The very reverse is the fact, as they are frequently forced in where unnecessary; as p. 450—"The coffin-bone is usually affected with rottenness (*caries*). P. 302—In lieu of Indian rubber, or elastic gum, "*caoutchouc*" is introduced, (misspelt *cahoutchouc*). P. 553—*Ædematous* is rendered "*Ædomatous*. Whenever he attempts to display that learning which he affects to despise, he betrays his miserable ignorance. P. 37—He derives *poney* from the pain he sustains, in Latin, *pœne*. P. 245—For *in coitu*, he writes, "*in actus coitu*." P. 292—"Abscess," he says, "is so termed to denote secession from the sight."

Repeatedly, also, introducing French words, he betrays equal ignorance. P. 332—"*Vives* are derived from *aviver*," which he explains "to be brisk and lively;" an error he runs into from having seen in the Dictionary, that it is to "*donner le vif* aux metaux," a technical

term used by workmen in that line, to give the last polish to the metal. P. 499—Under the head of Shoeing, he makes the "lacquey" bring the tools to his master, "*le marechal.*" Every child, acquainted with the idiom, the peculiar turn of expression in that language, knows that a master smith is invariably termed "*le bourgeois,*" and the workmen "*les compagnons.*"

In numerous passages he is profuse of his censure on Mr. Coleman and others. At p. 209, he accuses Mr. White of borrowing from Mr. Ryding, whilst (p. 477) he pirates the plan of "Screw Nails to fresh Shoes" from Clark, of Edinburgh; and (p. 451) the representation of the horse's mouth, and description of his age, are taken from the Treatise, "Ten Minutes' Advice," &c. P. 374—He directs to bleed copiously; a very indefinite term, where accuracy is requisite. In p. 457, he places splints "above the knee." Quincy's Dispensatory, or some ancient Pharmacopœia, appears to have been his guide, as he prescribes Tincture of Benjamin, and the Jesuit's Bark, and (p. 404) Oil of Clover. But in p. 474 is the grand march of intellect, defying both grammar and common sense.—"The prevailing national desire of acquiring the minor school endowments promises a different result; and, on this occasion, science has been disrobed of her cloak, and the niceties of art are sought in language that all can comprehend." In this language which all can comprehend, can any one explain what is meant (p. 537) by deep in the "wykes?" No dictionary is equal to the task. In short, it is evident, from the style of Mr. John Hinds, Veterinary Surgeon, especially from his unnecessary minuteness in regard to forging and punching horse-shoes, that the forge has been his nursery: and possessing rather more natural genius than falls generally to the lot of his peers, he has had the weakness to expose to the world his self-sufficiency and total want of education.

I have the honour to be,
Gentlemen,
Your obedient Servant,

March 15, 1828. PHILIPPOS.

[The compiler of John Hinds is known to us. We shall shortly show him up in his proper *dress*, with a professional opinion given on the book by a supposed judge, previous to its publication.

ROYAL VETERINARY COLLEGE.

HAVING made some observations in our last Journal on the general term *lameness* being applied to nearly all the horses which are admitted into the College with diseases of the feet (two-thirds at least being of this description), we have presented our readers, in the former part of the present Number, with some cases by M. Vatel, Professor at the College of Alfort; and from the minuteness and clearness with which they are detailed, and the success which followed, we are enabled to draw a fair conclusion, that diseases of the feet are much better understood there than at our own Veterinary College; to this point we hope to draw the attention of Mr. *Assistant* Sewell who has had the direction and care of the horses for some months, during the long continued attack of gout which the Professor has been labouring under.

We further beg the reader to picture to himself the diligence and minute investigation which must have been displayed in the management of these cases, when compared with the majority of those which are sent out unrelieved from our College; and where the examination occupies a minute and a half, or two at farthest; and when, if you happen to have your auditory nerves well excited, you may chance to hear the words, *Trot him along the stones—Bring out the next,* —mumbled out; and, if you do not regard being pushed down, and happen to be a little stronger than others, you may perhaps see written with a pencil, Tinct. Myrrh. Aloes. Sulp. Cup., or some old-fashioned name: and this practice not only applies to the treatment of diseases of the foot, but to every case throughout the stable. In fact, *silence, perhaps the best cloak for ignorance,* is the general order of the day.

CASES.

An Aged Brown Mare.

FEB. 25, 1828. Admitted, with *lameness*—stated to be inflammation of both fore feet.

Directed to be bled from each foot to six pints.

To have three-quarter shoes applied—a mash diet.

26th. Tincture of myrrh to the soles.

To have five drachms of aloes given in a ball.

27th. The ball has operated moderately.
To stand on wet straw till otherwise directed.

29th. Tar to be applied to the soles daily.
March 4. She is taken away, a little relieved.

A Six Year Old Chesnut Gelding.

Feb. 29, 1828. Admitted in tolerably good condition.

Sores are to be seen in the sides, shoulders, thighs, &c.; the glands under the jaw enlarged, and extensive ulceration of the membrane which lines the nose; a discoloured glary discharge issues from the nostrils, and the pulse of the horse is increased from ten to twelve beats in a minute above the usual standard.

The disease is stated to be Farcy and Glanders.

A rowel is ordered to be made in the front of the chest, and in each thigh.

For what purpose, we should be glad to know? We cannot conjecture, unless in accordance with the ignorant idea of draining off the *vitiated matter*.

March 1. Is ordered, in a ball, aloes three drachms, and turpentine half an ounce. The rowels to be dressed daily with turpentine ointment. One of the best applications that could be applied, certainly, to increase the discharge and debilitate the animal.

March 2. Ordered to take half an ounce of sulphate of copper *(blue vitriol.)*

We ask Mr. *Assistant* what he considers to be its action on the system? *Dare he say tonic?* Then why debilitate with rowels, and at the same time increase the action of the system? When will he favour the world with his Theory and Rationale of Practice in Farcy and Glanders, for which he has received from the gulled Governors such a liberal reward? *

March 3. To repeat the dose every day.

* Two, if not three hundred pounds, were obtained from the Governors by Mr. *Assistant* Sewell for a pretended discovery of a cure for Glanders, by administering copper. It was no discovery of his, we boldly assert; and that in true and confirmed cases of Glanders, copper will not effect a cure in any shape. What the result of a fair examination of cases, asserted by him to be Glanders, and the supposed cures performed, would have been, by an experienced Committee of Veterinarians, our readers will be able to judge, when we state that this *genius* dare not face them, or publish his Theory. *Query.*—How much had the Professor for *winking?*—"Ten per cent., we presume, at least."

Ten per cent.—Another day at St. Stephen's.

7th. Getting worse. The sulphate of copper to be increased to six drachms.

9th. As there appeared no chance of a *cure*, the horse was destroyed with the owner's consent.

Will it be believed that any man could possibly induce a Committee of Governors to a public Institution to reward him, without due inquiry, for a supposed specific cure for a disease that they were not competent to judge of; and that the same Institution should, for years after, constantly have several horses in the Infirmary that could not be relieved, much less cured, by this boasted specific?

QUITTOR.

A Brown Gelding—Aged.

Feb. 29, 1828. Admitted, with a quittor at the inner quarter of the near hind foot, which has existed for some time.

The wall that surrounds it is directed to be removed, and a three-quarter shoe to be applied to the diseased foot.

A solution of sulphate of zinc to be injected into the cavity, and afterwards filled with the powder of sulphate of zinc, and to be carefully kept on with tow and a bandage.

On the removal of the dressing, it appears rather better.

March 4.—Tincture of myrrh and aloes to be applied to the sore every day, and bound up.

10. The foot being better, and relieved, but not cured, the horse was taken away.

An Aged Grey Gelding.

Feb. 26, 1828. Brought some miles. Admitted with frequent pulse and difficult breathing; extremities, ears, and muzzle, very cold, and yellowness of the eyes.

He is placed in a loose box, directed to be back-racked and clystered.

To take half an ounce of aloes in a ball, and have mashes given him.

27. Morning: Pulse increased to 100, breathing quick and difficult, extremities very cold.

The ball has not operated; the *urine is discharged with pain and difficulty*.

The legs are directed to be rubbed with turpentine liniment, and covered with bandages.

Four ounces of blistering ointment is ordered to be rubbed into the

belly, and a rowel made in the chest. Clysters of warm water to be given frequently, and to take half an ounce of nitre dissolved in water.

Afternoon: Pulse nearly the same; appears in a state of great excitement; the urine is discharged every few minutes in a small quantity, and very high coloured The inside of the mouth appears yellow; alternate violent sweats and sudden chills. He is back-racked: the bladder is much distended, and increased heat of all the adjacent parts.

Clysters of warm water to be repeated frequently.

To be kept in a cool box, and the clothing to be taken off, &c.

28. Appeared much the same through the night, and about eight in the morning fell down; and in about two hours, after struggling for a time in great pain, he died.

Examination after Death.

The capsule of the liver is found ruptured, and the substance or texture completely changed and destroyed, being wholly reduced to a pulpy mass; extravasation of blood in the cavity of the abdomen. Intestines slightly inflamed throughout, and the right kidney enlarged.

An Aged Black Gelding.

Feb. 29, 1828. Admitted, with severe lameness of the near hind foot from a prick in shoeing.

The wound has already suppurated, and discharges at the coronet.

The sole is directed to be taken away, so as to allow the pus to escape, and a poultice of bran to be applied.

March 1, 1828. To take six drachms of aloes in a ball, tincture of myrrh to be applied to the wound, and a poultice at night.

2. Apply tincture of myrrh and aloes, and poultice as before.

3. The poultice and tincture as before, and to be continued daily.

4. The animal in a state of great pain and irritation, the wall is directed to be entirely removed from the part; this being effected, a great quantity of pus is found under the wall, ulceration having taken place to a great extent.

It is directed to be dressed with tincture of myrrh and aloes twice in the day.

5. Pain and irritation very great; the part has become mortified, and it is directed that the horse be destroyed.

A Bay Gelding—Seven years old.

Feb. 9, 1828. Admitted, and stated to have inflammation of the near fore foot.

Directed to be bled in the lame foot to six pints, and to have *an oblique bar shoe* applied.

Ordered six drachms of aloes in a ball; a poultice to be applied at night, and to have mash diet.

10. The ball has operated, tincture of myrrh to be applied to the sole, and the poultice continued.

11. The poultice to be applied every night.

12. A seton is made through the frog and heel of the diseased foot.*

14. The seton is directed to be dressed every day with turpentine ointment, and the poultice to be discontinued.

The seton remained discharging, and was dressed as directed above, till the 14th of March; when it was removed, and the sores had tincture of myrrh and aloes applied to them daily till the 17th, when the animal was taken away a *little* relieved by this barbarous operation.

SPAVIN.

An Aged Bay Gelding.

Feb. 8, 1828. Admitted, with an enlargement in the hock, and lame: the part is directed to be kept constantly wetted with a cold lotion; and to have a mash diet.

9. A seton is passed through the integuments over the spavin, and the horse to have six drachms of aloes in a ball.

11. The ball has operated freely, and the seton is ordered to be dressed every day with turpentine ointment; and to have full diet.

The seton remained discharging till the 14th of March; when it was removed, and the sores dressed every day with tincture of myrrh; on the 17th he was taken away, and the spavin with him.

PHEASANTS.

AN old and respectable gamekeeper, of forty years' experience, has made known, for the information of sportsmen, that the practice of killing so many cock birds at the end of the season is found to be very injurious to breeding, and is the cause of so many hen birds dying in their nests. An old hen pheasant, when past setting, has been found more destructive to the eggs and young of others than any vermin. As a proof of the extent to which this species of game is now tame-bred, one dealer alone has sent to different gentlemen in the country not less than 1200 brace of live pheasants within the last month.

* We shall hereafter comment on this heel seton.

ON THE MANAGEMENT OF CANARY BIRDS,

When Pairing and Breeding.

BY AN AMATEUR.

CANARY BIRDS sometimes breed as often as four or five times in the year, and lay from four to six eggs each time, six being the largest number generally known to be hatched in one nest. Fourteen days is the usual time for setting, including the day of commencing. The birds ought to be well matched in colour, and the stouter they are the better; there will then be much more certainty of having the young ones strong and fine. If you have a small cock or hen, which is yellow, it will be best to match it with a large mealy one, being the only mode of strengthening the breed, which is very apt to become weak and degenerated, if these points are not attended to. The middle of March is the best time to pair them; and the first thing necessary will be a good breeding cage, or convenient room; and as these, like most other birds, delight in sunshine and warmth, a situation that will have the advantage of the morning sun will be the most desirable room, which will then be kept warm the whole of the day. Not more than ten or twelve pair should be placed in one room; and if cages are used, only one pair should be in each cage. Sand should be strewed on the floor, or bottom of the cage, and changed occasionally. They should be supplied with good feathers, fine hay, and short soft hair, for forming their nest. The larger the cage, the better; and there ought to be two boxes for making nests in, as they sometimes go to nest again before the young ones are able to fly; and if this be not attended to, they sometimes destroy the young birds, by making a nest on them. When the eggs are hatched, if it be intended for the old ones to bring them up, they must remain together till they hatch again, as the cock will feed them; and as soon as the hen has hatched, take away the first lot of birds, or they will pull and peck the younger ones about in the nest, and sometimes kill them. Put them into a large cage, and feed them with good victuals, made as follows:—Boil an egg hard; take a little of the yolk, and the same quantity of bread crumb, a little scalded rape-seed; boil the bread, and, when soft, mix all well together with a knife on a board or plate; give them a small panful every day: this ought to be made fresh every other day at least. They may also have a little scalded rape-seed, as well as rape and canary seed by itself; and in this state they should remain till paired off into separate cages for breeding.

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THE

FARRIER AND NATURALIST.

No. 5.] MAY. [1828.

THE HORSE BAZAAR.

THIS Establishment occupies that range of buildings formerly the Barracks of the 2nd Life Guards, in King Street, Portman Square. Considerable additions have been made by the present enterprising proprietors, which have rendered it, not only a rival to Tattersall's, but a place of great resort.

The stables are good, and capable of containing several hundred horses; they are generally well filled, and there is every appearance of care and attention to the comfort of the animals.

Above these are spacious carriage galleries; and the harness and saddlery departments are equally well stocked, so that a complete *turn out* may be obtained here in the shortest possible time.

The public auction days are Tuesdays and Saturdays; and it is generally understood that business is conducted with honour and fairness: but as horses here, as well as at other places, are not always exactly what their owners warrant them to be, we strongly recommend any gentleman, previously to completing a purchase, to take the opinion of an able Veterinarian, as, indeed, he would always act wisely in doing, whenever he is about to buy a horse.

The view we have given, is from the entrance in King Street; the large building in front is the riding-school, and over it a splendid apartment, originally intended for a subscription-room.

ROYAL VETERINARY COLLEGE.

ANNIVERSARY DINNER OF THE PUPILS.

THIS dinner took place on the 9th of April, at the Freemasons' Tavern. About one hundred persons were present; among whom we noticed Sir W. Blizard; Drs. Babington, Geo. Pearson, and Ager; Joshua Brookes, Esq., &c.

Sir ASTLEY COOPER, Bart., in the Chair.

On the cloth being removed, *Non nobis Domine* was sung by the professional gentlemen present; after which, the Chairman gave—"The King, God bless him."—*(Three times three.)*—*Tune*—God save the King.

At this moment Professor Coleman, who had been prevented by illness from attending the dinner, was led in, surrounded by the stewards, and took his seat at the left of the Chairman.

(Tune—*See the Conquering Hero comes!*)

The Chairman rejoiced to see that the cloud that seemed about to be cast over the meeting by the absence of the Professor, was happily dispelled.

Toast—"The Duke of Clarence and the Navy."—*(Three times three.)*—*Tune*—Rule Britannia.

The Chairman rose to give a particular reason for drinking this toast.—Having had occasion, only a few days ago, to wait on the noble personage, he took the opportunity of observing to him, that nothing would give greater pleasure to the Governors and Managers of the College, next to having the King as Patron, than to have the honour of naming him as President; and, with the most gracious condescension, his Royal Highness was immediately pleased to give his permission; so that, besides the satisfaction and pleasure they might have in drinking his health as a Prince of the Blood Royal and heir-apparent to the Crown, they had, moreover, to hail him President of the Institution of the Veterinary College.

Toast—"The Duke of Sussex and the rest of the Royal Family."—*(Three times three.)*

Toast—"His Grace the Duke of Wellington."—*(Three times three.)*

The Chairman gave a fulsome and disgusting panegyric on the noble Duke, which we withhold, as irrelevant to the occasion.

Toast—"Lord Hill and the Army."—*(Three times three.)*

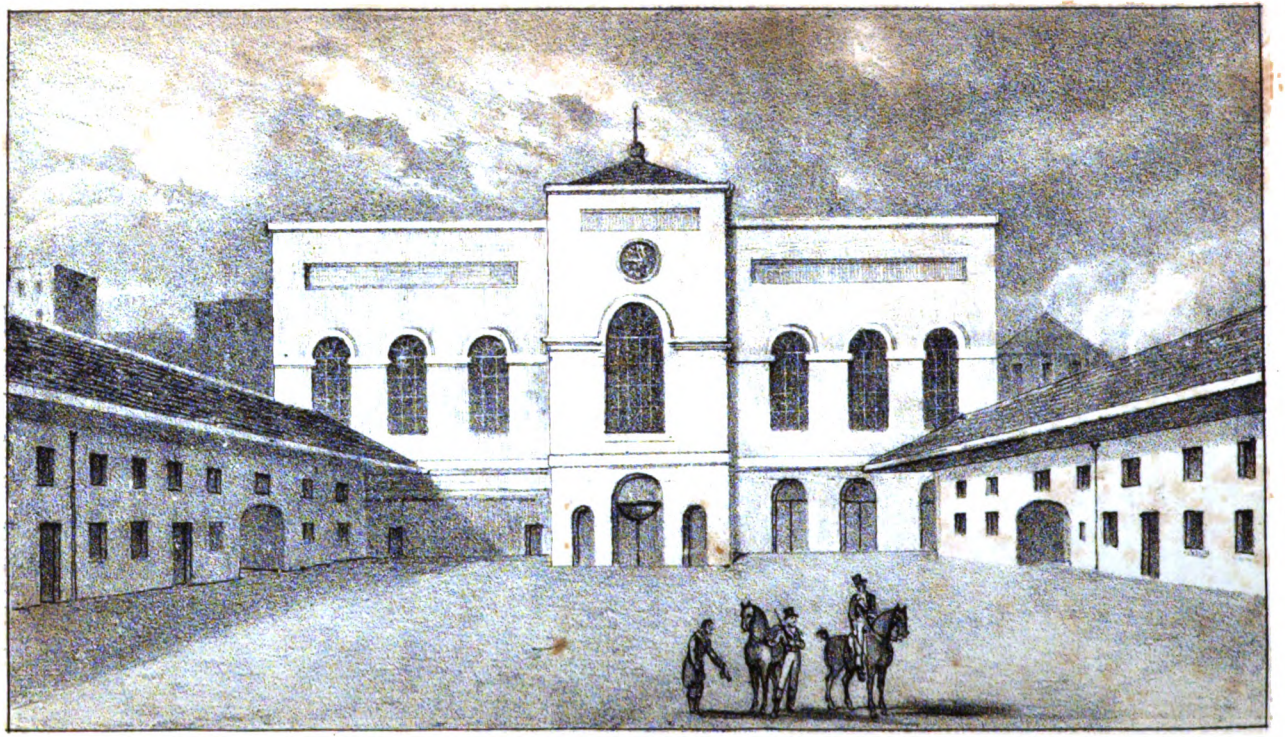
Toast—"The Royal College of Physicians."—*(Three times three.)*

It was an institution which had very much at heart the welfare of the Veterinary College.

Dr. Babington returned thanks at some length.

Toast—"The Royal College of Surgeons."

The Chairman, in giving this toast, begged leave in a particular manner to propose that they would drink, as an accompaniment, the health of Sir William Blizard, to whose personal exertions was, in a great measure, to be ascribed the present flourishing state of the College of



THE HORSE BAZAAR.

KING STREET, PORTMAN SQUARE.

Surgeons. It was his strict and impartial sense of justice that has kept us, (said the Chairman) from leaning, as otherwise we sometimes might have done,—for who is exempt from personal predilections,—too much to the side of individuals in our discussions, for whom we, on some occasions, might, perhaps, have a feeling of too great lenity: it is to him that we are indebted also for the rapid increase of our library, from an insignificant beginning to near ten thousand volumes; and of the kindness, good feeling, and many high and valuable qualities of the worthy knight, he could himself assure them; and he felt confident they would have pleasure in drinking a bumper health.—*(Three times three.)*

Sir Wm. Blizard returned thanks at length. He retorted, with interest, all the good and kind things which had been said of him by the Chairman, and only laboured under difficulty in finding terms to express his feelings of zeal for the College of Surgeons. It was now, he said, an institution to which the profession were desirous of belonging, although it did not exclusively prevent them from practising without its diploma; and of the Veterinary College, he warmly observed, that as it was so intimately connected with the general interests of anatomical science, as well as from its own particular claims to public patronage and support, so nothing could surpass the zeal and interest he felt for its welfare. He concluded by proposing what he knew they were most ready and anxious to anticipate, the health of their distinguished Chairman, Sir Astley Cooper, Bart.—*(Drank with applause—Three times three.)*

Sir A. Cooper rose to express his grateful acknowledgments for the kind manner in which they had evinced their regard and esteem for him as an individual, and assured the assembly, with many professions and demonstrations of his heartfelt and continuing wishes for the good of the profession and the College, that he should never relax in his endeavours to serve them; "and so long," said he, "as it may be the wish of the students of the College, or appear desirable to them, that I should sit here, in this Chair, upon occasions like the present, I shall ever be ready, while I have life, to acknowledge my sense of gratitude and obligation in this or any manner which may conduce to serve them." But he had another motive for this,—a feeling of personal friendship and esteem for the distinguished gentleman on his left hand, the honoured and revered Professor—*(Applause)*.—He deserved their warmest expressions of feeling and attachment; he was a man, he would say, of genius, of ability, of first-rate talent. This was now the fortieth year of their acquaintance, and his opinion of Mr. Coleman, after the first year, was precisely what it was at present—that he was a man endowed with the highest powers of mind, and of paramount ability. They had studied together, and he had then an opportunity of seeing the investigating mind and subtle genius of his friend, which led him to those important experiments on suspended respiration, —his first work, and he might say the *foundation* of his future fame; in prosecuting which inquiry, so great was his zeal, that a mutual friend at the time wittily observed, that he slew dogs and cats enough to block up Houndsditch—*(Laughter)*.—It was then that a gentleman

whose judgment and professional worth were well known, and to whom he (Sir Astley) owed, in fact, his fortune, the late lamented Mr. Cline, perceived the talents and ability of Mr. Coleman, and judged him a proper person to succeed to the vacant Professorship of the Veterinary College. That Institution was then in debt 10,000*l.*, and it had sixteen pupils; but the commanding resources of his worthy friend soon turned the scale. Was it in debt 10,000*l.* now? Had it sixteen pupils now? Had it sixty pupils now? How had the rank and standing in society of the veterinary practitioner improved under his auspices! Ask the Colonels of regiments whether there was an improvement. Ask the Judges respecting the value of the veterinary opinion in courts of law; it was to him, the scientifically-educated practitioner, that the Court looked, and on whom its decision depended. He would not dwell longer on that point. But it was not merely that Mr. Coleman had gone on adding to the numbers of the profession, and made the pecuniary affairs of the institution to flourish by his measures, he had still higher claims to their attention, as a scientific teacher—a man of most profound physiological knowledge and acute discrimination, who acted solely upon theory. He supposed if Mr. Coleman were to attempt to nail on a horse-shoe, he would burn his fingers or rap his knuckles; but his talents were of the higher and more refined kind: veterinary science owed him much, and the nation was indebted to him. The improvement in the ventilation of army stables was attributable solely to him: if for that alone, he had not lived in vain, and deserved well of the country. The Chairman then enumerated some of the Professor's claims and discoveries: amongst others, his work on the *Anatomy of the Horse's Foot*, in which the true principles of its construction and treatment were laid down; and, above all, his revival, in part, of the old humeral pathology, supposed to have been entirely done away with, by his proving that disease may be communicated from one animal to another by the fluids alone, by transfusion of blood, &c. "And now," continued Sir Astley, "because your Professor has of late suffered much from indisposition in his family, *and other causes;* and by total inability to give his lectures, has afforded occasion to the enemies of the Institution, in various ways, to raise a clamour against him;—would you discard such a man for this cause?" —*(Cries of "No, no!")*—It was still, he believed, Mr. Coleman's warmest wish to merit the kindness they had shown on the present occasion, and he hoped they might look forward, yet, to many anniversaries with their beloved Professor. He thought there was not much the matter, though his old and highly-valued friend had been depressed in spirits and health sometimes of late: he could give them confident hopes for the future. He, perhaps, might be, Sir Astley joeosely observed, what they would call a little foot-foundered, but he trusted it would be long, very long, before the disease reached the *coffin* joint.—*(Great applause.)*

Professor Coleman rose *(looking shockingly ill)*. If he had taken the advice of his friends, he said, he should now have been in his bed, instead of standing before them; but he had considered whether it would not have given him greater uneasiness and a sleepless night to

have neglected this duty, than it would do him harm to incur the fatigue of meeting them in public here. He thanked them for the testimonials of respect and attention they had paid him, and declared his zeal for their professional welfare to be unimpaired. As to the kind eulogies which their excellent Chairman had heaped upon him, something must be taken in allowance for the partial feelings of an old friend of forty years' standing: these compliments might have been paid with greater justice, if the worthy Baronet had been in *his* place; but he could not but feel grateful for Sir A. Cooper's support, and that of so many distinguished practitioners as he saw around the table. Such as he was, and such as his labours had been, his object had unceasingly been to merit the confidence and esteem of the veterinary students, and he felt proud that he had succeeded. When, on a late occasion, being prevented by illness from attending to the regular direction of their studies, he received a written request, signed by above *sixty* pupils, begging that he would, on no account, expose himself or leave his room, until he should be perfectly recovered: and although it had been stated by a publication, which he need not name, that at this interruption the pupils, without exception, felt themselves disappointed, ill-used, and indignant; yet he had the satisfaction of seeing this statement directly contradicted in a voluntary counter-statement from all but *three or four* of his pupils. He was pleased to see so many veterinary surgeons present. He doubted not there were many better qualified to teach than himself; it was the intention of the College founders to make practitioners even superior to their teachers: and he saw no reason, if gentlemen were so anxious to take upon them the task of lecturing, why they might not open theatres where they pleased, or in the neighbourhood of the College: he should be glad to see them; and at some future time, or when he or others should conclude to resign—*(Cries of "No, no!")*—there would then be an opening for such as aspired to the office.

Mr. Coleman took his seat amidst loud applause from the lower end of the table.

The Chairman had particular pleasure in proposing the health of their Assistant Professor, Mr. Sewell. It happens (he observed) that although you are most fortunate in having so eminent a gentleman as Professor, much must still depend upon the talents of the Assistant Professor, and he was most happy that he could say that Mr. Sewell was a gentleman of remarkable talent and superior attainments in his profession, and had also, as well as the Professor, done much to entitle him to their attention. It would be sufficient to mention only two points in which this gentleman had particularly distinguished himself, quite sensible that nothing he could adduce could do justice to Mr. Sewell's merits in all respects as a veterinarian. The first was his *discovery* of the operation of Neurotomy,—an operation which was found to be of the greatest service in *many inflammations of the foot*, and of the value of which he believed they were all sensible. It was impossible to say of what extensive application this operation might not be in diseases of other parts; it might be considered as one of the greatest discoveries which had taken place of late years. But besides

this, Mr. Sewell deserved the highest encomiums for the introduction and discovery of a medicine which, in cases if not *purely* and *truly* of glanders, were yet appearing under that form and type, had been found in many instances, if not always, to be in general a cure for that complaint; in which alone, if he had succeeded——But gentlemen were well aware of the Assistant Professor's genius and talent, his zeal for the profession, and anxiety for the welfare of the pupils, who, at times, were dependent on his instructions. He had the pleasure of giving the health of the Assistant Professor, Mr. Sewell.—(*Three times three.*)

Mr. Sewell returned thanks; but the very low tone in which this gentleman spoke, rendered it nearly inaudible to us in the situation in which we were placed. We understood him to express his uniform wish for the welfare of the school and pupils: he did not deny having made exertions for the improvement of the science, which labours, he said, would continue with his life; and concluded by thanking them for the kind manner in which they had drank his health this evening.

The Chairman rose.—There was also another gentleman well deserving of their attention, who, from his laborious assiduity and talents for investigation,—particularly, he would say, in anatomical pursuits,—appeared likely to add yet brighter lustre to the College, and to the happiness they enjoyed in having for their Professor and Assistant Professor gentlemen so highly qualified; but he felt himself inadequate, from the imperfect knowledge that he possessed of Mr. Vines, to do justice to what he understood to be his merit. He should, therefore, propose the health of Mr. Vines.—(*Drank with three times three.*)

Mr. Vines, in returning thanks, observed, that it was true he had endeavoured to forward the art which he professed, by physiological experiments, and certainly he might say at the expense of his health and constitution; but while he had life he should not relax in his labours for the profession.—(*Applause.*)

Mr. Coleman rose to give the health of an individual in the profession distinguished for his accurate knowledge of the physiological and pathological principles of his art, and whose work on the Anatomy of the Horse he had the greatest pleasure in acknowledging had been of the highest service to himself and to the students at the College. His obligations to this gentleman were very great, and veterinary science was particularly indebted to him. He begged leave to give the health of Mr. W. Percivall.—(*Three times three.*)

Mr. W. Percivall returned his grateful thanks for the truly unexpected honour conferred upon him, and was sorry that, being little accustomed to public speaking, he was so ill able to express his grateful sense of the kindness which dictated it. He was happy that his printed labours (which, however, fell short of what he ought to have produced, considering his remarkable opportunities) had effected the objects for which they were written.

The Chairman had next to propose a toast which, although from him it might seem something like giving "Our noble selves," he was convinced they would yet receive with applause:—He was

about to give the Medical Committee of the Veterinary College; and as President of that Committee, in the names of several members around him, he would venture to assert, that there existed in that Board the highest feeling of regard for their ultimate interests, and every desire to forward them in life, consistent with that duty which they held, in order to make the high credentials of the College student a safeguard to the public—an assurance of real philosophical scientific knowledge; that they were, in fact, above all things, desirous for the student's success. "Do not think us severe," said he, "if we do occasionally send you back to study a little longer; it is always for your good: we have no other object in view, than that you should do credit to the character which the profession now assumes, and to the instruction of those highly talented teachers under whom you are so fortunate as to be placed." He saw several of his medical friends present, who, with liberality unparalleled, had permitted veterinary students to attend their lectures; and thus enabled them to become, not only accomplished in their own profession, but even, he might say, characters of the highest physiological eminence. But the students could not doubt their disinterestedness and wishes for their welfare. "The Medical Committee." —(*Three times three.*)

The Chairman should now, he said, in common justice to a gentleman on his right hand, remarkable as much for the suavity of his manners, as for professional eminence, propose the health of Dr. Babington; he was—he might be excused for saying, having known him many years, and for some time as member of the Medical Committee of the Royal Veterinary College—a person possessed of most estimable qualities of various kinds; such a kind creature (*leaning over the Dr.*) and so truly disinterested in all he did! Perhaps he might be thought rather like buttering his friend over, but he could assure them that all who knew him would join in his praise. But there was another member of the Medical Committee present, Dr. Pearson: he was most deserving of their good wishes; besides, he was an investigating member. He was told about the fatty frog, and was not satisfied: the frog might be a toad, for what he knew, but he took it home and examined it, and what? He found not a bit of fat in the frog, it was a gelatine frog. Oh, Dr. Pearson was a most valuable and meritorious examiner! He had given the health of Dr. Babington, but at the same time he would wish them to drink the health of Dr. Pearson.

Dr. Babington and Dr. Pearson respectively returned thanks; the latter at considerable length. He had been all along delighted with the Veterinary College; with its practice of a superior order founded upon principles; and, above all, with its officers. There was Mr. Vines, who had been conducting what the Dr. thought most important experiments. Mr. Vines deserved the highest credit: he might become equal to Scheele in chemistry, Bacon in philosophy, and in anatomy he might be as famous as John Hunter: they might all be John Hunters, if they would, or at least become celebrated, if they made exertions, and, above all, aimed high enough.

The Doctor's speech was received with great applause.

Mr. Goodwin, jun., proposed the health of Mr. James Turner, for

his discovery and description of the real nature of the coffin-joint lameness.

The Chairman observed, that he formerly had the pleasure of communicating with Mr. Turner on the subject of the navicular complaint, and was then led to believe that the exertions of Mr. Turner had materially conduced to the better understanding of that species of foot disease.

Mr. Turner returned thanks.

The Chairman then gave "The Veterinary Surgeons of the Army."

Mr. Percivall, sen., returned thanks in their name.

Mr. Goodwin, jun., rose, as we understood him, in order to give a toast, he said, very usual on these occasions, and which it seemed to be his opinion had been too long delayed: he proposed a monosyllable very generally understood in vulgar language: and in the vulgar tongue.—(*Drank nem. con.*)

Toast—"The absent Members of the Profession."—(*Three times three.*)

Mr. Youatt's health was proposed from the Chair, in returning thanks, he observed, that although he might be called but a bastard son of the profession, yet none could be more anxious for its improvement, and that veterinary surgeons should hold, for at present he maintained they did not hold, that situation which their important branch of science entitled them to, &c.

Mr. Syddall proposed the health of Mr. Wm. Dick, of Edinburgh, who, from unavoidable and unexpected circumstances, was prevented from having the pleasure of meeting them on this occasion.

The Chairman then gave—"The Students at the Veterinary College," to whose hospitality they were indebted for their entertainment this evening.

Mr. Spooner, *in a neat set speech*, returned thanks.

"The Stewards on this occasion," was proposed from the Chair.

Mr. Sturgis briefly returned thanks.

A few other toasts were proposed and drank, and Sir A. Cooper left the Chair; retiring *amidst loud cheers*.

Mr. Coleman had withdrawn soon after his health had been drank, and many of the medical gentlemen took their departure.

Mr. Sewell was now called to the chair, and after a vote of thanks to their late able President, several toasts were drank, and the conviviality of the meeting proceeded.

Divers excellent songs had been previously sung by Messrs. Lushington, King, &c.; and (*The Rev.*) Mr. Youatt, being called upon, attempted to give a character to the future proceedings by an amatory song, not of the most delicate kind; but this effusion seemed to meet with no responsive feeling in his audience.

The company thinned rapidly under the weak administration of Mr. Sewell, and dispersed *in the usual manner*.

In noticing the proceedings at this Anniversary Dinner, we may remark, that the object of these party feasts, from the Cabinet down to the Select Vestry, and their influence on weak and corrupt minds, are now so well and generally understood, as scarcely to require a comment. The well-informed portion of the community, indeed, know better than to allow their judgment to be swayed by gormandizing and twaddle. But let us see what the original rules of our excellent College say about dinners.

"Rule 6. The eighteenth of February being the day on which it was resolved to establish a Veterinary College, shall be the anniversary: on which day, the several officers of the College shall be elected, and the subscribers invited to dine together, unless it shall happen on a Saturday or Sunday; and, in that case, the Meeting shall be held on the Tuesday following."

This, it will be observed, was a meeting of the *subscribers* to the Institution, who, after exercising their prerogative of electing the officers of the College for the ensuing year, thought to increase and consolidate their agreement by a social dinner. This anniversary festival was kept up for some time, but ceased about the period of Mr. Coleman's accession to the Chair, and, with the other rights and privileges of subscribers, has lain dormant during his *select* administration. The present dinner is a widely different affair; it originates with the pupils' Medical Society of the College, and purports to be given "in honour of their Professor, his Assistant, and those eminent teachers who have so liberally admitted veterinary students to their lectures." It is concocted by the Professor's agents, and, as may readily be supposed, the chief actors and speakers are men devoted to his interest, and the medical examiners of the College, who, by such harangues as may be seen in our report, *cawing* and *booing* to each other, and by extolling the present system, endeavour to infuse among the young men present, a certain *corps d'esprit*, and a hatred towards reformers. But to return. The account we have given of the proceedings at the dinner, is necessarily abridged from that of our Reporter; nevertheless, the speakers appear to full advantage on the canvas. Mr. Coleman is fortunate in having such a coadjutor as Sir Astley Cooper—one who, by *argument*, is so capable of making the worse appear the better cause. But we cannot avoid dissenting from Sir Astley's opinion of some of those eminent *discoveries*, for which he so highly praised the Professor.

At some future period, therefore, we shall favour our readers with an analysis of Mr. Coleman's Treatise on Respiration—"his first work,

and the foundation of his future fame;" accompanied with extracts from the masterly work of M. Berger, of Geneva, who repeated Mr. C.'s experiments, with results very different, and which may, perhaps, shake the value and stability of his "foundation." The effrontery displayed in setting forth the Professor's work on the Horse's Foot, as containing the "true principles of its construction and mode of treatment," is unparalleled, when we consider the uniform failure of this "mode of treatment," after a trial of thirty years; but this morsel we reserve as a *bonne bouche* for another day, and, in the meantime, refer Sir Astley to a review of the Professor's performance in the *Lancet*, an instrument with which the worthy baronet must be pretty well acquainted. Mr. Coleman's theory respecting the ventilation of stables, has never been fully adopted, even in the army; and we shall hereafter show that it is injurious and unphilosophical in the highest degree. So much for the Baronet's praise of his friend: he had better have confined himself to general topics; for we undertake to say, that he did not touch upon, or attempt to explain, a practical point in veterinary medicine, without betraying his ignorance and incompetency for the duties of a Veterinary Examiner. What did he mean, when extolling Mr. Sewell, by stating that the operation of Neurotomy is serviceable "in many inflammations of the foot?" when he should have known that it is now absolutely prohibited by its warmest advocates, in all cases where any considerable degree of inflammation is present; that, in fact, this boasted operation has become merely a resource employed in cases of chronic contraction caused by shoeing, and, even here, of very doubtful benefit.

It appears the Chairman intended to *insinuate* that Mr. Sewell, too, had discovered a *cure* (in blue vitriol) for glanders. It is certain that Mr. S. received a large sum from the Governors of the College under such a pretence; but now the subscribers are unequivocally told, that it is efficacious in cases "not purely and truly of glanders," but only "appearing under that form and type." What must the practitioners present have thought of this statement, which shows, first, that Sir Astley is ignorant of what constitutes glanders; and, secondly, that the Assistant Professor's *remedy* is of no avail?

Sir Astley took pains to magnify the praises of his medical supporters, Sir W. Blizard, Drs. Babington and Pearson. What have the two former done to deserve the thanks of the students? As for Dr. Pearson, he is "an investigating member," forsooth; he has found that the frog is gelatine and not fat, as Mr. Coleman has taught. This the Chairman took occasion to say; but there

was deep policy, even here. The frog is neither all fat, nor all gelatine, and, perhaps, not much of either; but what it really is, and the true physiology of its beautiful structure, have been long ago clearly described by one whose name was most carefully concealed from public view on this notable occasion, and whose account of it we shall soon publish. But as the Professor's nonsense about the *fatty* frog, which he has taught for thirty years, has lately been exposed in the *Lancet*, and has become too ridiculous to be any longer maintained, the College managers have boldly attempted to pass off the stigma of their former ignorant doctrine by throwing the merit of the discovery upon one of their own body. Dr. Pearson may have boiled some horse's frogs: he found, Query—How much gelatine? Will he favour us with his analysis? but, in the mean time, he and all his medical brethren are far more culpable than praiseworthy for having so long neglected to examine for themselves, and consult the works of others on such an important subject—the "fatty frog," Mr. Coleman's favourite organ, his hobby, the darling he has "SQUEEZED" for thirty years by *patent right*, which now, at last, he dares admit contains not a particle of fat, nor "bags of yellow oil!!" These are our veterinary examiners! They had better proceed to boil themselves, and then the profession would be rid of them.

But to return: In allusion to the fulsome compliments of the Chairman (in which he himself appears to have been aware that he went too far), we may be permitted, metaphorically, to observe, that on this occasion he seems to have squeezed the "fatty frog" over the heads of the Professor and his *dear* Dr. Babington, till the oil almost smothered them.

Our young friends would do well to consider, for a moment, who were the orators at this dinner: they were NOT THE OLD AND ESTABLISHED MEMBERS OF THE VETERINARY PROFESSION; but a set of *physicians* and *surgeons*, who know about as much of veterinary practice as they do of the people in the moon.

Our limits will not permit us to make half the comments which various speeches call for. It would be well, if Mr. Turner would favour the world with a clear account of the causes, symptoms, and cure of that, at present, very ill-defined and doubtful complaint, "navicular disease," and the difference between his description and Mr. Osmer's: he would then deserve, perhaps, some part of the praise which fell to his lot at this dinner.

What can we say of *(The Rev.)* Mr. Youatt?—his speech and his song appear to have been equally misplaced.

We understand from the best veterinary judges, that Mr. Coleman, and his Assistant, Mr. Sewell, looked very much *out of condition*. Perhaps the system of their new *trainer* does not quite suit them.

HORSE CAUSE.

Norfolk Circuit.—Thetford, March 17.

BARTON *v.* HICKLING.

This action, which was for the breach of a horse-warranty, was, perhaps, one of the most extraordinary instances of hard and contradictory swearing that ever appeared in a court of justice. Perhaps, when steam-carriages shall have come into more general use, these actions may become less common; at present, each assize for this county exhibits invariably one or more of them, to the astonishment of all who may happen to be present. From the statement of Mr. Sergeant Storks, for the plaintiff, and from the evidence he adduced, it appeared that "the horse in question was lame in both fore feet, groggy, had a thrush in the frog of one of his feet, that the tendons and sinews of his legs were extended, one fore-foot much enlarged, and the other much contracted;" and that this "was owing to the heats and colds in his feet, and the fever striking them." This was distinctly sworn to by a host of "farriers," "retired veterinary surgeons," and horse-dealers; that all this was the fact within two days of the sale to the plaintiff; that it must have been so for many months previously; and that many of the diseases were perfectly incurable.

A Mr. Saul, who described himself as "*a horse-dealer, unfortunately,*" swore that he measured the feet, and found one of them greatly contracted, which, he said, "a man with half an eye might see." It would also appear, from the plaintiff's evidence, that the horse was unable to carry a man of a dozen stone weight.

On the other hand, Mr. F. Kelly, who addressed the jury for the defendant, traced the animal from the minute of his birth, seven years ago, through every person into whose hands he had passed, to the hour at which the cause was tried. It had gone through the hands of about a dozen persons, every one of whom was called, and proved that they never perceived the least lameness in him at any period of time, that he never was groggy, that all his feet were of the same size (and one

witness "had measured them all with a rule"), and that no swelling or extension of any of his tendons or sinews was ever seen. On the day on which the plaintiff bought him, he was, by his permission, ridden ten miles, at all paces, over all kinds of roads, and leaped; and that no lameness, or the least blemish, was ever observed. One witness for the defendant, whose weight must have exceeded that which the plaintiff's witness swore he could not carry, deposed that the animal was perfectly able to bear both himself and the learned gentleman who was examining him, behind! In fact, there was not one single defect or blemish which the horse was sworn to on one side, which was not met by a directly counter-statement on the other side. A host of "farriers" was also called for the purpose of proving that they had seen him since the sale,—that he had then none of the diseases which were complained of,—and that if he had had them at the period of the sale, they must have perceived the grogginess (which cannot be cured) and the contraction, but that they did not. "He was perfectly, decidedly, and unquestionably unsound," said ten witnesses on behalf of the plaintiff; "He was never for a day in any one respect unsound," replied as many witnesses on behalf of the defendant.

Mr. Baron Garrow said, as the evidence was so unusually contradictory, he would read the whole of it over to the jury, as they were the proper persons to judge of the credit due to witnesses, and to balance between such conflicting testimony. The learned Judge accordingly recapitulated the evidence, and then left it to the Jury to say to which side they would give credit. If they thought the horse was unsound on the 9th of June, the plaintiff would be entitled to their verdict; but if they thought the balance of evidence inclined in favour of the soundness at that period, the defendant would be entitled to it.

The Jury, after a short consultation, found for the plaintiff—Damages, 63*l*.

THE MARMOT.

THESE beasts, in the strict sense, make hay. They bite off the grass, turn it, and dry it in the sun. It is reported that they use an old marmot as a cart. She lies on her back, the hay is heaped on her belly, and two others drag her home.

A DESCRIPTION OF VETERINARY MEDICINES.

[Continued from page 152.]

VEGETABLE SUBSTANCES.

1. BALSAMS *(Balsamum)*.—The term *balsam* is now only properly applied to a natural compound of resin and benzoic acid. Balsams are met with in a liquid as well as a solid state; the former being converted into the latter by exposure to the air, heat, or from long keeping.

The Balsams of Peru, Tolu, and Styrax, are examples of this class of drugs.

Formerly, the term *balsam* was indiscriminately applied to nearly all liquid resins, which now form a separate class.

2. BARKS *(Cortex)* is that substance which surrounds the wood of a plant; inclosing the inner bark *(liber)*, and is itself provided with an external covering, or epidermis.

They should be collected at the season of the year when they separate most easily from the wood—(this will generally be found to be late in the spring); after being well dried in the air, or with a moderate heat, they should be carefully preserved in a place free from damp and excluded from the air.

3. BULBS *(Bulbus)*, "A bulb under-ground," as of an onion. This term is more precise than root *(radix)*, as the fibres appended to it are the proper roots, though the College of Physicians have invariably used the word root to the bulbs, which they direct to be employed, in their Pharmacopœia, as that of the garlic *(allium)*, meadow saffron *(colchicum)*, leek *(porrum)*, and the squill *(scilla)*.

Great care is required in collecting and preserving bulbs, particularly those of the *colchicum;* which will be found a powerful medicine, when prepared at a proper season, otherwise it will be quite inert: the directions will be given at full length, when the plant is treated of in its regular succession.

4. FLOWERS *(Flos)*.—The flowers of plants, in general, possess less activity and medicinal properties than the leaves; in some they are equal; and in a few, as the chamomile, &c., they are the most active and the only part used. They should be plucked in dry, clean weather, just after they are fully expanded, and dried, as soon as possible, with a moderate heat, and carefully preserved from the effects of the damp.

5. GUMS *(Gummi)*, are those simple substances which exude

spontaneously, or are obtained from vegetables, soluble in water, but insoluble in alcohol *(rectified spirit)*. Gum Acacia, Tragacanth, &c., are of this class.

6. GUM-RESINS *(Gummi Resina)*.—The word *gum-resin* denotes a compound substance, possessed of certain different properties; the first part of which, the gum, being soluble only in water; and the latter, the resin, in rectified spirit: consequently, a gum-resin requires a portion of each, that is, proof spirit, for its complete solution. These substances may be purified by putting them into a bladder, placing it in nearly boiling water, and when completely softened or dissolved, pressing them through a hempen cloth.

7. HERBS *(Herba)*.—All herbs should be cut or gathered annually, just before the flowers expand, in their native situations, and when the weather is dry; and, unless they are intended to be used fresh, they should be dried quickly, with a gentle heat, that their colour may not be destroyed. They should be preserved dry, and in the dark; and when intended for internal use, those which contain volatile principles or virtues, should be powdered and kept in black glass bottles.

These directions are particularly applicable to the preparing and preserving of the Foxglove *(Digitalis)*.

8. LEAVES *(Folia)*.—The leaves of plants are, in many instances, the parts directed to be used: they generally require to be separated from the stalks, and should be dried, &c., with the same precautions as given for preserving herbs.

9. RESINS *(Resina)*.—Are those substances which exude from plants naturally, or are obtained from them by art: they differ from gums, by not being soluble in water, requiring rectified spirit, distilled or expressed oil, to hold them in solution. They are found both in a liquid and solid state; the former generally assuming the latter appearance by age, or through some artifical means.

The various sorts of turpentine and common resin, are examples of this class.

10. ROOTS *(Radix)*.—The roots of some plants are the most active, and only part employed; they should generally be dug up in the spring (unless otherwise directed), before the leaves and stalks appear: the *Colchicum*, and a few others, are exceptions. They should be carefully dried with a gentle heat, and preserved from moisture. Those roots which are required to be kept fresh should be buried in sand.

11. SEEDS *(Semina)*, are those parts of vegetables which frequently contain the greatest activity and the most useful properties of the plant:

they require to be carefully dried and preserved from the damp, otherwise they are liable to get mouldy. They should be collected just before they begin to fall spontaneously.

As the virtues of many of the seeds depend on their essential or volatile oil, they are best kept excluded from the air.

12. Woods *(Ligna)*.—The woods which are used for veterinary purposes are but few; the quassia, for internal administration, and the red sanders, for a colouring substance, are those mostly in request.

Woods intended for medicinal use, are best when cut in the winter.

[*To be continued.*]

ON THE OPHTHALMIC AND THE SPHENO-PALATINE GANGLIA IN THE HORSE.

BY A. RETZIUS.*

Some anatomists, among whom are MM. Girard, Schwab, and Gurlt, admit the existence of the ophthalmic ganglion in the horse; others, as MM. Muck, Desmoulins, and more especially Tiedemann, deny it.

The numerous researches of M. Retzius, on this point, have decided the question; the ganglion has been observed by this anatomist, of which he gives a detailed description, as well as of all its filaments of communication. The spheno-palatine ganglion also exists in the horse, a fact which has been denied by M. Desmoulins. Surrounded by cellular tissue, the spheno-palatine ganglion of the horse is composed of a series of smaller ganglia, but the whole of which, joined to the nerves which are near it, may almost be considered as a small system of its own.

YOUNG OF THE KANGAROO.

The Kangaroo, that grows to four hundred pounds weight, brings forth her young like half-grown mice, takes them up, and suckles them ten months in her bag.

* Kongl.—Vetenskaps.—Academ. Handlingar. 1826.

ON BROKEN WIND IN HORSES.

BY MR. B. CLARK.

(*In Rees's Cyclopædia.*)

THIS is a disease which frequently happens to horses; and the following are the indications which mark its presence:—The breathing of the horse becomes altered from its natural state, and from an easy, gentle, and uniform respiration is changed to a painful, laborious heaving, and violent agitation of the flanks, which rise by several successive undulations to a preternatural height, then suddenly relax and fall downwards beyond the natural extent of these parts; the nostrils become dilated, and held rigid and opened to their utmost extent, and the face becomes everywhere emaciated and contracted: such are the appearances in very aggravated cases; in more recent cases these appearances are less evident, and it is a disease that can exist in every degree of mildness or violence.

When the disease has been of long standing, and little pains or care is taken with the animal, as may be more particularly observed in cart-horses, and horses employed in farmers' work in the country, the abdomen becomes large and pendulous; but in more recent cases, and in horses otherwise situated, we have observed that, in the early stage at least, the abdomen is rather contracted, and is painfully held up, in this disorder.

Great thirst attends this disease, perhaps arising from the increased action or fever which it occasions; and this has been too often mistaken for the cause of it, and has led to the most cruel privations.

There is no disorder, perhaps, of the horse, which has so much engaged the attention of anatomists and of speculative and ingenious men, as this, to discover its cause. It has, however, we believe, never yet been satisfactorily explained; at least there is no author that we are acquainted with that has formed any connected or probable account of it, unless, perhaps, very lately, and which was derived from the source we are about to mention.

Haller seems to have supposed it proceeded from a relaxed or ruptured diaphragm. Lowe imagined that a relaxation or injury of the phrenic nerves might occasion it. Some have assured us, after examination, that the lungs are not at all affected in this complaint, and that its seat was about the larynx and air-passages; and some of the writers on this subject have believed that the lungs were grown too big for the chest, and that this was the source of the mischief; and there have

been many other conjectures equally absurd. Some thought they elucidated the nature of this disease by comparing it to a consumption, and others to an asthma. We trust something more natural and satisfactory will be found in the following statement of our observations on this singular disease :—

In the year 1795, being engaged in the dissection of a grey mare that was sent to the Veterinary College to be destroyed, on account of this complaint, on opening the chest, the lungs appeared free from inflammation—being very white; and as it appeared free from redness and increase of colour, the general concomitant of disease, we were led for a while to consider the lungs as not the seat of the disorder, as others had done (for several of the pupils were present at this dissection). On cutting into their substance, no inflammation was perceivable: on examining them more closely, we observed a small bladder or vesicle on the outside of the lungs, in the external investing pleuritic coat; this was conceived by some who were present to be a tubercle, and that tubercles might be the cause of the broken wind. Suspecting, however, from its appearance, that it was not solid, but contained air, it was punctured, and it immediately subsided. This instantly suggested to the writer of this article (*who proposed this experiment,*) that the lungs were actually in a state of *emphysema,** or that air was contained in a state of extravasation in their substance; and which not only seemed evidently the case in this instance, but we have since fully verified it by examination and dissection of a considerable number of cases of broken wind, and found that it is the constant appearance. This extravasation of air in the substance of the lungs, is, perhaps occasioned by a rupture of the air-cells, as suggested by Mr. Coleman at that time, unless it is formed in them, and thrown out by some morbid operation of the blood-vessels, as sometimes happens in the intestines and vagina; for the exact way in which this emphysema arises has not been yet ascertained. It fully explains the cause of the white appearance of the lungs: the membranes being separated and divided by air laying between them, partially admit the light, also the puffy appearance they make, and the crackling noise they give on being handled,—all admit of a ready explanation by this discovery, and so do the symptoms which attend the disorder; for the common air escaping, from disease on a sudden rupture of the cells, into the membranes composing the lungs, thereby compress and obliterate more or less the natural cavities destined for the reception of the air, and thus occasion the effort we observe to overcome this obstruction, and

* Emphysema (from εμφυσαω, to inflate.) Air in the cellular membrane.

which naturally induce the appearances we have described as the symptoms attending this disorder: it also accounts for incurability, and the oppression which a full stomach occasions. As the extravasation proceeds, the complaint gradually, or sometimes suddenly, increases, so as to be insupportable to the animal; and, at length, being quite useless, he is necessarily destroyed.

In some cases, the disease, without much increasing, may exist for many years, and till the horse dies from other disease, or age. This white appearance of the lungs it is that had deceived so long those who had been led, through curiosity, to examine the lungs in this complaint; it being so unusual to see any part in a state of disease more delicately white than in its healthy state; and singular it is, that the extravasated air should not bring on the inflammation and destruction of these organs.

Horses, in bad cases of broken wind, are observed to void air in considerable quantities by the anus, as though the extravasated air of the lungs was absorbed and carried to the intestines; or it is probably only indigestion which is the cause of this; and the smiths, not unfrequently, on this account, cut through and divide the *sphincter ani*: then the power of closing the rectum is lost, and the air escapes without noise; and they are led from hence frequently to imagine they have cured the complaint.

We are now led to consider what the cause is, which, in the general estimation of mankind, leads horses to this disease, viz. their being allowed too much water; and here, we apprehend, every observer of common feeling and humanity must be shocked at the recollection of what instances have fallen within his own observation, of cruelty in this respect, and of what horses are daily and hourly suffering from the most barbarous of all customs, the denying a sufficiency of water to sound horses, to prevent their becoming broken-winded. True it is, that water administered to horses in an improper manner, especially after the privation above spoken of, may become a cause of their being broken-winded; but would any one infer from this, that it is necessary that all horses should be kept almost entirely without water, exposed to a never-ceasing thirst, till an opportunity of gratifying the appetite in this way occurs? and the natural and healthful beverage being too largely taken, becomes a poison, and induces the very mischief which so much cruel and useless pains had been taken to avoid: for the horse that is allowed to drink frequently, and as much as he likes, will never from this source become broken-winded. No horse on a common, exposed to the water of the brook, which he can partake of as often as he pleases, will ever become broken-winded from this cause, unless he had previously suffered a privation of water, and in his first excesses to overcome

his thirst, had injured himself. Let us now consider under what circumstances it is advantageous to deprive a horse, for a time, of his water. The traveller, who starts in the morning on his journey, would be incommoded if the horse's stomach were loaded with water; it is quickly absorbed from the stomach, and passing off in perspiration, becomes unsightly and troublesome; and though it may be true that perspiration, not too heavy, by keeping a moisture on the skin, and by its evaporation, induces a coolness that might be refreshing, yet to be inundated with it would be highly disagreeable. The water should, therefore, be given at an earlier hour in the morning, and should have time to pass off before the horse is used on the road; and if he be deprived, in a great measure, of it during the day, he should be the more plentifully supplied with it during the night time, so as not to create a violent thirst, which can only be gratified, the first opportunity that happens, at the expense of his health, or, perhaps, his existence.

Sorry should we have been, if, after much inquiry into the nature of this disease, we should have discovered that the above practice, of depriving horses almost entirely of water, though cruel, was necessary; and that we must acquiesce, with painful sensations, in the use of this custom. We are, on the contrary, convinced from experience, as well as the most incontrovertible reasoning, that the practice is as destructive and pernicious as it is cruel and unnatural; for we are aware, the suggestions of humanity would avail but little, where an opposite course would best serve the interests of mankind in regard to this animal: however, they are, fortunately for it, not incompatible; on the contrary, all the comforts he can receive will best insure his life and labours.

It should be recollected that the horse is fed on the dryest food, as corn, beans, hay, &c., and this requires, to its being well digested, a certain portion of moisture, which must be either derived externally or from the blood; and horses are often expected to work hard under these circumstances, to sweat and perspire profusely, and digest their food as well, without any water;—the consequence of this is, that their dryness and thirst must arrive at a pitch that is scarcely governable: and to these causes we may add, as contributing to the mischief, the hot, crowded, low stables of large towns and cities, where they are often, in consequence of such treatment, seized with various inflammatory complaints—as affections of the limbs, eyes, brain, and lungs, and other diseases. They are sometimes miserably allowed to wet their mouths on the road, and this is deemed sufficient for their wants; or, if they by any accident get to water, the consequence ensues that we have above described.

With chaises and post-coaches, are ever seen the greatest number of

broken-winded horses, because the artificial and mischievous system pursued by the drivers of such vehicles naturally lead to it. It is a practice with the brewer's dray-horses, both in the metropolis and the country, as often as they come home, to let them go to the trough and drink their fill; among these, broken-winded horses are very rare, though they have all the water they can desire.

Wetting horses all over with cold water while in a profuse sweat, we believe not to be so injurious a custom as would at first appear, if the law for its application is understood; but, on the contrary, very beneficial and refreshing. Those who do it should be apprized of the danger of carrying it to the extent that would chill the horse, when the worst consequences would often ensue: to avoid ill effects, the horse, after this bathing, should not be left long to stand still and chill, or in any cold place, or draft of air; but while his skin is yet warm, (as in case of a return chaise,) he should be put in, and driven home, till again perspiration is fully induced upon the skin, when all danger would be prevented; and it would be best, perhaps, not to repeat it, at least to the same extent, on his arrival home: as he is then to stand still in the stable, there would be some risk of inflamed lungs, inflamed feet, or the gripes, from the blood being confined in the interior system.

Muddy water is often conceived to be best for horses, and is given them in preference by some grooms. A horse, however, must arrive at an extraordinary degree of thirst before he would touch it; and it is only better, as being in general warmer, having been exposed to the air and sun; and is certainly safer for horses than water drawn from a cold spring or deep well—the contrast of temperature being too great with the horse heated by violent exercise.

When the cause of any disease is not understood, the theories for its explanation will be vague and unsatisfactory, and the remedies various, often opposite, and almost infinite: and so it has been with this complaint; for there is nothing can equal the absurd nostrums recommended in books of farriery, in this complaint in particular, as well as in some others; and the farther we go back, the more sure and sound is the information respecting it. The ideas of the Romans were coarse and absurd; but the Greeks appear to have had a better knowledge of it, as is seen by the following translation given by Ruellius:—"*Cum in pulmonibus quid rumpi cœperit, hoc vitium πνευμωρωξ Graiis quasi pulmonis rupta disseris appellatur;*" and it is afterwards much better described in a chapter given by Theomnestus in the same work, and at considerable length—too much so to admit of being inserted in this place. Whether, however, the term *pulmonis rupta* did really

convey to their ideas the actual cause of the disorder, may be doubted by the context, any more than broken wind to an Englishman, or *cheval pousif* to a Frenchman. The ancients appear to have had a belief in its being cured, especially before it became inveterate; the remedies they mention, however, may be fairly suspected of possessing any such power.

We cannot conclude this article more usefully to the public, than by cautioning them against a common practice, especially among the lower order of horse-dealers, of violently squeezing the wind-pipe and throat, to ascertain if a horse is broken-winded, which is often attended with the most mischievous consequences; the cough will be in proportion to the violence of the irritation used, and this even in cases of broken wind, unless in the last stage of it, when other symptoms sufficiently denote it; so that, as a criterion, we believe it to be of little value.

A grey pony was brought to the Veterinary College, during the professorship of M. St. Bel, in the year 1791, with great difficulty of breathing, a copious discharge of saliva from the mouth, and a running at the nose: so far it appeared somewhat like glanders; but the glands under the jaw, and all the external parts of the throat, were free from swelling.

The difficulty of breathing was considerable, and threatened suffocation: this induced us to suppose some obstruction was the cause, either in the nostrils, fauces, or larynx.

The operation of bronchotomy was had recourse to, which immediately relieved him. Present suffocation being thus prevented, our next plan was to remove the obstacle, which we imagined might be in the nose. The frontal bone was trepanned, and it was intended to trepan the nasal bone; but this was not executed, for the pus from the former found its way through into the nose, and the nose was injected every day, through the opening, with warm decoction of herbs. As the orifice in the trachea every day became smaller, it was difficult to keep in the *canula;* which accidentally, a few days after, falling out, the horse was suffocated and expired. On opening the head, there was no obstruction any where to be found; on opening the larynx, the true cause was discovered.

The internal membrane that lines the larynx, or wind-pipe, was enlarged or distended with a fluid, in a way that prevented the admission of air. This membrane was detached from the sides of the larynx, and so distended, that the two portions met each other in the centre of the pipe—forming two hemispherical tumours, which acted as valves,

and completely excluded the admission of air. On cutting into these tumours, they were composed of cellular membranes, distended by a small portion of fluid: the surrounding parts did not bear any marks of inflammation. If these tumours had formed on one side only, they might have been attributed, perhaps, to some puncture, or some injury from bleeding, or other cause of this sort; but being on both sides of the throat, it is probable both sides must have been irritated, to produce it—and nothing so likely as violent compression of that sort we see men use when they propose to try horses for broken wind; for they endeavour to squeeze the pipe till both sides meet, otherwise the horse will not cough, or only slightly. Since this, another exactly similar case was brought to one of the slaughter-houses in town, while we were casually staying there; and the horse was said to have died of suffocation, they could not tell why. On examining the larynx, a similar mischief was discovered.

During the last six years, we have opened more than ten horses that were broken winded, and uniformly formed the lungs emphysematous: violent breathing, and appearances in every respect like broken wind, attend other affections where the lungs are injured, as in large abscesses forming in the lungs; water thrown out in the chest in roarers, and even violent pain in any part of the body, will produce appearances resembling broken wind, which again disappear when those affections are removed.

When the stomach is loaded, especially with water, all the symptoms of this disorder are more easily remarked, especially on exercise; it is, therefore, one of the most sure means of ascertaining it: and on this account, horses with this complaint are in general kept from drinking great quantities of water, which they are much disposed to do, probably from the fever observed to attend the complaint; and also, perhaps, from the blood in the lungs not undergoing so completely the changes it ought to do in that viscus.

Some horses are differently affected in broken wind to others: the respiration is quickened in some without much heaving; and the abdomen in such is contracted and hard, instead of being large and pendulous. It is sometimes attended with a cough, which is not deep, but short and hard, as though the lungs resisted perfectly the impulse of this exertion. On exercise, the cough is much increased, after which he seems relieved; the head, in coughing, is held low, his neck stretched out as though he endeavoured to bring something from his throat—"*quasi ossicula devorasset;*" the face has a rigid, emaciated appearance, resembling, though less violent, those constrictions which

attend lock jaw. The eyes are often yellow from diffused bile; the nostrils dilated and rigid. The appetite is not affected by it; if any thing, it is increased.

In this disease, as before observed, the flanks rise and fill slowly and heavily, and then fall suddenly; which the state of the lungs accounts for: it is done in order to get the most air into the lungs, which must be accomplished slowly; and then to expel it by a sudden effort or attempt of all the muscles at once, to collapse them, which but imperfectly takes place.

The writer of this article endeavoured to rupture the cells of the lungs of a sound horse, by inflating them, and laying weights upon them, and found that no moderate pressure would do it; indeed, when removed from the body, no experiment could be very satisfactory, and he desisted from farther experiments with this design.

CONGENITAL ANASARCA IN A CALF.

BY DR. JAEGER.

On opening the body of a cow which had been pregnant eight months, Dr. Jaeger found a calf, the entire surface of which was white, and deprived of hair, with the exception of certain spots. A serous fluid, rather dense, analogous to the liquor amnii of the cow, filled the subcutaneous cellular tissue, and passed off by the natural apertures of the body, and by the surface of the skin, without any incision having been made. It was supposed to be about fifty pounds in weight, that is to say, about half of the weight of the animal; the bones appeared to be regularly formed; the sternum and ribs were not developed as much as the rest of the body; this want of developement was also observed in most of the organs contained in the thorax and abdomen. The lungs were very small and compact; and presented, on being inflated in the superior lobe, the appearance of elongations, similar to those which are observed in the lung of the cameleon, and, in the inferior lobe, that of a membranous bladder, transparent, and lined by a substance of a reddish colour: the lungs of this animal resembled, in a great degree, those of reptiles.

XENOPHON'S RULES

FOR THE

CHOICE, MANAGEMENT, AND TRAINING OF HORSES.

[Continued from p. 174.]

CHAPTER IV.

Of the Construction of the Stable; and the Care to be taken of a Horse's Feet.

1. But when any one shall have purchased a horse that he likes, and shall have led him home, it is proper that the stable should be in such a part of the dwelling where the master can see the horse oftenest. It would be right, too, that the manger should be constructed so that it would be no more possible to steal the horse's food out of the manger, than that of the master out of the larder. He who is neglectful of this, seems to me to neglect himself; for it is certain, that, in dangers, the master confides his own person to his horse.

2. A secure stall not only prevents the food being stolen, but serves to show, likewise, when a horse will not take his food. Any one perceiving this, will either know that he is surfeited, and that his body wants evacuation; or that he has been overworked, and needs repose; or that a loathing of corn, or some other disorder, is coming upon him. But as it is with men, so it is with horses; all things in the beginning are more easily cured, than when the diseases have taken root and fixed themselves in the body.

3. But as care must be taken of a horse's food, and of his being exercised, that his body may be robust; so must his feet, likewise, be attended to. Moist and smooth floors will injure even good hoofs. That floors may not be moist, they should be made sloping; and that they may not be smooth, a pavement should be made of stones that are about the size of a horse's hoof,—for such a pavement would strengthen his feet by standing on it.*

4. In the next place, the horse must be led out by the groom, where he is to be dressed; and after having had his morning's feed, he should be taken from the manger, that he may return to it in the evening with

* The practice of keeping a large quantity of litter and dung under horses' feet, is very wrong and injurious, as it heats the feet and legs, and also makes the hoofs become dry and brittle.

greater appetite.* That the stable-yard may be the best possible, and harden the feet, there should be four or five loads of round stones, of about a pound weight each, thrown down in it, and compassed round with iron, that they might not be scattered; for the standing on them would be, as if he were rode a part of the day over stony ground.†

5. He must necessarily, too, when rubbing down, or spoken to, use his hoofs as when he walked; and stones laid in this manner likewise strengthen the frogs of the feet. And as care must be taken to have the *hoofs hard*, so must the mouth be kept tender; but the same things soften the flesh of man, and the mouth of a horse.

CHAPTER V.

Of a Groom.—How a Horse should be fastened. The manner of rubbing him down, and cleaning him.

1. It seems to us, that a skilful horseman should have a groom who has been taught whatever is to be done about a horse. First, then, he should see that the knot of the halter which ties the horse to the manger does not hurt his head: for if the halter be not easy about his ears, it may gall him in frequently moving his head to the manger; and this, when once become sore, will make him more difficult to be bridled and dressed.

2. It is right, also, that the groom be ordered every day to carry away the litter and the dung to some particular place; for, by doing so, he will get rid of it with less trouble, and it will be the better for the horse.

3. The groom ought to know, too, that a muzzle should be put on the horse, both when he takes him out to be dressed or to stretch his legs; and, indeed, he should at all times, when taken out without a bridle, have a muzzle. For a muzzle does not hinder his breathing, but prevents him from biting; and its being put on horses makes them think less of being vicious.

* A great error prevails frequently in keeping the rack full of hay, and which the horse refuses to eat, after having smelled to it for some time; but if removed, and a small quantity only given him, he will readily eat it.

† As we have before shown, the ancients did not shoe their horses by nailing iron on their hoofs, but when, in travelling, they found it necessary to defend the feet, it was effected by fastening on, by means of straps and ligatures, a kind of *sandal, stocking*, or *boot*, made of some tough vegetable twigs, or leather, to which metal plates were sometimes attached.

4. And the horse ought to be tied over the head; for everything which disturbs a horse about the face, he endeavours to get rid of by tossing up his head; and tossing up his head when thus tied, rather loosens than tightens his halter.

5. When he is to be dressed, it should be begun with the head and mane; for it is useless to clean what is below, when that above is not cleaned. The rest of the body should then be made clean with all sorts of dressing instruments, and the dust wiped off the way the hair lies. But the hair on the back bone should not he touched with any instrument whatever, but rubbed with the hand, and gently smoothed down in the direction it grows; for this will least injure the seat of the horse.

6. The head ought to be washed with water; for, being bony, if it were cleaned with iron or wood it might hurt the horse: and the *forelock* should be moistened; for these hairs being very long, do not prevent the horse from seeing, but repel from his eyes whatever molests them: and it may be imagined that Providence gave these long hairs to the horse, instead of long ears, which they have given to asses and mules, as safeguards to the eyes.

7. And the *tail* and the *mane* should be moistened, as it is right to make this hair grow: that of the tail, that by throwing it out as far as possible, a horse may chase away what molests him;* and that of the neck, that by being very thick, it may offer a good grasp in getting upon him.

8. The *mane*, and *forelock*, and the *tail*, were likewise given for the sake of ornament to a horse. A proof of this is, that mares will not permit asses to cover them at all till they have been cut off. For which reason, all those who breed mules, shear their mares before they are covered.†

9. The washing of the legs we do not mention, for it is of no use, and the daily wetting of them hurts the hoofs; and the cleaning too much under the belly is as well let alone, for this is very troublesome to

* The present custom, that of allowing horses to retain their long tails, is highly creditable to the age, when compared with the cruelty heretofore practised, by depriving these noble animals of so useful and ornamental a part, and which nature has furnished them with,

"Who never made her works for man to mend."

Cropping of the ears, *nicking*, and *docking*, appears to have been unknown to the ancient Greeks, at least they had the humanity not to recommend it.

† The Grecian mares appear, from Xenophon's account, to have had a larger developement of the organ of pride (No. 10), than is common with the fillies of the present day.

the horse; and the cleaner these parts are, the more they attract things under the belly that molest him.

10. And if ever so much pains be taken with them, it does not prevent the horse, when led out, from being immediately the same as if he had never been cleaned. Let these things, therefore, be omitted, and let it suffice to rub the legs with the hands.

CHAPTER VI.

Precautions in rubbing down Horses; and when leading them, how they should be bridled. When shy, to be treated with gentleness.

1. We will now show how any one may rub down a horse with the least danger to himself, and best for a horse. If he clean him, looking the same way as the horse does, he runs the risk of being struck in the face with his knee or his hoof.

2. But if he should rub him down, placing himself, when cleaning the horse, opposite to him, and out of the reach of his leg, and near the shoulder, he would run no danger; and would be able to clean the frog of the horse by lifting up his foot. In the same manner, too, he might clean the hind legs.

3. Whoever is employed about a horse, ought to know that this, and everything else which he has to do, ought to be done by coming as little as possible near his face and his tail: for if he is inclined to be vicious, a horse has, in both these parts, the advantage of a man. But any one, by approaching him on the side, may be able to do many things to a horse with the least danger to himself.

4. But when a horse is to be led, we do not approve of his being led from behind, for this reason; because the person leading the horse is, in this manner, least able to defend himself against him, and the horse has it most in his power to do whatever he pleases.

5. As also the going on before with a long rein, to teach the horse to follow, we blame, for this reason; because a horse has it in his power to be vicious on whichever side he pleases; he has it also in his power, by turning himself, to get opposite to his leader.

6. When a number of horses are thus led together, it is likewise not easy to prevent their interfering with one another. But a horse accustomed to be led by the side, is least able to hurt either men or horses, and is readiest at hand for the rider, if he should wish at any time to be mounted on a sudden.

7. That the groom may put the bridle on properly, first let him come to the *near* side of the horse, and throwing the reins over his head, let him put them on the top of the shoulder; then let him take the head-stall in his right hand, and approach the *bit* to him with his left.

8. Should he receive it, the rest of the bridle must be put on. But if the horse will not suffer it, the bit must be held to his teeth, and the middle finger of his left hand must be put between the horse's jaws: for many horses, on this being done, loosen their mouth; but if he will not receive it even thus, let him press the lip against the *dog-tooth*, for there are very few who do not receive it, on feeling this.

9. Let the groom likewise be instructed in these things:—First, never lead a horse by the reins, for this makes him hard mouthed; then, to keep the bit from his jaws as much as possible, that he may not be insensible to it; for the pressing too much against them hardens the mouth. On the other hand, if placed too low, it gives a horse power, by biting the bit, not to be obedient.

10. The groom ought also to be very exact in all these particulars, if there is anything which more particularly requires his diligence. For it is of so much consequence that a horse should be willing to receive the bit, as on not receiving it he becomes entirely useless.

11. But if he be bridled not only when he is to work, but also when he is led to his food, and when he is brought home from the place of exercise, there would be no wonder if he should receive the bit voluntarily and in stretching out his neck.

12. It is proper, too, that the groom should be able to lift up any one after the Persian manner;* that the master, if he should at any time be sick, or advanced in years, may have some one who can lift him up easily, or may supply his friend with one who can perform this office.

13. But never to act with anger towards a horse, is the first and best of all the precepts that can be imprinted on the mind. For anger is inconsiderate, and very often urges us to do what afterwards must necessarily be repented of.

14. When a horse likewise shys at anything, and will not approach

* Stirrups not being in use at the period when Xenophon wrote his treatise, the practice at that time was to vault on the horse, and sometimes to mount by a spear having a loop or some other contrivance fixed to it; or from a *block*; or after the *Persian* manner, which *Volaterannus* states was done by the help of a servant or slave, who accompanied his master, and, by bending his back, his master stepping on it, mounted and dismounted the horse.

it, he ought to learn that there is nothing terrible in it—and especially a spirited horse. But if not, that which seems terrible should be touched, and the horse led gently up to it.

15. But those who are for using blows, make them still more afraid; for the horses think, when they suffer anything grievous at such a time, that what they are afraid of, is the cause of it.

16. But when the groom brings the horse to be rode, we do not disapprove his being able to make the horse bend himself, that he may be the more easily mounted. But we think the rider ought to learn to mount him, in case he will not bend; for sometimes a different horse presents itself, and sometimes the same horse is not equally quiet.

(To be continued.)

LUDICROUS METEMPSYCHOSIS.

THE souls of deceased bailiffs and common constables are in the bodies of setting dogs and pointers; the terriers are inhabited by trading justices; the blood-hounds were formerly a set of informers, thief-takers, and false evidences; the spaniels were heretofore courtiers, hangers-on of administration, and *hack* journal-writers, all of whom maintain their primitive qualities of fawning on the feeders, licking their hands, and snarling and snapping at all who offer to offend their master; a former train of gamblers and black-legs are now embodied in that species of dogs called lurchers; bull-dogs and mastiffs were once butchers and drovers; greyhounds and hounds owe *their* animation to country squires and fox-hunters; little whiffling useless lap-dogs draw their existence from the *quondam* beau,—macaronies and gentlemen of the *tippy* still remaining the playthings of ladies, and used for their diversion. There are also a set of *sad dogs*, derived from attorneys, and *puppies* who were in times past attorneys' clerks, shopmen to retail haberdashers, men-milliners, &c. Turnspits are animated by old aldermen, who still enjoy the smell of the roast meat; that droning, snarling species, styled Dutch pugs, have been fellows of colleges; and that faithful, useful tribe of shepherds' dogs were, in days of yore, members of parliament, who guarded the flock, and protected the sheep from wolves and thieves, although, indeed, of late, some have turned sheep-biters, and worried those they ought to have defended.

ON THE ANTIQUITY AND INVENTION OF HORSE-SADDLES.

THERE was formerly preserved at Berne, in Switzerland, and shown to travellers as an object of great curiosity, an old saddle, with stirrups, that was said to have belonged to Julius Cæsar, and to have been used by him in the war in Gaul. It is, however, quite certain, that at that period such conveniences were not known. In the earliest ages, the rider sat on the bare back of his horse, and it was only slowly that even a covering of any kind was introduced. This, at first, consisted merely of a piece of raw hide: but in process of time housings were adopted, which nearly covered the animal; and these certainly were used by the Roman cavalry in the time of Cæsar, as he himself tells us that the Germans, who themselves still adhered to the ancient method, held the Romans in some contempt for the adoption of this effeminacy; but Varro, the historian, who lived at a yet later period, boasts of having rode, in his youth, without any covering on his horse. These caparisons, however, and indeed the whole equipment of the horse, at length assumed an appearance of such splendour, as to warrant the description given by Virgil, although not strictly applicable to the era to which he ascribes it:—

> ——————"At his command,
> The steeds caparison'd with purple stand,
> With golden trappings glorious to behold,
> And champ betwixt their teeth the foaming gold."
>
> *Dryden's Virgil's Æneid*, Book 7.

The first invention of saddles, in any manner resembling those now in use, is attributed to about the middle of the fourth century: and as the Persians were the first to introduce the housing, it is not improbable that this improvement also may have originated with that people; but the earliest positive mention of them is found in an ordinance of the Emperor Theodosius, in the year 385, prohibiting those who rode post-horses from using saddles *(sellæ)* that weighed more than sixty pounds. This, from its great weight, was, probably, somewhat similar to our pack-saddle; and it would appear, that every traveller was provided with one of his own, which, it may be remarked, is still customary with the couriers who ride post throughout the Peninsula, and in some parts of Italy. In the fifth century, these saddles were so lavishly ornamented, that the Emperor Leo I. found it necessary to issue a decree, forbidding the use of pearls, and some kinds of rare precious stones, in their embellishment; and, in the sixth, we find an order of the Emperor Mauritinus, that the cavalry saddles should have large coverings of fur.

The invention of stirrups, however, was not coeval with that of saddles. We have here a proof of the error of supposing that things of evident utility for common purposes, must, on that account, be of great antiquity: for, however obvious and necessary the addition of this simple contrivance may now appear, no certain trace of it can be found before the sixth century.

The Greek and Roman youth were taught to vault into their seat, and those of mature age were either assisted by their servants, or used the aid of stepping-stones. These servants, indeed, were not merely employed to lend their aid in the mode that might naturally be supposed, but were required to stoop down, in such manner as that their backs might form a kind of footstool for their masters; and the name by which they were designated *(Anabolei)* was at one time applied to stirrups, in the same manner as the instrument used for pulling off boots is termed a jack, because it supplies the place of a boy. In proof of this custom, our readers will doubtless call to mind the historical anecdote of the Roman Emperor Valerian, who, when made captive, in the middle of the third century, is said to have been thus degraded by his conqueror, Sapor, King of Persia. Horses were even sometimes trained to kneel until the rider mounted. Horse soldiers, it would appear, were provided with a small projection, or sometimes with a looped strap, on their spears, which they used as a step on mounting.

The first positive allusion to stirrups that has been noticed, is in a work on the art of war, which has been attributed to the Emperor Mauritius, and is supposed to have been written in the latter end of the sixth century; in which it is said, that a horseman should have at his saddle two iron *scalæ*—a name by which stirrups were afterwards designated. This is repeated in a work on tactics, written by the Emperor Leo VI., three centuries later; but in all the long intermediate period scarcely any mention of them is to be found. Indeed, we can collect from Eustathius, the commentator on Homer, that even in the twelfth century they were not common; and for a long time after their first introduction, it was considered manly to dispense with them. We find, however, in an engraving inserted in Montfaucon's "*Monumens de la Monarchie Française*," from an excellent piece of tapestry of the eleventh century, that all the saddles there represented are provided with stirrups. Before this period, and after the humiliating custom of requiring servants to bend as a step had ceased, large metal knobs were affixed to the saddles, by which the rider assisted himself in mounting; and stepping-stones were placed at stated distances on the roads, at the gates of inns and public buildings, and at the doors of most private dwellings.

HISTORY OF HORSE-SHOEING IN ENGLAND.

ALTHOUGH but little has yet appeared in our pages on the *most important* subject of "Shoeing," our readers may rest assured that we are fully prepared to enter on its consideration; and as it is a branch of Veterinary science which offers a great diversity of opinions, is least studied, and worst practised; so we are particularly anxious that every step we may take on this debateable ground should be clearly understood, and well attended to, by those whom it may concern. The curious account of "Horse-shoeing," given in former numbers, will be sufficient for the present—whatever may hereafter be added—to show the extent of the knowledge and practice of the ancients in this art; and brings down its history to the period when iron shoes, fastened with nails, became of general use on the continent of Europe, which appears to have gradually taken place from the fifth to the ninth century.

There is no account of the art in this country prior to the Conquest, when William of Normandy gave to Simon St. Liz, one of his followers, the town of Northampton, and the hundred of Falkley, then valued at 40*l.* per annum, to provide shoes for his horses: and in "Brook's Catalogue of Errors," page 65, it is also stated, that he appointed Henry de Ferrers to be superintendant of the shoeing-smiths; and his descendants, the Earls of Ferrers, bore six horse-shoes on the quarterings of their arms.*

From its introduction, to the time of Queeen Elizabeth, we have little or no recorded account of the shoeing art. It is to be supposed that the original "Ferrers," as they were called, had but little view to elegance or neatness in the formation of their shoes: a bar of iron turned to the figure of the foot, and coarsely stamped, formed a defence, on the same principle, and equally serviceable, with the various fanciful figures which the caprice of later years has successively invented. The general character of the oldest specimens we have seen, is that of being very wide in the web, with nail-holes placed nearly in the middle; thus obliging the edges of the shoe to project considerably

* At Oakham, in Rutlandshire, the seat of this family, a singular and rather tyrannical custom long prevailed: if any baron of the realm passed through the place, he was to forfeit one of his horse's shoes, unless he chose to redeem it by a fine; and the forfeited shoe, or the one made in its stead, was fixed upon the castle gates, inscribed with his name: in consequence of this custom, the gates became, in time, covered with numerous shoes, some of them of an unusual size, and others gilt, &c.

beyond the hoof, all round—a circumstance that is, in general, favourable to the ease and comfort of the horse, by increasing his bearing surface. The heels were generally curved inward, and the shoe not perfectly flat, but a little turned up at the toe; a custom which probably originated in their having to fit natural feet, which might be worn away, as they usually are at that part. In those days, having no turnpike roads, and comparatively little travelling, it is most likely that horses were only occasionally shod for unusually long journeys, or in time of frost, to prevent their slipping or becoming tender-footed on the hard ground: and that this was the case, we are justified in stating, by the practice in many parts of the world at the present time. If but few horses were constantly shod, there was less chance of their perceiving the access of those complaints and diseases of the feet which are now found to be the invariable attendants, and the admitted consequences, of shoeing: and it may be added, that the coarse, hardy breeds that served the purposes of our ancestors, were much less liable to suffer from these causes, than the high-bred, delicate animals that have now become common in Britain.

The first work in the English language which contains any detailed account of shoeing, is that of Master Blundevill, published in 1609, during the reign of Queen Elizabeth.

Fig. 1.

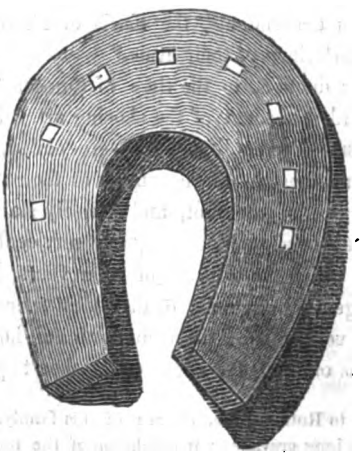


Fig. 1., is what he gives as "a shoe for a perfect hoof:" it is a view of the under or ground surface, and must appear to a modern eye a very coarse and clumsy affair; nevertheless, although we certainly do not mean entirely to approve of its proportions, it will be our

business, in many places, to show that the ease and good going of the horse depend less upon the shape of the shoe than is usually imagined; and, supposing the nails to be driven with equal precision, this figure would be even preferable to a large proportion of horse-shoes in use at this day. But not to anticipate conclusions which will be better understood when the History is more advanced, we shall observe, that although his "perfect shoe" is so ugly, Master Blundevill has shown, in his plates, a very great variety of figures, comprehending nearly or quite as many plans as are at present known to the generality of shoeing smiths—some for weak and low heels, for false quarters, to prevent cutting, &c.; showing, that however fashions may have varied since his time, but little really new light has been thrown upon the *practice of common shoeing*. Yet his directions are given without any apparent principle or consistency; sometimes directing very injurious measures. The following is rather a favourable specimen:—

"*Of shooing the hoove that hath narrow (or contracted) heels.* Make a trim, light shoe, with a broad web: let the sponges (heels) be so broad as they may almost meete together to defend the heele from the ground, and pearce it all towards the toe, sparing the heele so much as you can; and let the shooe bee long enough towards the heeles, and set it on with eight nailes, like the shooe that fitteth the perfect hoove."

The words "contraction" and "hoof-bound," often occur; and we perceive, clearly, that the same evil consequences resulted from the practice of shoeing, in the sixteenth century, as we find in the present day.

Fig. 2.

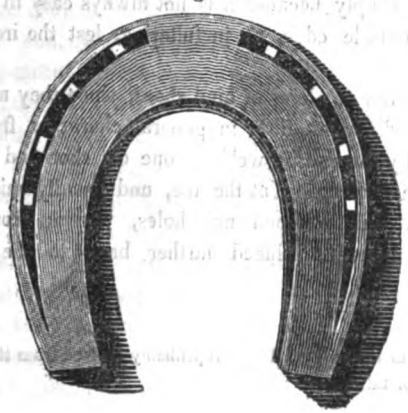


Fig. 2 is intended to represent the common English shoe: it may be

objected to by some as too heavy, by others as too light, according to the various standards they have been accustomed to; but, we believe, it possesses all the characters of that most usually employed throughout the kingdom. It is flat below, and concave on the upper surface, the inner edge being much thinner than the outer; of a more uniform width than the old English shoe; of equal thickness at toe and heel, and the heels usually cut nearly square.

The variations from Blundevill's shoe are considerable; but the chief is the "fullering," * or channel for receiving the nail heads, which appears to be a peculiarity originally English, and to have been adopted within the last two hundred years; as no shoe, before that date, nor any foreign shoe whatever, to this day, is to be found with this peculiar groove or fullering. It is sometimes carried all round the toe of the shoe, or quite to the heels, at the pleasure of the workman. In all Blundevill's fore shoes the nail holes do not reach so far back to the heels as in our common shoe; and they are carried completely round the toe, which practice is still adhered to sometimes; but the difference is not essential, as will be explained hereafter.

A more important difference in the English shoe, from all others, is, that the nails are usually placed much nearer the outside rim, so that the edge seldom projects beyond the wall of the hoof, and is often set within it, to the injury and destruction of such feet as are so abused. To make a *finely* fullered, or, as it is delusively called, a *neat* shoe, is the baneful pride of our workmen.

Stamped shoes, however, are still very often used, especially behind and for draught horses; and, as the smiths say, "they are better for the foot," simply because it is not always easy to drive the stamp so near the outside edge, as in fullering, lest the iron should burst out.

We have given no plates of hind shoes, since they are of minor importance, and differ but little in general character from each other, —being usually formed by welding one old shoe and a half together: they are made very strong at the toe, and usually with thick calkins at the heels, and stamped nail holes, varying from six to ten in number, and generally placed farther back to the heels than the fore shoes.

* The name of the tool "fuller," is probably derived from its effect of making the shoe wider or fuller.

Fig. 3.

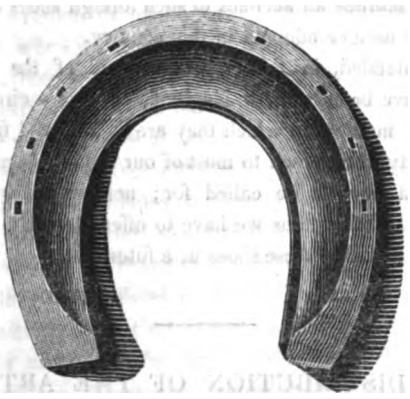


Fig 3, the "seated shoe," was probably not often made a century ago: it has been recommended by Osmer, J. Clark, and Mr. Moorcroft; and is the most popular and general variety from the common shoe. The difference is only in the upper surface, next the foot; about one third of which, on the outside, is made perfectly flat for the wall of the hoof to rest upon, and is called the *seat;* all within this is hollowed out, or deeply concaved (see fig.), with a round-faced hammer.

It has been apprehended, that this flat seat was of very great importance to the bearing of the foot; and, certainly, it is preferable to the sloping upper surface of the common shoe, but requires more trouble to make it well, and the alteration does not effect any change in the principle; therefore is of little real moment, as not affecting the final result. The concavity of the seated shoe was also considered as highly useful in preventing any pressure of the iron on the sole, which is always to be guarded against; but this point may be obtained with much less trouble, and its value is counter-balanced by the danger which exists, of the *seat* being left too narrow to receive the wall; in which case the horn is often broken and injured, and this not unfrequently happens with weak feet, in injudicious hands.

This shoe has been several times warmly adopted by different Veterinarians and gentlemen, particularly under the name of the Blomfield, or Carlton House shoe; but no particular advantage has been found from its use, we may infer, from its being generally laid aside after a short trial. It has a very neat, handsome appearance, and on this account obtained admirers; but no proof was ever brought of its utility.

These are the three shoes which may be considered peculiarly English: our next will embrace an account of such foreign shoes as have been at any time much used or adopted in this country.

It is not intended, in this cursory account of the various horse-shoes which have been used in England, to give a circumstantial description of the manner in which they are forged and finished, as the details are pretty well known to most of our readers, unless, at a future time, it should seem to be called for; neither are we at liberty to advance all the observations we have to offer, so early in the account, but must recur again to these shoes at a future time.

ON THE DISTRIBUTION OF THE ARTERIES IN THE HEAD OF THE SHEEP.

BY DR. J. C. I. BARKOW.*

The arteries of the head of the sheep are very remarkable in their distribution. The common carotid gives off collateral branches before it divides into two principal trunks, from which all the other branches are given off. The branches which pass off before the principal bifurcation are—the superior thyroideal, the ascending pharyngeal, the occipital, the lingual, the posterior auricular, and a parotidean. The external maxillary artery is wanting, and its branches are furnished by other vessels. The common carotid bifurcates into the facial and internal maxillary; the facial furnishes the anterior, auricular, and the temporal; it is continued under the name of transversalis faciei, which gives off the coronary artery of the upper lip. The inferior coronary is furnished by the mental, which is itself a branch of the internal maxillary. This latter is a very important artery in the sheep, for it not only furnishes branches to the face, but also all those which, in man, come from the internal carotid. It gives off, on each side, three branches, which penetrate separately into the cranium, where they ramify in the *rete mirabile*; from which they pass to form the simple trunk of the cerebral arteries, which communicates with the basilar, and is distributed to the brain. As there exists no internal carotid, the carotid canal is wanting; the sulcus, which is observed on the sides of the sella tursica, and which resembles the carotid sulcus in man, contains only the inferior cerebral vein, which passes from the cranium by the spheno-petrosal fissure.

* Nov. Acta Acad. Natur. Curios. tom. xiii. pars i.

The ophthalmic artery is also a branch of the internal maxillary, and furnishes the ethmoidal artery and the posterior ciliary; the central artery of the retina, on the contrary, arises from the trunk of the cerebral artery, when it has passed from the *rete mirabile;* the olfactory nerve, also, receives some very small branches from this vessel. The internal maxillary furnishes the inferior maxillary to the face, which receives the name of mental, after having passed from the mental foramen; the superior alveolar and infra-orbitar, which gives off a pterygoid branch; it terminates in bifurcating into two branches, which receive the names of pterygo-palatine and spheno-palatine.

With respect to the branches which pass off from the common carotid, it is necessary to be observed, that the ascending pharyngeal and the occipital arise from that artery before the lingual; and with respect to the superior maxillary, the first cerebral branch arises between the inferior maxillary and superior alveolar; the two other cerebral arteries, and the ophthalmic, are situated between the superior alveolar and infra-orbitar.

HORSES OF DONGOLA.

This kingdom is situated at near 400 leagues from Cairo, and forms a portion of those vast countries that approach the centre of Africa, and which the ancients knew under the name of Ethiopia. The breed of horses which is reared there, is of Arabian extraction. Other breeds, also, of Arabian origin may, in some respects, possess a superiority over these in point of shape; but none are more quick, nor more indefatigable in running, and none are rated at a higher price in the markets of the East. It is not rare to see these horses fetch as much as 50 and 60,000 Egyptian piastres. A traveller in that country states, that the tribes who live on the banks of the Nile, above the cataract of Assenan, have so passionate an affection for these animals, that when they wish to put an end to the wars which they wage, the resignation of a Dongola stallion is often one of the principal stipulations of their pacific arrangement. Reared in burning plains, the horses of this part of Africa are very sensible to cold; and some which have been transported into Greece, have been observed to tremble with cold under the sun of Constantinople.

OBSERVATIONS

ON THE

AMPUTATION OF THE PENIS IN THE HORSE.

(Read before the Royal Academy of Medicine, for the Division of Surgery, in the Session of the 26th January, 1826.)

BY M. BARTHELEMY, JUN., M. V.

Senior Professor at the Royal College of Alfort.

THE amputation of the penis in the horse is one of those operations in veterinary surgery which is rarely performed: I only know of one case, the details of which have been recorded in *veterinary annals* by one of the members of this learned Academy.

The horse upon which M. Huzard operated, had the penis covered with sores and warts, which he considered incurable. The mode of operating which he adopted was the ligature, having previously placed a metallic canula in the urethra. On the eighth day, mortification of the part being complete, a section was made, and the canula withdrawn: the animal was cured.

The subject of the operation which I am about to report, was afflicted with a relaxation, or kind of paralysis, of the penis, supervening upon a severe attack of gastro-enteritis. The depending portion of the penis was about eight inches long; it was slightly swelled, but presented no other trace of inflammation: with exercise the swelling increased, and there then appeared a little heat. The urine was passed as usual.

This paralysis had resisted all the curative means which it had been possible to employ in such a difficult case; the indocility of the horse obliged me to give up palliative measures. Considering this paralysis incurable, and the animal being quite unserviceable in this state, I determined on amputating the penis, an organ which, besides, is of no use in the gelding.

I had choice of two methods,—the ligature, which had been practised by M. Huzard, and the knife. The difficulty of approaching the animal, and some untoward symptoms having followed the use of the ligature in the former operation—viz. colic, loss of appetite, fever, inflammation of the abdomen, the putrid smell of the part, &c., induced me to prefer amputation as the most expeditious and least pain-

ful means: by this method, I had only the hemorrhage to fear, but it might be dangerous; I had to operate on an erect organ, which, in size, nearly equalled the arm, and I could neither depend on tying the arteries, nor on cauterization,—the retraction of the remaining portion of the penis into the sheath, immediately after the section, rendered this operation impossible. I could neither be assured nor guided by precedent; this operation had never been practised in veterinary surgery, but I was convinced that the hemorrhage would not be mortal, because the arteries of the penis are only distended during erection; I therefore introduced into the canal of the urethra a pewter canula, the size of a little finger, and nine or ten inches in length; moderate pressure, by means of a flat ligature, was made upon the penis, about an inch above the portion to be taken away, in order to prevent, as much as possible, the flow of blood which appeared to be inevitable after the section; the canula was to be afterwards kept in the urethra by means of a band which went round the body of the horse: it was intended to prevent the contraction of the urethra during the cure. All this being done, and the animal properly secured, I caused an assistant to grasp the penis at the ligature, and made the cut with a strait bistoury; but the moment it was effected, the remaining portion withdrew immediately within the sheath, escaping at once from the hand of the assistant, the ligature, and canula. It was impossible to replace the canula. There was no hemorrhage at that time, but during the five days that followed the operation, the bleeding manifested itself, although of short duration, every time the animal tried to stale. This intermitting bleeding evidently depended upon the partial erection of the penis, which, in the horse, always precedes the emission of urine: the quantity of blood that the horse lost in this lapse of time might, perhaps, be rated at fifty pounds. The health of the animal was not at all affected, and eight or ten days after, he was in a state to resume his labour. All his functions were performed, as in the natural state, until towards the thirtieth day, when the passage of urine became, from day to day, more difficult; the animal passed a small quantity with painful efforts, which was thrown upon the abdomen in a small intermittent jet; and the skin which covered the abdomen, constantly irritated by the urine, became extensively inflamed, and all the hair came off the part. By examining the penis, the cause of retention became evident: the wound, in healing, had drawn in the skin of the penis over the orifice of the urethra, and the urine could only escape by a crooked sinus, of which the exterior opening was at the centre of the cicatrix,—that is to say, five or six lines above the

extremity of the urethral canal. There was no time to lose; the retention of urine being nearly complete, the life of the horse was in danger: it was necessary to enlarge the opening, and to introduce a canula until the part healed.

This operation, simple in appearance, was, however, impracticable: some attempts that I made to introduce a flexible pewter staff into the opening, were unsuccessful—the retraction of the penis opposed to it an insurmountable obstacle. Obliged to give this up, I determined to open the urethra four inches from the ischial arch, but new difficulties presented themselves. I could not be guided in this operation, either by a sound, as used in man for the operation of lithotomy, nor by a column of water introduced into the canal, as we practise for the same purpose in the horse. The slight resistance offered by the urethra; the thickness of the cellular membrane which surrounds it; its appearance altogether, nearly like the *perineo-urethral* and *coccygio-sous-pineen* muscles;—finally, the want of practice in this operation, rendered this first attempt nugatory.

Far from being discouraged by this failure, I immediately made new trials upon several living horses in the slaughter-houses of Montfaucon. After having thus practised myself in this operation, I came to execute it, without any difficulty, upon the sick subject: I made a new incision between the first and the ischial arch,—that is to say, two inches below it. There the urethra, situated less deeply, was more easy to find; and, by the aid of a canula, the bladder was immediately emptied of the great quantity of urine which distended it; directly after this canula being withdrawn, I introduced into the urethra a pewter sound, about sixteen inches long, and nearly the size of a little finger; I directed it towards the obstacle which prevented the flow of urine, and, whilst an assistant held it in this position, I made a large incision with a convex sharp bistoury over the cicatrix which prevented the appearance of the sound in the sheath. An œsophagus tube was substituted in the place of it: its lower part was wrapped round with strips of linen, and covered over with white wax, which increased it gradually in size to the end, where it was attached to four strings; which retained the tube in its proper position, passing through two loops of waxed cord which pierced through the sides of the sheath in the manner of setons.

By this simple plan, the expulsion of the urine was freely performed through the canula, and by the superior opening of the canal of the urethra; but this quickly healed up, and the animal was again put to work.

The only treatment that I employed, consisted in keeping it clean; but a month after the operation, the skin of the sheath which retained the two loops of cord was cut. The canula was no longer manageable: as I did not consider that the inferior orifice of the urethra was sufficiently cicatrized to retain the canula, it was fixed to the lower and central part of the sheath by a single loop of waxed cord, but the canula, softened and too flexible, came partly out, and made the horse kick in a dangerous manner. Obliged to abandon this plan of retaining the canula, I substituted two flexible pewter tubes, about the size of a writing pen, which I placed on each side of the sheath, above the torn portion, by two stitches of suture, and near enough to the abdomen; the ends were reunited by twisting them: these metallic rings were of the figure of common ear-rings, and they had the advantage of occasioning hardly any suppuration, and of not cutting the skin which held them.

The canula remained in this position for two months, and we only withdrew it every two or three days to clean it. The animal continued his full work all the time he carried this apparatus; and for nearly two years since this operation has been performed, he has staled exactly as other horses, with this only difference,—that the penis is exactly of the same length with the sheath; at other times, being retracted within the sheath, he urines as other horses do at times, especially those of the Dutch breed. The sheath has much diminished in size; it is almost wasted away.

From the details which I have already exposed, I may conclude—1st, That the amputation of the penis can be made in a gelding without having anything to fear from hemorrhage, and without the health of the animal being changed; 2dly, That to avoid any obstruction in the canal of the urethra, we ought to place a small pipe in the canal of the urethra, and sustain it by two pewter or tin rings to the lateral parts of the sheath, by maintaining it in this position during two months at least.

It may not be useless to remark here, that to avoid the difficulty of placing the pipe after the operation, which arises from the laxity and redundance of the sheath, it might be better to cut the penis at twice. By the first incision, which should be made posteriorly, the tube of the urethra is divided transversely: the penis, now out of the sheath, would give a facility for placing the canula; and we ought not to terminate the amputation till after this instrument should have been fixed by the rings.

ON FEEDING HORSES WITH BREAD.

FROM THE

Recueil de Medecine Vétérinaire.

THIS plan is stated to be general in Silesia; and, after the experience of four years, an intelligent agriculturist is convinced of its utility, on the double account of economy and of health.

This agriculturist made a bread with thirty bushels of oatmeal, and an equal quantity of rye flour; to which he added a portion of yeast, and nine bushels of potatoes reduced to a pulp. With this bread he kept seven horses, each having twelve pounds a day in three feeds; it was cut into small pieces, and mixed with a little wetted chaff. Before this, he gave to the same horses six bushels of oats per day, independent of the necessary quantity of chaff and hay. By this means he saved, in twenty-four days, forty-nine bushels of oats; and, during the whole of the time, the horses did their usual work, appearing in better condition, more healthy and active.

INOCULATION FOR THE STRANGLES IN ITALY.

FROM THE

Recueil de Medecine Vétérinaire, February 1828.

M. TOGGIA, jun., in a pamphlet which has just fallen under our notice, entitled *On the Strangles, and the Utility of Inoculation in this Disease*—Turin, 1826, announces that, in April 1823, being then Veterinarian to a stud of horses, he inoculated eight healthy colts with *the strangles in its second stage;* and, afterwards, six other young colts, with the nasal matter taken from the first.

Four days after, there was observable, in some of them, a slight cough, followed, first, about the seventh day, by a small discharge of mucous matter, which ran more abundantly from the nostrils when the animal coughed; secondly, with inflammation of the glands of the neck, towards the seventh or eighth day; and, at last, towards the fourteenth day, by the opening of the abscesses which resulted from that inflammation.

He considers these symptoms which he has observed, however mild in their appearances, as sufficient to prove that by this inoculation, he had communicated the strangles to the colts which had been submitted to it; and founds, upon this circumstance, the conclusion, that the strangles is a contagious affection, *sui generis*, and susceptible, therefore, of transmitting itself the same as by inoculation. The strangles, which he says he has thus communicated, shows itself always in a mild and benign form.

Since these first trials, and during a space of two years and a half, he inoculated, in the same manner, more than twenty-four colts. After these numerous experiments, he is more and more confirmed in the belief that such inoculation is proper to preserve colts from the attack of spontaneous strangles, as none of those which have undergone this operation have since shown (and he has watched them carefully, even to the age of five years) any of the symptoms of strangles.

Finally, M. Toggia regrets, that having quitted, to pass to another post, the stud where he made these experiments, his new duties have not only prevented him from repeating them, but also from submitting colts already once inoculated to the counter proof of new and direct inoculation, to assure himself if they have really acquired by it an exemption from subsequent attacks of strangles.

He calls the attention of practitioners to the results he thinks he has obtained, which, if they should be verified by greater experience, would oblige us to consider the *strangles* as analogous, under many points of view, to the *small pox* in man, and to the *scab* in sheep.

We shall, ourselves, abstain from comments upon this subject. We offer these experiments to the attention of Veterinarians, who, by their particular opportunities, are in a situation to repeat them, and pronounce on their value.

ROYAL VETERINARY COLLEGE CASES.

A Bay Gelding—Seven years old.

March 27, 1828. Admitted, with inflammation of the lungs.

Discharge from the nostrils, cough, increased action of the system, great languor, &c.

Directed to be placed in a loose box; to have six pints of blood taken from the jugular vein; to have two drachms of aloes given in a ball, and a mash diet. Pulse 40.

28. Appears worse, the bleeding to be repeated: pulse increased to 60. Is directed to be placed in an open shed, the legs to be bandaged, and rowels to be made in the front of the chest.

29. Apparently relieved; to continue the mash diet, and give, in a ball, calomel one drachm, turpentine three drachms. Pulse at 50.

30. The pulse increased to 60; the bleeding directed to be repeated, and two drachms of aloes to be given in a ball. Common clysters to be frequently injected. The rowels to be dressed with the turpentine ointment daily.

April 1. One ounce of infusion of cantharides ordered to be rubbed into the fore part of the chest, and to have one drachm and a half of aloes given in a ball, the bandages continued to the legs, and warm clothing.

2. To continue the use of bandages as before, and have two drachms of aloes in a ball.

3. Appears rather better: continue the bandages; the rowels to be kept discharging. To have half an ounce of turpentine, given in a ball.

5. The hind legs are swelled; a rowel is directed to be made in each thigh, and to be dressed with turpentine ointment. The bandages to be continued.

8. The swelling is much diminished, and the horse better.

12. Placed in a stall; the rowels in the thighs removed; allowed common diet of hay and corn.

15. Discharged—cured.

INFLAMMATION OF BOTH FORE FEET.

An Aged Bay Gelding.

March 18, 1828. Admitted, with *lameness*. Directed to be bled from each foot, six pints.

To have *spring* shoes applied, and poultices to the feet at night; a mash diet.

19. Ordered to have six drachms of aloes given in a ball, and the poultices applied at night.

20. To continue the poultices: ball has operated.

25. A seton *run* through each frog.

27. Setons to be dressed daily with the turpentine ointment.

April 6. The size of the setons to be diminished, but dressed as before, and the poultices to be discontinued.

10. Setons directed to be removed.

14. Discharged—relieved.

INFLAMED HOCK.

An Aged Bay Gelding.

March 30, 1828. Admitted, with lameness, great heat, and the part enlarged. Directed to be bled from the toe, to the quantity of eight pints; to have a staple shoe applied, and the hock to be kept constantly cold with a poultice. To have mash diet.

31. To have a ball with six drachms of aloes; and continue the use of cold applications and staple shoe, till otherwise directed.

April 1. The ball has operated well: directed to have the hock kept continually wet with a solution of salt.

5. Taken away—relieved.

A Grey Gelding—Six years old.

March 15, 1828. Admitted, with an enlarged hock: the part feels hot, and is much swelled, and the animal lame. Was directed to have a ball given him of five drachms of aloes; to have mashes, and the part to be kept constantly wet with goulard water.

16. To continue the cold application till otherwise directed; the ball has operated.

20. To be shod, behind, with a thick heeled shoe.

21. A solution of common salt to be applied to the hock, instead of the goulard water, till otherwise directed.

April 3. *Springs* are directed to be added to the shoe, and to continue the use of salt and water.

5. A sufficient quantity of infusion of cantharides directed to be rubbed round the hock.

6. The blister has risen, and discharges.

10. Discharged—cured.

CATARRH.

A Grey Gelding—Eight years old.

March 25, 1828. Admitted, with a cough, and discharge from the nostrils; refuses food. Directed to be placed in a loose box, to have mashes, and a ball with three drachms of aloes, given him.

27. Appears better. Directed to continue mash diet.

28. To have two drachms of aloes in a ball.

31. Discharged—Cured.

INFLAMMATION OF THE LUNGS.

A Bay Gelding—Seven years old.

April 3, 1828. Admitted, with a quickened pulse and breathing, the mouth hot and dry; conjunctiva and mucous membrane of the nose inflamed. Directed to be placed in a cool box, and clothed; to have six pints of blood taken from the neck: two drachms of aloes given in a ball, with three of turpentine: mash diet.

4. A little relieved; a rowel ordered to be made in the chest, and the cloathing taken off.

5. Rowel to be dressed with turpentine ointment, daily.

7. Going on favourably; to have corn with the mash.

9. To have two drachms of aloes given in a ball.

12. Allowed the usual quantity of hay and corn.

14. Ordered three drachms of sulphate of iron, in a ball, every day.

16. Discharged—cured.

THE APE.

An ape, which Blumenbach observed for more than a year together, would manage the wood for the stove, and put it in with as much judgment and economy as a cook-maid. He was very fond of the fire, like all apes, and would at times singe himself, and afterwards roll in the snow, and then return to the fire. He was often at the college, where he used to examine the specimens with a most laughable imitation and grimace. Once he swallowed a piece of arsenic, large enough to poison ten Kalmucks;—it only produced a diarrhœa, and he was quite well again. A work on insects was once lying on the table: this fellow had studied it with great gravity for an hour. When ———— came into the room, he found that he had, with great address, pinched out all the beetles of the great plates and eaten them, mistaking the pictures for real insects.

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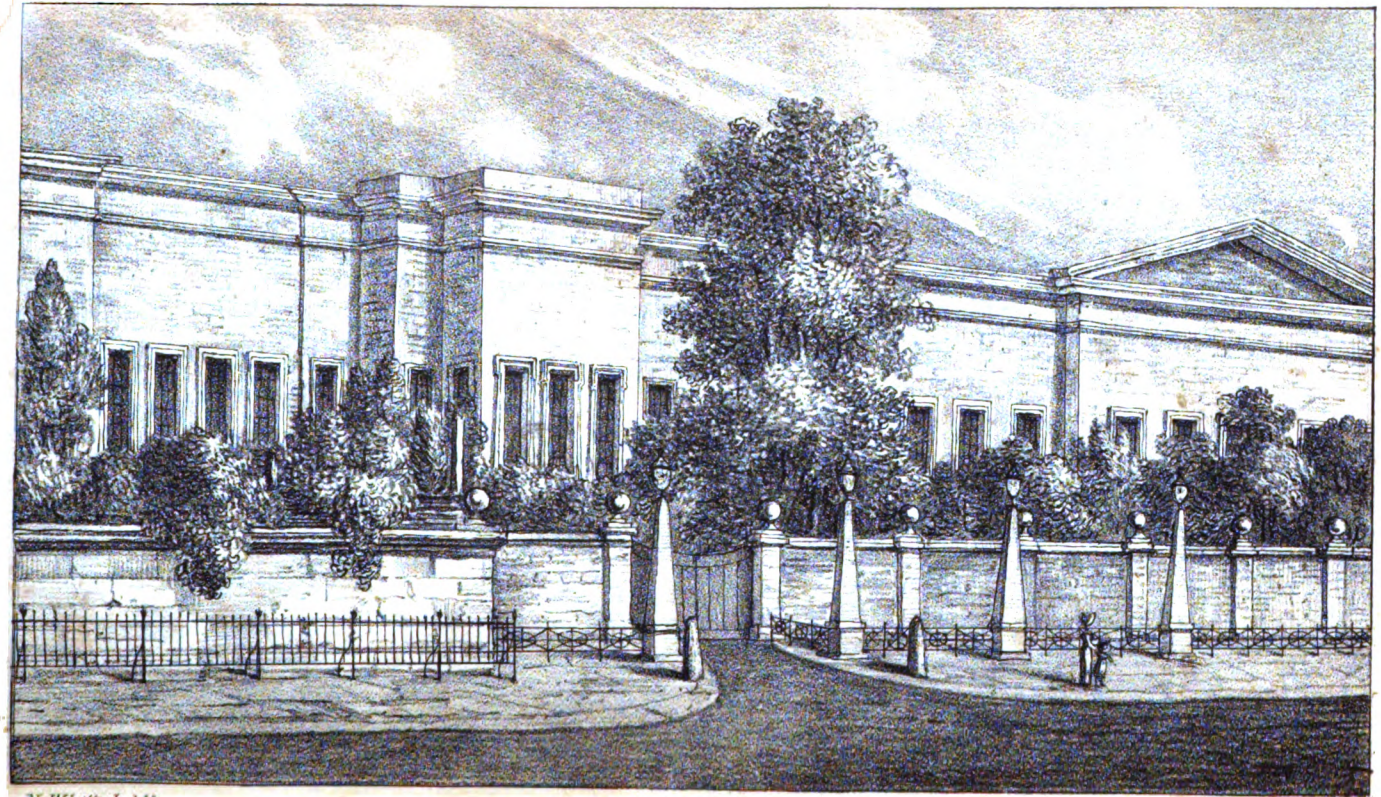

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NEW LIBRARY OF THE BRITISH MUSEUM.

THE

FARRIER AND NATURALIST.

No. 6.] JUNE. [1828.

THE LIBRARY OF THE BRITISH MUSEUM.

THE class to whom our publication is more particularly addressed, has not, we believe, been heretofore remarkable for a very intimate connexion with literature in general, or even with that particular branch of it which is especially requisite and useful to the Veterinarian —Natural History. Now, as this circumstance has arisen, in a great measure, from the uninviting manner in which these subjects have been presented to those of our readers whose habits and pursuits have debarred them from elaborate studies, we have some reason to hope that the plan we have formed for the future conduct of this Journal may, in some degree, remove the difficulty, by a judicious selection of such objects from the vast field of animated nature, as may best suit the wants of our readers, and lead them to take an interest in a science so well deserving and demanding their attention.

As frequent reference will be made to the splendid museums and private collections of this and other countries, we shall take an early opportunity of giving their history, origin, and extent; and particularly to introduce our readers to the contents of that grand national institution, the British Museum.

The New Library represented in the engraving, is a building more noble in its objects than in its appearance; it contains treasures almost unknown in the sciences to which we are devoted, and many that may enrich our future pages. The exact number of volumes within its walls is not easily known, but a catalogue is now in progress, the execution of which will occupy some years.

LAMENESS IN HORSES.

COLLEGE DOCTRINES.

THE necessity of a radical reform in the present practice of horse-shoeing is becoming daily more apparent, even to the most careless observer. For many years past, the most experienced among horsemen and sporting men generally, have been unsuccessfully seeking for the true principle of shoeing, which, it is tacitly admitted, lies somewhere; though, at present, we regret to say, out of sight—at least to them.

The common system is ruinous, yet how few have attempted to expose its pernicious consequences. We appeal to the sign-boards of our friends, the farriers, where every man may see, painted in large letters, "*Horses Shod on new (or the newest) Principles;*" more often —"*On improved or approved Principles;*" while some less prejudiced, or perhaps convinced of the general futility of these pretended alterations, which are usually found to mean nothing, are content to shoe "*on any principle that may be desired, or that may be required by man.*" Some do it "*agreeable to nature;*" some, on "*French or English Principles;*" and not a few young Collegians have "stuck up" their intention to use "*Professor Coleman's Patent Frog Shoes.*" Yet these "squeezers" are not used,—and why so? Because the public have voted them, with much good sense, not only useless but injurious. In this dilemma, much good may be expected to result from the establishment of a liberal Journal expressly devoted to subjects of this nature; and though we are not exactly in the situation of a contemporary, who declares that, "*without support, his literary existence must speedily terminate,*" yet we shall be ever glad to receive, and ready to insert, the observations and arguments of all parties, which may tend to the fair discussion of the important question of shoeing; in fact, on all questions connected with Veterinary Science: and our own exertions shall not be wanting to develope the truth, and remove that mass of humbug and deception which at present involves the subject of horse-shoeing, no matter under whose authority it may be fostered.

In the Sporting Magazine for April last, are some observations on the various breeds of horses in the United States. The article concludes in the following words, which we shall take the liberty of transcribing, as they strongly support our views of the mischief universally resulting from the common practice of shoeing:—

"I wish from my heart, for the benefit of mankind at large,* that Nimrod had spared more time to see if—notwithstanding all the discouragements—he could not have found out something more than we now know upon the prevention or palliation of lameness in the feet. *This is the deep and eternal curse upon good horseflesh in every country.* All that the writer gives us on this subject may be thus stated;—that there are as many unsound feet with round, smooth, black, and shining hoofs, as those which are evidently contracted. In this part of the world, hoofs as broad as long, generally go the oftenest, excepting the Canadian's, who has a high, round hoof, which is always sound. Further, that when the foot is really diseased, the only remedy is to knock the animal on the head. In the last conclusion, most persons born before him, of much experience in horseflesh, have probably anticipated him. In the first, I allow, that many hoofs retain a tolerably circular form, after the foot is incurably diseased; but I disagree with him in thinking that where a hoof is of very oblong shape, though it does remain sound, which is the commonest occurrence in the world, it is not contracted from the effect of the iron. In the sandy parts of the southern States, horses are never shod, and their hoofs are generally pretty nearly of a circular † form; and if they very much depart from it, it is to be wider than long.

SEPTENTRIONALIS."

The Americans are an acute and observing people, and Septentrionalis has given us a string of facts demanding the serious consideration of those who are of opinion that it is our English hard roads, or fast paces, or hot stables, that render the best horses cripples before they have reached maturity;—an opinion from which we altogether dissent; but we adduce facts mentioned by Septentrionalis, in direct support of our doctrine, that it is the fixed iron shoe which produces contraction; and he has arrived at the same conclusion, evidently from a similar course of reasoning. Horses never shod, he has observed, never have contracted feet, though exposed to stable heat, and often to hard roads, as on the mountains, and on the sun-baked tracts; while, on the contrary, wherever horses are shod, their feet become contracted, ossified, or deranged in structure. He has not fallen into the English error of supposing that shoeing is not injurious, because it does not always produce precisely the same effects on all feet; for there may be great disorganization and disease without much contraction; and such cases, we shall hereafter show, are referable to the same cause.

* And of the poor horses, he might have said, for surely their sufferings deserve some consideration as well as our losses.—*Ed.*

† The natural foot of the horse is not circular, though it is commonly supposed so.

If Nimrod knew as much of the natural unshod foot in all its stages, points, and bearings, as his American correspondent, he would not mistake a tolerably circular foot for that of the natural standard; or because it was not absolutely oblong, would he suppose that no contraction existed. "It is," says Septentrionalis, "the curse of good horseflesh in every country. The Canadian* horse alone preserves sound feet; he is a cart-horse (or short, strong-jointed cob) of fourteen hands, of *French descent*, and in trotting describes a circuitous line in the air with each of his fore feet," not the straight forward pounding trot so common in this country.

But we have not transcribed these passages for the sake of making our own comments, but in order to introduce an important document which evidently emanated from head-quarters, and appeared in the Sporting Magazine for May. As official articles are scarce now-a-days, we shall present it to our readers with no other alteration than a little weightier emphasis on certain remarkable parts.

"*On the Prevention and Palliation of Lameness in the Feet of Horses.*

"SIR,

"YOUR correspondent SEPTENTRIONALIS, in the last Number, laments that there should be entailed on this noble animal,—and that through the ignorance of man,—the dire calamity of *foot lameness*. On this subject the following practical observations, drawn from professional experience, are at the service of the sporting world.

"The two principal causes of foot lameness are, contraction and concussion. To such a beautifully complex piece of mechanism as the foot of the horse, the present mode of shoeing,—that of permanently fixing it in close contact with an unyielding piece of iron,—must ever be an act of extreme violence; and the wonder is not that so many horses are lame, but that there are any horses that are sound. The fact is, there are few which have done much work that are not lame in an incipient degree, though perhaps their owners do not know it. But the non-elastic nature of the iron shoe is not the only thing to be regretted. The evil is greatly aggravated by the unscientific application of it to the foot; nor can we ever hope or expect any other result than numberless cripples, so long as the management of the foot is committed to persons totally unacquainted with the nature of its structure and functions. The foot is furnished with more than a thousand springs, most of which act obliquely from the coronet downwards; the remainder horizontally. The most important of the latter is the horny

* An objection to our general principle will probably be made, in consequence of this exception; but let it come, we cannot spare time to forestall it; for there is a long chain of false reasoning extant upon this point also, which it will require some labour to remove.

sole. So important is this, that if it be thrown out of use, the elasticity of all the others will be rendered null and void. It is convex above, and concave below; and its healthy action is to descend from the pressure applied to it by the pastern and coffin bones, and, in consequence of that descent and convexity, to expand. By its descent, it allows of the elongation of the five hundred sensible laminæ; and by its expansion, it keeps open the lower circumference of the crust and heels. It becomes, therefore, matter of infinite importance, that this spring—the horny sole—be kept in its natural healthy state; viz. thin, and consequently pliable, that it may descend, expand, and thus prevent contraction, which, as I have said, is one principal cause of foot lameness. Its unhealthy state is that of being morbidly thick, hard, and inflexible, either too concave, or in the extreme of convexity, as in pumiced feet.

"An idea is prevalent, that contraction is *the* principal cause of lameness; but this is a mistake: for where there is one horse lame from contraction, there are twenty lame from concussion. The free descent and elasticity of the horny sole will also contribute to prevent this disease, concussion; but its prevention mainly depends on allowing the *newly discovered and important function* of the posterior parts of the foot to be performed. By the posterior parts of the foot are here meant, all those posterior to the heels of the coffin bone—viz. the quarters of the crust, bars, heels of the frog, and lateral cartilages. All these, in an unshod foot, from their attachment to the horny sole, have a considerable motion downwards: and to allow of which, when shod, the shoe should always be laid off the heels and quarters; that is, there should be a space left between the crust and shoe sufficient for the introduction of a picker. The shoe so laid off will then, in fact, act like a tip (which is the nearest to perfection of all shoes, so far as the functions of the foot are concerned), with this additional advantage, that the heels of the foot will be prevented from wearing away so fast as with tips. This, then, is the other grand cause of lameness—concussion to the sensible parts of the foot; produced from the natural descent of these posterior springs being prevented, by their resting in close contact with the shoe in ordinary shoeing; and hence it is that there are so many horses lame, notwithstanding they have good open circular feet. It has been thought that contraction is produced by the nails; but it appears that the tendency of these will be, *at worst, only to keep the hoof of the same size and shape as the shoe to which it is fixed.*

"The causes of contraction then are:—First, a morbidly thick sole, which will not descend and expand the heels and quarters. Secondly, the frog being pared away, consequently elevated from the ground, and not allowed to come in contact with it, as it ought to do at each step of the animal. Thirdly, *heat*, by which the crust is contracted, and rendered hard and brittle—*hence so many horses turned out to grass in summer come up lame.*

"The causes of concussion are that the posterior springs of the foot are deprived of their natural functions of descent, by their close approximation with the shoe, and also by the want of elasticity in the horny sole.

"To counteract the effect of heat in the stable, the horse should stand upon wet straw, strewed under his fore-feet two or three nights in a week. This will render his *crusts elastic and tough;* and the less a horse, with a predisposition to have contracted feet, lies down the better; as, when he lies down, all pressure is removed from his frogs, which are the grand active powers to keep open the upper part of the crust next the coronet, and resist the contractile effects of heat.

"I am, Sir, yours, &c.

"A VETERINARY SURGEON."

Whether this letter was penned by Professor Coleman, or written under his eye by an immediate dependent, is very immaterial; but one thing is certain respecting it, that it embodies the latest hypotheses and *pro tempore* doctrines of that ingenious teacher. What a fine thing for science is writing, and what a noble invention is printing! We have here, in a clear and tangible form, within a page and a half, the substance of all that a pupil will hear insisted upon by the Professor during a course of lectures; and that which may appear to him as delivered *ex cathedra*, hopelessly obscure. But in this condensed state, it happily admits of being easily comprehended and refuted.

When it is considered that Mr. Coleman has been above thirty years advocating the ridiculous doctrine of frog pressure, and keeping out of sight the influence of the fixed shoe and nails in producing lameness,—when all this is remembered, it would be but justice to give him credit for such liberal admissions as the following, if it were not apparent that they have been unwillingly forced from him, and that he is now endeavouring to avoid, by more *ingenious* sophistry, the inference which must follow:—

"To such a beautifully complex * piece of mechanism as the foot of the horse, the present mode of shoeing,—that of permanently fixing it in close contact with an unyielding piece of iron,—must ever be an act of extreme violence, &c.; and the fact is, there are few horses which have done much work, that are not lame in an incipient degree."

This is a very sufficient acknowledgment of the evils of that system over which Professor Coleman has presided; and as a matter of fact, it is extremely valuable for our purpose.

"But the non-elastic nature of the common shoe" (though admitted to be the chief and grand evil) "is not the only thing to be regretted. The evil is greatly aggravated by the unscientific application of it to the foot; nor can we ever hope or expect any other result than numberless cripples, so long as the management of the foot is committed

* Simple enough, Mr. Coleman, when clearly understood.

to persons totally unacquainted with the nature of its structure and functions."*

"The foot is furnished with more than a thousand springs." Here we come upon anatomical ground, in which those who are not well acquainted with the foot will take but little interest; however, the subject shall be fully discussed, and we pledge ourselves to give the outlines of its construction at an early period; and, in the meanwhile, it will be easy to point out enough of inconsistency in this letter to illustrate the absurdities of Mr. Coleman's doctrine.

The letter is an abstract, we beg to observe, of the Professor's newly-begotten theory of the "descent of the heels and quarters;" and the shoe he recommends in conformity with it, is, in figure, precisely like the common one, with a short spring welded to its upper surface at the place of the last nail-hole, and extending to the heels. These springs rise from the shoe about one-eighth of an inch, are fitted to the wall of the foot; and intended to be of that exact strength, that when the horse is at rest there shall be room to pass a picker between them and the shoe; but when in motion, they are intended to yield to the weight. Whether they actually perform these functions is another question; at present it is only needful to observe, that the shoe being like the common one, that is, inflexible, such a defence, at best, "will keep the hoof of the same size and shape as the shoe to which it is fixed."

This "unyielding piece of iron" is applied to an organ (the foot) "furnished with more than a thousand springs, the most important of which is the horny sole. So important is this, that if it be thrown out of use" (or its action prevented) "the elasticity of all the (nine hundred and ninety-nine) "other springs will be rendered null and void."

Very well; recollect the foot is fixed by an unyielding piece of iron, "the sole is convex above and concave below, and its healthy action is to descend from the pressure applied to it by the pastern and coffin-bones; and in consequence of that descent and convexity to expand, and by its expansion, it keeps open the lower circumference of the crust and heels."

Now, gentle reader, if you do not at once see the glaring absurdity of this proposition, just imagine a pail or barrel with a convex bottom, which, when pressed upon by a great weight, would, doubtless, expand and burst at the sides, if it were not confined (there's the pinch) by the iron hoop encircling it below, "which will keep it exactly of the same size and shape."

* The farriers would do well to combine and prosecute the author of this *libel*: or, at least, make him prove that *he* understands "the nature of its structure and functions," or that his patent plans have been of public benefit.

Nothing could break down or expand an arch so fixed, but by destroying it; it would be as wise to talk of expanding the convex bottom of a claret bottle by pressure from within. This, then, is the situation of the horse's foot when confined in the common shoe. Alas! it is even so, as fixed as fate; for when "this spring, the horny sole, is thrown out of use," nine hundred and ninety-nine tributary springs are laid aside with it, or entirely destroyed.

But to proceed. "It becomes, therefore, matter of infinite importance, that this spring, the horny sole, be kept in its natural healthy state—viz. thin, and consequently pliable; that it may descend, expand, and, consequently, prevent contraction, which, as I have said, is one principal cause of foot lameness." This means, that it is to be pared until it yields to the pressure of the thumb, which, we can inform the writer, will not cause it to "descend," "expand," and "prevent contraction;" but, on the other hand, to become dry, rigid, and preternaturally concave. "Its unhealthy state is that of being morbidly thick" (which it never will become when the natural action is permitted), "hard, and inflexible, either to concave, or in the extreme of convexity, as in pumiced feet."

Leaving, then, the foot in its fixed state, we come next to the doctrine of concussion, which, in such a foot, our readers will be at no loss to perceive must take place, more or less, at every step of the animal.

"An idea is prevalent, that contraction is the principal cause of lameness; but this is a mistake, for where there is one horse lame from contraction, there are twenty lame from concussion. The free descent and elasticity of the horny sole will also contribute to prevent *this disease, concussion*."

Stop; here we have concussion called a *disease;* and it is said to be partly prevented by "the free descent and elasticity of the horny sole," which we have clearly proved above can never take place with the Professor's shoe. First, then, is a blow, or a beating, or a flogging, a disease? Concussion is no more a *disease* than criticism, though both may cause one.

"But its prevention mainly depends on permitting the *newly-discovered* and *important* function of the posterior parts of the foot to be performed. By the posterior parts of the foot, are here meant all those posterior to the heels of the coffin bone—viz. the quarters of the crust, bars, heels of the frog, and *lateral cartilages*. All these, in an unshod foot, from their attachment to the horny sole" (the lateral cartilages are not attached to the horny sole), "have a considerable motion downwards; and to allow of which, when shod, the shoe should always be laid off the heels and quarters; that is, there should be a space left between the crust and shoe sufficient for the introduction of a picker," &c.

Appealing again to our practical readers, we ask how long this space between the horn and shoe, at the heels, would remain? Not two days, if the horse were worked; as in the case of a bar-shoe for corns, which, however laid off, will eventually come in contact with the bruised heel, and renew the lameness. But the best exposition of this occurs with the new *grasshopper* shoes above described. Either one of two things happens: the spring is too strong to move, and becomes speedily clogged with dirt; or, being weak enough to descend, it is commonly broken off, as in a large number we have seen; and, in this latter case, the space it occupied is not left open, but the horn descends, and the shoe, when taken off, is worn bright by the constant pressure. But it is mere courtesy to argue this point;—not only is the plan decidedly the most futile in practice that the annals of shoeing can show, but the theory on which it is founded is so manifestly incorrect, and betrays such an ignorance of the structure and laws of onuchal parts, that we know not whether most to pity the blindness of its proposer, or to admire his persevering reliance on the infinite gullibility of others. For the present, however, we must be content with denying the existence of any such important function in the foot as he speaks of having *newly discovered:* there is no *natural* action of the heels and quarters of the hoof downwards, which would be in opposition to the course of its fibres; though the steel springs will, undoubtedly, in the few instances where they are not stopped or broken, bend down and rest on the shoe, from the immense weight brought upon them. It is obvious, that though the chief wear is at the toe of the foot, the chief bearing of the weight is on the heels, and no one who has ever seen unshod horse-tracks will be deceived in this; the foot is always level, except at the outside toe; it strikes the ground, flat and fair; and, on a hard road, in stepping paces, the plainest mark left is that of the angles of inflexion at the heels.

"This, then, is the other grand cause of lameness,—concussion to the sensible parts of the foot, produced from the natural descent of these posterior springs being prevented by their resting in close contact with the heels of the shoe in ordinary shoeing; and hence it is, that there are so many horses lame, notwithstanding they have good, open, circular feet."

Concussion has been a favourite and convenient word; but we rejoice to say, it cannot be admitted as a disease,* though it has a morbid tendency which we will endeavour to define. When the heels cannot expand and the sole descend, in consequence of the shoe and nails, which "keep the hoof of the same size and shape as the shoe to which it is fixed," then, when the nine hundred and ninety-nine springs cannot act,

* It is a slight substitution of cause for effect, which, however much practised in the Pancras logic, will, by no means, be tolerated in the pages of this Journal.

there must invariably be a greater or less degree of jar to the whole foot when it meets the ground, dependent on the various degrees of elasticity in different feet.—*This is concussion.*

It may be be familiarly understood, by imagining the effect likely to result from confining our own feet perpetually in inflexible shoes or cases, not of leather, but of wood or iron; or, if an example of more strict analogy be required, we may suppose the cleft of the cow's or deer's foot prevented from separating, by a tip nailed across it at the toe. In all these instances a similar effect would be produced; and when a blood-horse is driven twenty miles in fixed shoes, we may reasonably expect, and shall usually find, that a considerable degree of inflammation is the consequence; it is occasionally acute, but more often chronic, subsiding until renewed by a repetition of labour. Constant inflammation may have many different terminations: the most usual is, that by gradual absorption of the interior elastic parts of the foot, and the horse becoming, sooner or later, a cripple; sometimes the inflammation takes place chiefly in the podophyllæ *(laminæ)*, then the bone sinks, and the horse becomes flat-footed or foundered; often, in cases which Nimrod calls good circular feet, the fixed state in which they have been held has induced ossification of the lateral cartilages; but this, or whatever mischief may have occurred, is alike attributable to the same sufficient cause—inflammation, occasioned by confining an elastic organ in a rigid bond of nails and iron.

A reasonable inquirer need not desire an explanation more in accordance with anatomy, physiology, and the known laws of pathology; yet it does not suit some persons to admit so simple a solution, and it is thus lightly touched upon by the ingenious man in question:—

"It has been thought, that contraction is produced by the nails; but it appears that the tendency of these will be, *at worst*, only to keep the hoof of the same size and shape as the shoe to which it is fixed."

"At worst." It is here insinuated that the shoe and nails are at least innocent; but we must recollect, that while they totally destroy the expansion, they do not so completely prevent the foot, when internal absorption is going on, from contracting upon itself. The horny heels are inflected inwards, and have a tendency at least to converge, when their natural action is destroyed. It is also to be observed, that the shoe is always fitted and applied to the foot (which we assume to be an expansive organ) in its most collapsed state, when the weight is removed; and, besides that, every nail, as the smith well knows, has a decided tendency to bear the horn inwards: these things may be slight, but constant repetition for years makes the effect, at last, of considerable importance.

Besides the poor "morbidly thick sole," which,—mistaking cause for effect again,—is accused as the "first cause of contraction;" the second is want of pressure to the frog; and the third, and most singular, is "*heat*, by which the *crust* is contracted and rendered hard and brittle. *Hence*, so many horses turned out to grass *in summer*, come up lame!"

Now, we have heard of stable-heat having this effect, and always thought it very much exaggerated, and nearly all humbug; but never, till now, that the genial warmth of the sun, in a cool grass pasture, was too much for the tender feet of horses.*

Is the horse a native of the frigid zone? Was he intended to stand for ever in water? or rather, is it not true, that in his favoured clime—the dry and scorching plains of Arabia—contraction is unknown, and all its attendant evils? It were as fair to blame the sun of England for parching his ears, as for *overbaking the crust* of his feet; and in all these lame cases we may safely predict some much more probable cause; but many excuses may be, and are, found, to conceal the truth.

"To counteract the effect of heat in the stable, the horse (we are told) should stand upon wet straw strewed under his fore feet, two or three nights in a week; this will render his crusts elastic and tough!!"

Will it indeed? then, of course, Professor Coleman has *newly discovered* a toughening property in cold water, hitherto, we will venture to assert, unknown to chemists or to medical men: instead of applying proper unguents, which would keep the horn supple and succulent, and preserve it from the drying property of the air, it is to be wetted two or three nights in a week with wetted straw. And, in the intermediate days, what becomes of this *sopped crust*, when exposed to the sun, or at least to the dry atmosphere? Why, every stable-boy knows the consequences of wetting leather or wood,—it invariably shrinks, contracts, and perishes; and the case is similar with horn, especially if its cuticle or epidermis is rasped away by the smiths, which is not entirely prohibited at the College. It is difficult to imagine how Professor Coleman could have arrived at the conclusion, that alternately wetting and drying the hoofs should "render them elastic;" attentive observation (indeed, common sense) will show that it has a directly contrary effect: therefore, this recommendation of sopping the crusts three times a week cannot be the result of experience, but of

* There is something so boldly irrational and unnatural in this and the following propositions, as almost to defy reasoning: if a man would wish to make himself believe that the sun contracts horse's feet, that wet straw toughens them, or that it is injurious for them to lie down when they like, he makes these dogmas matters of pure faith, and forbears to use his reason or common sense.

the special faculty of inverted reasoning in which he so eminently excels, and which has obtained for him, among Veterinary writers, the appellation of *the ingenious Mr. Coleman,* or *Mr. Coleman the ingenious Professor,* &c. Such *ingenuity* is triumphant at a debating club, and too often succeeds in a lecture-room; but it fails when committed to paper, and still more certainly when its hypotheses are applied to practice. We shall have frequent occasion to give examples of this unfortunate faculty, but its possessor is not always to be blamed; it is the result of a peculiar organization; how otherwise can a man persuade himself, as well as others, to a fixed belief in such manifest absurdities as this? We pledge ourselves to prove, that,—taken *inversely,*—nearly all of the Professor's peculiar doctrines are as correct as this rationale of the mode of toughening the hoof by the use of cold water or wetted straw.

"And the less a horse with a *pre-disposition* to have contracted feet, lies down the better; as, when he *lies down,* all pressure is removed from his frogs, which are the grand *active powers* to keep open the upper part of the crust next the coronet, and resist the contractile effects of heat."

A most rational and humane proposition,—to deny an animal his natural repose, and keep him standing all his life, in order to counteract —What?—The tendency to inflammation and contraction in the feet, produced by his horrible iron fetters. But it is in horses where a *predisposition* to these diseases exist; those, according to the Professor, which have light forehands, heads, and necks, and low action: why not say at once, in plain terms, that high-bred horses, from the delicate texture of their feet, are most susceptible of the restraint which the shoe imparts? It is the constant inflammation present in such feet, that makes them feel dry and hot; and which is here falsely attributed to the heat of stables. But why may he not lie down and take his rest? Because, then, "all pressure is removed from his frogs, which are the grand *active powers,*" &c. Pertinacious adherence to old errors is a striking point in the Professor's character; thus, either Mr. Coleman or his hireling concludes, at last, a most curious epistle, with a regular frog pressure salvo. But disagreeing with the Professor, *in toto,* on this point, and intending, at no distant period, to give this notorious College doctrine its due, we must waive remarks at present, and only point out a necessary application of the inverse rule in the above passage. Instead of *active powers,* read *passive organs.* But why, we ask, is it needful to take all this pains, if "the hoof is kept of the same size and shape as the shoe to which it is fixed?" Why labour to obviate contraction, if the shoe prevents its taking place? That formidable *disease, con-*

cussion, is forgotten, and the real evil incautiously admitted, in spite, too, of wet straw and continual standing. But we must conclude with a question:—Did Mr. Coleman ever fairly prove the contractile effects of heat upon the feet of unshod horses? When he has succeeded, by any measures, in contracting colts' feet, once expanded, without nailing iron to them, it will be time to deny the consequences of the "fixed shoe."

NEW VETERINARY MEDICAL SOCIETY.

FOR the information of our professional readers, we have inserted the proposed Rules and Regulations of a new "VETERINARY MEDICAL* SOCIETY;" and although we cannot exactly accord with some of the intended laws, nor consider a science which has existed under the auspices of a College nearly half a century, in its infancy, we nevertheless hail this important step as a favourable omen for the profession. With regard to the laws, we have further to observe, that in our opinion they are by no means calculated to consolidate those conflicting interests which have so long existed in the profession; but we earnestly invite Veterinarians to attend at the proposed meeting, of which we will furnish some account in our next Number.

"At a meeting of Veterinary Surgeons, held at Mr. Youatt's Theatre, May the 8th, 1828, to take into consideration the propriety of establishing a VETERINARY MEDICAL SOCIETY, and afterwards adjourned to, and held on, May the 13th. Present—Mr. W. Goodwin in the Chair; Messrs. Cherry, E. F. Cherry, John Field, Henderson, John Percivall, William Peroivall, Rogers, James Turner, and Youatt.

"RESOLVED,

"That, impressed with the importance of bringing the members of an infant art into more frequent and friendly intercourse with each other, and sensible that, from the free discussion of subjects connected with our practice, the advancement of Veterinary Science must be essentially and rapidly promoted, we do hereby form ourselves into a Society, to be entitled "THE VETERINARY MEDICAL SOCIETY."

"LAWS AND REGULATIONS.

"1. The object of the Society shall be the advancement and diffusion of Veterinary knowledge, by the discussion of subjects connected with Veterinary practice.

* Why not VETERINARY SOCIETY? The introduction of the prefatory word, MEDICAL, is at once useless and absurd.

2. All persons engaged in the study or practice of Veterinary medicine, are eligible to be ordinary members.

3. Candidates for admission shall be recommended by letter, signed by three members, and in the following form :—

(Date.)

"*We, the undersigned, do, from our personal knowledge, recommend Mr. , residing at , as an ordinary Member of the* VETERINARY MEDICAL SOCIETY."

4. This letter, being presented at any weekly meeting, shall be publicly read by the Secretary, and notice shall be given by the Chairman that the ballot shall take place at the second subsequent meeting; and in the intermediate time the name of the candidate shall be suspended in the place of meeting.

5. If, on the ballot, three-fourths of the votes shall be in the candidate's favour, he shall be considered as duly elected.

6. The member thus elected shall receive due notice of his admission from the Secretary; and on the third night of meeting, at the latest, after his election, shall attend, and pay to the Secretary the admission fee of One Guinea: he shall then be introduced to the President by the Secretary, or by one of the gentlemen who signed his *certificate*, and the President shall formally admit him in behalf of the Society: he shall then subscribe an obligation to the laws, by writing his name, in the presence of the Society, in the book that contains the Laws and Regulations.

7. If he neglect to attend and pay his fee within the time specified, the election shall be declared void, unless an excuse, in writing, satisfactory to the Committee, be previously received.

8. A candidate once rejected, shall not be proposed again until the next session.

9. A Copy of the Laws, and a List of the Members, shall, during every meeting, be laid on the table for immediate reference.

10. Those medical gentlemen whose theatres are gratuitously open to the Veterinary students, and likewise the members of the Veterinary Examining Committee, shall be eligible as, and invited to become, honorary members.

11. Physicians or surgeons of eminence, who have distinguished themselves for their researches in comparative anatomy, and foreign Veterinary surgeons, are eligible as honorary members. They must be proposed in the usual way, and elected by ballot.

12. No admission fee shall be required from an honorary member.

13. The officers of the Society shall consist of a President, four Vice Presidents, a Treasurer, a Secretary, and a Committee of six members.

14. The President shall be elected by ballot on the first night of every session, and shall be exempt from fine.

15. The four Vice Presidents shall likewise be elected on the same evening.

16. The Vice Presidents shall, in the absence of the President, take the chair, in rotation; and if the gentleman whose turn it may be

shall be absent at eight o'clock, he shall forfeit the sum of Half-a-Guinea, unless he have deputed one of the other Vice Presidents to act in his stead.

17. Six members shall likewise be elected by ballot on the same evening, to constitute a Committee.

18. The President, Vice Presidents, Treasurer, and Secretary, shall be *ex officio* members of the Committee.

19. The nomination of Treasurer and Secretary, the consideration and enactments of new laws, and the general management of the Society, shall be vested in the Committee.

20. An appeal to the Society at large against any act of the Committee must be signed by six members, and delivered, in writing, to the President of the evening, before nine o'clock, who shall announce the same for consideration at the next ensuing meeting.

21. The Committee shall assemble as often as they may deem necessary during the session, or a special meeting may be called by any six members. The Secretary shall issue the summonses, giving at least three days' notice.

22. No alteration nor addition to the Laws shall be made by the Committee, unless seven members present shall vote for it, and notice of such proposed alteration or addition shall have been previously sent to every member of the Committee.

23. Members desirous of suggesting alterations or additions to the Laws, must send the same, in writing, to the Committee, who shall take such communication into due consideration, and report the result of their deliberation to the Society at its next meeting.

24. The Treasurer shall receive from the Secretary all monies paid to the Society, and shall defray any expense incurred during the session; but he shall not pay any sum to the amount of more than One Guinea, without the previous order of the Committee.

25. The accounts having been previously audited by the Committee, a full statement of them shall be laid before the Society on the first meeting in every month.

26. The Secretary shall attend personally, or by deputy, at every meeting of the Society; and in person on every meeting of the Committee, under the penalty of Five Shillings for each absence.

27. The Secretary shall take minutes of the proceedings of the Society and Committee, and issue such letters and summonses as they may direct.

28. The ordinary meetings of the Society shall commence on the first Wednesday in October, at seven o'clock in the evening; and on no occasion be prolonged after ten o'clock. The meetings shall terminate on the last Wednesday in April.

29. The chair shall be taken at seven o'clock precisely, and the business shall be conducted in the following order:—

The minutes of the proceedings of the former meeting shall be read and confirmed by the President.

Letters recommending new members shall be read.

Members proposed at the meeting before the last, shall be balloted for.

New subjects for discussion shall be received, announced, and entered in the book.

The subject for the evening's discussion shall then be brought forward.

30. No subject shall be admitted which is not connected with Veterinary Science; and each subject shall be discussed in the order of announcement.

31. The subject shall be treated by the proposer in the form of a written Essay, which shall be read by himself or the Secretary, and this Essay shall be deposited with the Secretary.

32. On the first Wednesday after the closing of the regular meetings, the Committee shall assemble at the usual hour, and consider whether it may be advisable to publish a volume or pamphlet; composed of such of these Essays as they may select, under the title of "*Transactions of the Veterinary Medical Society*," at the expense and for the benefit of the Society; it being clearly understood that the authors of such papers shall likewise have full power to publish them, for their own advantage, in any way they may think proper.

33. Every member who is absent when his subject ought to be discussed, shall forfeit the sum of Five Shillings; and his subject shall be placed at the bottom of the list.

34. No new paper shall be read after nine o'clock; but should the discussions terminate before the usual hour of adjournment, the President may permit any member to relate a case of practice.

35. Should the subjects proposed for discussion be at any time reduced to three, the Vice Presidents, and the six members elected on the Committee, shall each of them be required to propose a subject.

36. No person shall be permitted to speak more than once, except in explanation.

37. Each member shall be permitted to introduce a visitor at every meeting; but the same visitor shall not be introduced more than three times in each session. A card, containing the name and address of the visitor, shall be delivered to the Secretary by the member introducing him.

38. Each visitor shall be allowed to take part in the debate, but not in any question relating to the private affairs of the Society.

39. Any member or visitor being called to order by the President of the evening three times, ineffectually, shall be fined One Guinea. If he persist in such disorderly conduct, he shall, if a member, be expelled; or if a visitor, declared incapable of revisiting the Society.

"RESOLVED UNANIMOUSLY—

"That the above sketch of Laws and Regulations shall be printed, and circulated among the Profession; and that this Meeting do stand adjourned until TUESDAY, the 10th of June, at Six o'Clock in the Evening, precisely, at the same place, when the attendance of every Veterinary Surgeon is earnestly requested, finally to take into consideration the above Laws, and regularly establish the Society, and elect the proper Officers.

"W. GOODWIN, Chairman."

ROT IN SHEEP.

In presenting our readers with Dr. Harrison's valuable Inquiry into the Cause and Nature of the Rot in Sheep, &c., we have to observe, that we not only consider it the best Essay that has appeared on the disease, but one which explains the real cause of the malady: our own experience accords entirely with the author's views.

From the very favourable situation in which Dr. Harrison was placed for making experiments on sheep *(Lincolnshire)*, and the well-known talent for investigation which he possesses, we shall feel much pleasure in laying before our readers an account of his more recent experiments.

This Essay, though published some years since, does not appear to have received that attention which its merits and great utility deserve; though, more recently, some men of eminence have meritoriously attempted to prove that *miasmata* or *malaria* is the sole cause of certain fevers in the human subject; yet they appear to have wholly overlooked those diseases in animals, apparently produced from the same causes, and which have been so ably examined by Dr. Harrison. Considerable light and useful information might, in many instances, be derived by properly examining and comparing diseases of the human subject with those of animals, more particularly those of the above nature; and a well-regulated Veterinary Institution, with men of talent and industry at its head, would afford a most excellent opportunity for such investigations.

To the Editor of the Farrier *and* Naturalist.

No. 7, Holles Street, Cavendish Square, November 14th, 1828.

Dear Sir,

In answer to your note respecting the re-publication of my Inquiry into the Rot in Sheep, and other animals, I have to say that it is not my intention at present to do so; and if you consider it of sufficient importance to the public, I beg to say that you are at perfect liberty to insert it in your Journal, or publish it in any other shape that you please: I have also to add, that since the appearance of that Inquiry, I have still further investigated the disease in question; and my subse-

quent experiments tend more fully to confirm and establish the doctrine set forth in my Essay.

These additional papers I will arrange, and with much pleasure transmit them to you for publication.

I am,

Dear Sir, yours, &c.,

EDWARD HARRISON.

AN

INQUIRY INTO THE ROT IN SHEEP,

AND OTHER ANIMALS.

BY EDWARD HARRISON, M.D., F.R.A.S., ED.

Member of the Royal Med. and Royal Phys. Soc. Ed.; of the Med. Soc. London, &c.

IT is well known, that sound livers grow firm and solid by boiling. By the same process, livers severely tainted with the Rot lose their consistency, and break down into small pieces.

Rotten livers remain soft and flaccid after death. In slight cases they preserve their cohesion, but never become hard and compact on boiling.

From this circumstance, I presume, the disease has obtained its name, and may be distinguished from every other complaint. It affects sheep, cows, horses, asses, hogs, deer, hares, rabbits, geese, pigeons, turkies, and poultry;* but since the phenomena and progress of the disorder have been more carefully observed in sheep than in other animals, my observations will chiefly be confined to them.

Poor clayey and loamy lands are most subject to Rot. On them, without great care, water stagnates, and can only be removed by evaporation; for they are too compact and tenacious to permit much of it to sink down and escape below the surface. By judicious drainage, and conveying away the moisture as it falls, such lands become sound; and then sheep may feed securely upon them, in all seasons of the year.

Grounds that are always dry, or always under water, and such as are wet enough to preserve a continual run and circulation, were never known to suffer from the Rot.

Dry lands, and countries that are everywhere well drained, it is universally admitted, do not rot animals. By an improved cultivation, and the enclosure of open fields, many large tracts, which were for-

* Dogs are not entirely free from the Rot. See Inst. &c. *sur les Malad. des Anim. Domest. Annee*, 1791.

merly very destructive to sheep, have been laid dry, and are become sound land. Mr. Joseph Hardy, of Portland, informs me, that he was born, and lived many years with his father, at Osbornby, near Falkingham, upon a farm, which is now occupied by his brother. In his father's time the parish was undivided, and contained large portions of low swampy land, where the sheep were so much exposed to the Rot, that he has frequently known fifty or sixty of them to be brought, at one time, into the farm-yard, and treated for this disorder. Of these many were choquered, or had a swelling and fluid in the cellular membrane, under the chin. Since the above lands have been enclosed and completely drained, his brother informs him, that neither his farm, nor that of any of his neighbours in the lordship, is troubled with the Rot.

Ponds of living water are equally safe; but when attempts have been made to drain meres, and other collections of shallow water, which have not entirely succeeded, the places become moist and soft in wet weather, and sheep that feed upon them are very much exposed to the Rot.

A grazier of my acquaintance has, for many years, occupied a large portion of an unenclosed fen, in which was a shallow piece of water that covered about an acre and a half of land. To recover it for pasturage, he cut in it several open ditches to let off the water, and obtained an imperfect drainage. His sheep, immediately afterwards, became liable to the Rot, and in most years he lost some of them. In 1792, the drains failed so entirely, from the wetness of the season, that he got another pond of living water, and sustained, in that season, no loss in his flock. For a few succeeding years, he was generally visited with the Rot; but having satisfied himself, by experience, that whenever the pit was, from the weather, either completely dry or completely under water, his flock was free from the disorder, he attempted a more perfect drainage, and succeeded in making the land dry at all times. Since that period he has lost no sheep from the Rot, though, till within the last two years, he continued to occupy the fen.

So long as any current is preserved, there is little to fear from the Rot. Water in motion is continually mixing with fresh particles, by which its purity is maintained, and new arrangements are prevented. In such places sheep can remain, for many weeks together, uninjured on grounds that are excessively wet and flabby.* Edmund Turnor, Esq. of Panton House, in the county of Lincoln, a gentleman of great landed property, and extremely well acquainted with most branches of agriculture, has repeatedly informed me, that a field, in his own occupation, was never known to Rot before he attempted to lay it dry. The pasture contains upwards of fifty acres, about thirty-five of which arise, towards his mansion and offices, by a rapid ascent. The remainder is nearly flat, or recedes from the ditch by a gradual acclivity. The water which soaked from the hill sides was considerable before he began to cultivate it, and is now chiefly carried away by concealed drains. In the flat piece a large ditch still remains, by which all the

* See Bath, &c. Agricultural Society, vol. 1st.

water was formerly conveyed; but from neglect and disuse, this drain has, for some years, been completely stopped up by coarse grass and slime. The mud in it is several feet deep, and of a yellowish or ochrey colour. In some places the surface is covered with a thin layer of stagnant water; in other parts it remains only in the hollows and feet-marks. To this ditch, all the stock, together with the hares and rabbits of an adjacent plantation, had formerly an easy access, and all of them were frequently rotten. Of late years the enclosure has been divided into two parts, and the larger seldom rots, though I observed lately that it contained a few hollows and inequalities, from which the moisture could only be removed by evaporation. The smaller division includes the open ditch, and continues to rot as much as formerly.

In the year 1792 the country was uncommonly wet, from the great quantities of rain which fell in the summer months; and this was a most destructive year to sheep and other animals. In the human subject, agues, remittents, and bilious autumnal fevers, were also very prevalent in many places. Graziers soon took the alarm, and became very solicitous about their flocks. A breeder of rams informed me, that to save his finest sheep he put them into closes, which, during an occupation of forty years, had never been known to rot; but he had the misfortune to lose them all. He was equally surprised to find that other pastures, which had frequently produced the Rot, were this season entirely free from it. Upon inquiry I found, that the suspected land was so much under water this year, that the sheep were obliged to wade for their food; and that pastures of a higher, and consequently of a dryer layer, were, from the deluge of rain, brought into a moist or rotting state.

In the same year Mr. Kirkham, of Hagnaby, occupied his old range in the West Fen, and expected to lose many sheep. He was, however, agreeably deceived, by finding them all sound and well; when, upon the approach of winter, they were removed into his enclosed grounds. The sheep had to wade for their food, and went frequently up to their knees in search of it. He seldom escapes the Rot entirely, as his flock is confined to a low range in the Fen. I conceive, in all these instances, that the ground which rots in ordinary seasons, was made by the great falls of rain too wet; and that more elevated land became moist enough this summer and autumn to produce it.

Grounds newly laid down for pasture, or ploughed fields exhausted by repeated crops, where the sward is thin, and the water remains in splashes for want of proper outlets, are peculiarly subject to rot. In such situations there is nothing to ward off the gleams of the sun's rays. Evaporation is therefore copiously performed, and probably some of the water is decomposed; so as to generate, in combination with other substances, the poisonous effluvia called *miasmata paludum*, which occasion the rot in animals.

The connexion between humidity * and the rot, is universally ad-

* Sheep die very much of the rot at St. Helena, from the over great moisture on their hills, which are half a mile high, and so moist, that paper in the night could not be kept dry enough to write on.—*Houghton's Coll. Husband.* vol. i. 98.

mitted by experienced graziers; and it is a matter of observation, that since the brooks and rivulets in the county of Lincoln have been better managed, and the system of laying ground dry, by open ditches and under-draining has been more judiciously practised, the rot is become far less prevalent. It is well known to practical physicians, that agues and remitting fevers are occasioned by emanations from moist situations. From personal observation and extensive experience, I have for some time been led to believe, that the bilious fevers, and pneumonic * inflammations, which occur in our low districts during the autumnal months, are to be imputed to miasmata. Even the yellow fever has been traced to the same origin by some able physicians; and this opinion seems of late to have acquired additional credit in America.†

In England, agues and remitting fevers were formerly much more prevalent and severe than at this time. In the Holland division of Lincolnshire, it may be safely affirmed, that, from the improved drainage in that fertile district, they have declined very considerably both in frequency and violence. Formerly, it was no uncommon thing for persons to endure the fits of an intermittent fever for two or three years; and the remittents and bilious fevers were very prevalent and dangerous in autumn. Many of the symptoms and morbid changes in the liver are common to sheep and to mankind; hence we have reason to believe, that a close analogy and intimate connexion subsist among several of their liver disorders. It has even been asserted, that in the first stage of the rot, sheep are hot and feverish. Should this be confirmed by future observers, a strong resemblance would indeed be established. In sheep tainted by the rot, the liver is much affected, and is always enlarged. They never recover so entirely from this disorder as to get very fat, and the mutton and gravy is generally white and pale. When the intermittents of this island were more obstinate, and continued their paroxysms for many months without any abatement, the ague-cake, as it is called by the common people, was a frequent occurrence. This is an enlarged liver, or spleen; and had dissections been more practised at that time, I think other proofs of a morbid similarity between the human liver and that of sheep would have been discovered. In warm climates, bilious, remitting, and intermitting fevers are very common, during and immediately after the rainy seasons. All these affections are frequently accompanied with bilious symptoms, which generally terminate in an enlarged, schirrous liver. The liver seldom completely recovers its former functions, and persons so affected remain pale and sallow for the rest of life. Whether they are less inclinable to feed than other people, is a matter upon which I am unable to decide. Such as are afflicted with diseased livers, are often bloated and swollen; but this state differs greatly from the general corpulence and obesity to which I allude. According to the observations of Dr. Paisley and others, the grand source of health

* Pneumonia peripneumonia, which is an inflammation of the lungs, was formerly a common disorder in this county. Of late years, it has declined considerably; in consequence, as I suspect, of the sewers and other public works being so much better regulated.

† Vid. Med. and Phys. Memoirs, by Dr. Caldwell.

and disease, in the eastern regions, proceeds from the natural or diseased condition of the liver.

Within the last forty years, plans of great magnitude in drainage and enclosure have been devised and conducted, chiefly by the Right Honourable Sir Joseph Banks, for the improvement of his native county. When these immense schemes are completely executed, the population and produce of Lincolnshire will be so much increased, as to add in no small degree to the strength and resources of the empire. These patriotic enterprises have already succeeded so well in many parts, that intermittents in the human subject, and the rot in sheep, have considerably decreased among us.

A medical gentleman of great experience at Boston, and who is considerably advanced in life, has frequently observed to me, that intermittents are so much diminished in his circuit, that an ounce of the cinchona goes farther at this time in the treatment of agues, than a pound of it did within his own recollection. During his father's practice at Boston, they were still more obstinate and severe. For my own part, I have declared for several years, in various companies, that marsh miasmata are the cause of both agues and the rot. And as miasmata are admitted, by the concurring testimonies of medical practitioners in every part of the globe, to be produced by the action of the sun upon low swampy grounds, I hope this interesting subject will be fully investigated, and effectual plans carried into execution, for the preservation of man, and of the animals which are so useful to him.

Other soils have been known to occasion the rot; but, unless I am much mistaken, it may be laid down as an established fact, that where the earth is too porous to retain moisture, it will never produce this fatal disorder. Pure sandy and gravelly lands were never known to rot; probably because the water that falls upon or passes over them, descends into the bowels of the earth, before it has suffered any change from the action of the sun and air. When these soils are thin and lie upon strata, the rain and top water are confined, and they then become liable to rot. "In some parts of Dutch Brabant, the soil is a barren sand, but water is everywhere to be met with, at the depth of two or three feet from the surface; and in proportion to its distance, the inhabitants are free from diseases." *

In this country, sheep appear to suffer from the wetness of sandy strata, in the same way that our soldiers, and the inhabitants in the Low Countries, were affected by it in 1744-5.

Soils are seldom pure; the most porous are often mixed in different places with principles that enable them to hold moisture; or other strata are interspersed, where water stagnates, and the rot is produced. The banks of the river Trent contain a great diversity of materials. In some places, they consist of mere sand and gravel, in others of clay or loam. The former never produce the rot, although the argillaceous and loamy soils are by no means to be trusted in wet seasons. From these circumstances, we are led to conclude, that this disorder does not depend upon any peculiarity in the Trent waters; but that it is pro-

* Vid. Pringle's Diseases of the Army, p. 62.

duced in some way or other by the action of moisture, in combination with the sun upon particular earths. I believe it will be found to be true, that the rot in animals is always acquired by pasturing on moist soft land,* where, for want of sufficient channels, the water is detained and stagnated.

On marshes exposed to the tides of the ocean, miasmata are effectually restrained by the saline quality of the sea water. Probably some bogs, and swampy tracts in Ireland, which are said to be free from the rot, are protected by the minerals that they contain. I believe that peat mosses do not communicate the infection to sheep. In such districts, the evolution of noxious miasmata seems to be entirely repressed by a combination taking place between the water and extractive materials of the soil.

I was inclined to believe, that miasmata are less copiously evolved in calcarious than in other countries, because it is an established fact, that the moisture of the Lincolnshire Wold Hills (a large mass of calcarious matter) seldom produces the rot. It has indeed been suspected, that sheep are sometimes tainted on dry limed land in Derbyshire;† and as it is a subject of importance, I hope the gentlemen of that county will give it a full investigation. Till the inquiry has been made, I shall retain my former opinion; and I do it with greater confidence, because a relation of mine, who resided a long time at Chapel le Frith, informed me lately, that he never heard of the rot during his residence in that county.

I do not mean to affirm, that the same identical miasmata are equally the cause of all the diseases enumerated in this Essay. Probably a great variety of exhalations are generated in marshy grounds; for it is notorious, that the endemics of different seasons are very unlike one another, both in form and severity. It is also well known, that human creatures and brute animals are assailed by numberless specific contagions; and therefore it does not seem to be an improbable supposition, that lands abounding with a great diversity of soils and of herbage, in various climates, in different seasons—in dry and wet years, &c., should be capable of generating an almost endless variety of noxious miasmata. It is moreover confirmed by experience, that most contagious epidemics assume something specific and appropriate. For example, so great is the virulence and mortality of the small-pox, in some seasons, when compared with others, that medical practitioners have been inclined to admit several species of variolous disorders. This dissimilarity cannot, however, as I conceive, be imputed to any modification in the contagious poison; but must arise from the atmosphere being more or less favourable to the diffusion and agency of variolous matter upon the human constitution. This state of the air is peculiarly noticed by the American physicians, and seems, of late years, to have increased the malignity of the yellow fever.

It does not appear by eudiometrical experiments, that the atmosphere in habitable situations ever undergoes any considerable change in its

* Young's Eastern Tour. Bath, &c. Society, vol. 1.
† Bath, &c. Society, vol. 1.

sensible qualities; and therefore I suspect that the noxious emanations are only diffused in the air, where they remain imperceptible to the most delicate tests * hitherto invented, and on some occasions constitute no inconsiderable part of the morbid atmosphere. It is to this cause that I attribute the sallow complexions, and debilitated constitutions, which so universally prevail among the inhabitants of some swampy districts in the papal dominions. Formerly, in the hundreds of Essex, in some parts of Lincolnshire, Cambridgeshire, &c., the people were extremely pale and sickly; but since these districts have been better drained, and, consequently, have generated fewer miasmata, the peasantry are greatly improved in health, and the Rot prevails less among their sheep.

Mr. Vanbreda observes, that during the hot and dry weather in autumn, the oxygen gas in marshy regions has been reduced from 28 to 14 parts; while the azotic air was increased from 72 to 84 or 85 parts in the hundred. He likewise detected a small quantity of carbonic, hydrogen, and ammoniacal gases, which he imputes to vegetable and animal putrefaction. According to this analysis, we find, indeed, a considerable deficiency of the oxygenous principle, but nothing to which we can impute the disorders that have been attributed to miasmata. The reduced atmosphere of large towns gradually undermines the constitution, and the rosy bloom of rural health; but we know, from experience, that it never produces the first attack of a recurrent fever; nor do I believe that it will ever occasion the Rot in animals.

* Vide Guyton on Purifying the Atmosphere.

[*To be continued.*]

NEW INSECT.

The *ground pearl*, which abounds in many of the West India Islands, and was formerly supposed to be a fossile, has been proved, by the researches of the Rev. L. Guilding, to be the nidus of a living insect. This new insect, which is supposed to be a parasite on the great ant of the West Indies, is remarkable, as not being provided with a mouth, its food being conveyed through a tube in each of the fore claws. The animal has also the power of throwing out long filaments from its body in dry weather, supposed to be with the view of attracting moisture for its preservation. An interesting paper was recently read, describing this insect, by Mr. Guilding, before the Linnean Society.

SKETCH OF THE NATURAL HISTORY OF THE SALMO SALAR, OR COMMON SALMON.

1. *Of the Process of Spawning, and subsequent Evolution of the Ova.* 2. *Of the Growth and Movements of the Young Brood, to and from the Sea, during the first year of life.* 3. *Of the Migrations of the Salmon betwixt the River and the Sea.* By DANIEL ELLIS, ESQ., F. R. S. E., &c.* *(abridged from his interesting Essay just published in the New Edin. Phil. Jour.)*

NATURALISTS enumerate several species of this Genus Salmo; but it is here proposed to speak only of the first species—viz. the Salmo salar, or common salmon; and this we shall do, by treating—1st, Of the process of spawning, and subsequent evolution of the ova; 2d, Of the growth and movements of the young brood to and from the sea, during the first year of life; and, 3d, Of the migrations of the salmon betwixt the river and sea.

SECT. I.—*Of the Process of Spawning, and subsequent Evolution of the Ova.*

The salmon is a very prolific animal. Both the male and female frequently propagate their kind during the first year of their age; while the older fishes, which inhabit alternately the seas and *lower* parts of rivers during the winter and spring months, ascend to the *higher* parts of rivers in autumn to exercise the same function. Early in spring the milt, or reproductive organ, appears to be forming in the male, and the roe in the female salmon; but both are then small in size; they increase in each sex through the summer months, and, towards autumn, the male and female become respectively full of milt and roe.

In proportion as these bodies advance to ripeness, the salmon fall off in condition. Before the spawn is of great size, the belly of the fish, says Dr. Fleming, is loaded with fat; but when the milt and roe have become ripe, that fat has disappeared from the belly, and it is little else but skin. This change furnishes a test by which we may know whether a *kippered* salmon has been in good or bad con-

* Drawn up from the evidence contained in two Reports of a "Select Committee of the House of Commons, on the Salmon Fisheries of the United Kingdom;" ordered by the House to be printed in 1824 and 1825.

That the salmon fisheries are less productive than formerly, we may conclude from the fact, that 30 or 40 years since, it was a frequent practice, in the western counties of England, when boys were apprenticed, to insert a clause in their indentures, that they should not be compelled to eat salmon more than a certain number of days in the week. But at a late period, so scarce had this fish become, that its preservation was thought worthy the serious investigation of the legislators; and the poor apprentice now rarely, if ever, enjoys this luxury.

dition at the time it was so prepared; for the thinner the edges of the belly may be, the presumption is that the nearer was the fish to a spawning state.*

In a general way, the evidence obtained from all parts of the United Kingdom goes to prove that, towards the months of August, September, and October, the reproductive organs, both in the male and female salmon, have, more or less, completely reached maturity, at which period the roe in the female is found, on the average, to contain from 17,000 to 20,000 ova, or eggs. When arrived at this state, the instinct of propagation impels them eagerly to seek rivers, and to ascend nearly to their sources, in order to find a place suitable for the deposition of their spawn. They no longer, as in the winter and spring months, roam over the coasts and shores, and return backwards and forwards with the flowing and ebbing of the tide; but pursue the most direct route by the mid-channel up the river, and make the greatest efforts to overcome every obstacle, either natural or artificial, that may impede or obstruct their course. "I have often seen them leap a fall, near my residence," says Sir G. S. Mackenzie, "of about 30 feet high; but they seldom spring out of the water more than 8 or 10 feet. I have seen them leap over a dry rock of considerable height, and drop into the water behind it. After having entered a river, the object of salmon appears to be to push as far up towards the source as possible, in order that they may deposit their spawn in the small streams that form their sources: and which, on account of their being near the springs which supply them, are neither so apt to run dry as the river lower down, where the effect of evaporation is greater, nor to be so affected by frost as to stop the water from running. The water is always steadier in its temperature near the sources, varying little throughout the whole year; and these small streams are fitted peculiarly for vivifying the spawn, as they form a constant succession of rills, by which the water is kept fully saturated with air."† It is not always, however, that the spawning fish are able to reach these sources, but are obliged to deposit their spawn in the shallow fords in the beds of rivers, and sometimes in the streamlets of mill-dams.

The process of spawning itself has been observed with much accuracy by Mr. Halliday, in the river Annan, in Scotland, and by Mr. Little, in the Bann, in Ireland. It is principally accomplished in the months of November, December, and January. According to Mr. Halliday, when the parent fishes have reached the spawning ground, they proceed to the shallow water, generally in the morning, or at twilight in the evening, where they play round the ground, two of them together. After a time, they begin to make a furrow by working up the gravel with their noses, rather against the stream; as a salmon cannot work with his head down the stream, for the water going then into his gills the wrong way, drowns him. When the furrow is made, the male and female retire to a little distance, one to the one side, and the other to the other side of the furrow: they then throw themselves

* Report II., p. 72. † Report I., Appendix, p. 17.

on their sides, again come together, and, rubbing against each other, both shed their spawn into the furrow at the same time. This process is not completed at once. It requires from 8 to 12 days for them to lay all their spawn; and when they have done, they betake themselves to the pools to recruit themselves. He has seen three pair on a spawning bed at one time, and stood and looked at them while making the furrow and laying the spawn.*

The account given of the same process by Mr. Little, agrees with that just stated.

The spawn is, as we have said, deposited in furrows formed in the gravel, and is afterwards covered over with loose gravel, so as to resemble, says Mr. Little, an onion bed in a garden. In this state the ova remain for weeks, or sometimes much longer, apparently inert, like seeds buried in the soil. The period at which the young fry begin to rise, depends much on the season of the year. In an early spring, the fry comes forth early, and later when the spring is late. Generally they begin to rise from the bed about the beginning of March, and their first movement is usually completed by the middle of April. Mr. Little has never, himself, seen the first appearance of the beds after evolution has commenced, and previous to the fry quitting them; but persons employed by him to protect the beds in the upper branches of the rivers, describe the young animals as rising from the beds like a crop of oats or thick braird of grain, rushing up in very great numbers. The tail first rises up, and the young animals often leave the bed with a portion of the investing membrane of the ovum about their heads.†

Mr. Halliday has also observed them, when disengaged from the spawning beds, with a portion of the skin of the ovum sticking to their nose like a scale.‡

From experiments carefully made, by placing the spawn, in its different stages of evolution, and also young fish, in salt water, in which they did not survive long, it is inferred, that the spawn of salmon, if deposited in the sea, would not be evolved; neither would the young fish, in the earliest periods of its life, be able to exist there.§

Sect. II.—*Of the Descent of the Fry to the Sea, and of their subsequent Growth and Movements.*

Having thus described the process of spawning, and traced the series of changes exhibited in the evolution of the ovum, we have next to follow the progressive movements of the young fry from the place of their birth in the river, to their arrival in the ocean. When their evolution is completed, and they have disengaged themselves from the spawning beds, they keep, at first, in the eddy pools till they gain strength, and then prepare to go down the river, keeping, says Mr. Little, near to its sides, and proceeding on their way till they

* Report I., p. 61, 2.
† Report I., p. 109.
‡ Report I., p. 62.
§ Report II., p. 92.

meet with the salt water, when they disappear.* Whether the river be early or late, the descent of the fry is made much about the same time in all. It begins in the month of March, continues through April and part of May, and sometimes even to June.†

Mr. Halliday also describes the fry as making towards the edges of the river soon after birth, and keeping the easy fresh water about its sides; afterwards, as they become stronger, they go more towards the mid-stream; and, when the water is swelled by a little rain, they move gradually down the river. On meeting the tide, they remain for two or three days in that part where the water becomes a little brackish from the mixture of salt water, till their constitutions become inured to the change, when they go off to sea all at once, sinking down in the bed or channel in the middle.‡ From the end of March till the middle of May, he has seen them thus descending; and in particularly dry seasons, when no floods occur, they sometimes could not get down, for want of water, until the month of June.§

To ascertain the precise course of their descent, both in rivers and in their estuaries, Messrs. Shepherd and Sime were, many years ago, specially appointed, under legal authority, to examine the river and estuary of the Tay, by going up the said estuary and river in the month of April, when the fry were descending; and a little above a place called Carpowe Bank, where the frith appears to begin, they met with the fry at the sides of the river, where they disappeared in the deep water, and where, with a small net, they caught many of them in the very middle of the channel. Above this point, and all the way upward to Perth, the fry were visible to the eye along the sides of the river.‖ The reason why the fry thus descends by the margin in rivers, and by the mid-channel in estuaries, is apparently, says Dr. Fleming, because the margin of the river is the easy water, and, consequently, best suited to their young and weak state; but when they reach the estuary or tideway, then the margin of the water being there most disturbed, the fry avoid it, and betake themselves to the deepest part of the channel,—disappearing alike from observation and capture,—and so go out to sea. Hence, they are never seen in the pools on the banks of the estuary, nor caught in any of the nets used there in taking the small fish.** The young fry, at this period of their growth, are called sometimes smolts, or samlets: they are of very different size and weight, according to their age, varying from half an ounce to two or more ounces. As they are never seen or taken by salmon-fishers after they enter the sea, it is probable, says Dr. Fleming, that they go into deep water at a distance from shore.

After remaining some weeks in the sea, the samlet returns to the coasts and rivers, being then about a pound or a pound and a half in weight: in Scotland it is then termed a grilse. The grilses seldom, says Mr. Little, appear till nearly the middle of June, and weigh then from two to two and a half, or three pounds, increasing in size half a

* Report I., p. 109. † Report I., p. 62. ‡ Report I., p. 115.
§ Report I., p. 63. ‖ Report I., p. 93. ** Report I., p. 111, 112.

pound a week. By the end of the fishing season, they weigh from seven to nine pounds.* In the river Severn, they are said to return from the sea towards the end of June, or beginning of July, weighing then from two and a half to three pounds, rarely four pounds; but by the end of August, says Mr. Ellis, they grow so large as to weigh from four to eight pounds.† At this stage of growth they are called botchers; of these, some of the larger ones go up the river to spawn: others are considered to return to the sea, and come up again the next spring of the year;‡ they then weigh from ten to fifteen pounds, when they take the name of gillings.

With respect to the subsequent growth of the salmon, it is considered that, in the river Severn, the young salmon, which, in the spring of the year, weighs from ten to fifteen pounds, has increased, in the following months of December and January, to eighteen and twenty-five pounds; and, in another year, would attain the weight of thirty-five or forty pounds, which is as large as they are now ever taken in that river. It is not doubted, however, that if they escape the nets of the fishers, they would grow to a still greater size; a salmon having, heretofore, been taken, which weighed fifty-two pounds when *out* of season; and which would, doubtless, have been of greater weight, had he been taken while in the condition of a clean fish.

In the river Lee, in Ireland, Mr. G. Shepherd also states, that the grilses, or peels, as they are there called, which retreat to the sea, weighing from eight to ten pounds, make their re-appearance in the river during the following autumn, weighing from twenty-four to thirty, or even thirty-four pounds.§

Many of the witnesses state, that the skill and perseverance of the fishers are now so great, that, under the stimulus which ready markets and high prices afford, very few of the clean salmon, which once pass up our rivers, are again permitted to return to the sea; and, consequently, few salmon are now taken of more than one year's growth. In all the fisheries north of the Tay, with which Mr. Hogarth is acquainted, the proportion of grilses to salmon has, for many years past, been gradually increasing, so that, though the total weight of fish taken may not have diminished, the quantity of salmon has, and this deficiency has been compensated for only by the increased weight of grilses. The cause of this decrease in the proportion of salmon, is owing, Mr. Hogarth states, to the too assiduous and close manner of fishing, by which both the number and size of salmon have diminished. "I am quite satisfied," he adds, "that all our rivers are over-fished, even those as to which the total weight of fish has increased."‖

The great proportion of grilses to salmon, in some of the Irish rivers, is remarked by Mr. Halliday;** and Mr. Little states, that, though the total weight of fish in the river Foyle, in Ireland, has much increased: yet it is mostly made up of grilse, it being seldom that any large salmon is taken in it. In the Shannon, the fish are a great deal

* Report I., p. 111, 112. † Report II., Appendix, p. 13. ‡ Ibid.
§ Report II., p. 148. ‖ Report II., p. 104, 109. ** Report I., p. 64.

larger; few of them being under twenty, and many thirty-five or forty pounds, and upwards.*

After the process of spawning is completed in the river, the parent fish, says Mr. Halliday, retire to the adjoining pools to recruit. In two or three weeks from that time, the male begins to seek his way down the river; the female remains longer about the spawning ground, sometimes until April or May. The fishes which have thus spawned are denominated *kelts*. These kelts, or spent fish, come down the river, says Dr. Fleming, during the spring months, from February to May, inclusive; so that two or three months may intervene between the deposition of the spawn and the descent of the parent fish; varying, probably, according to the degree of strength in the fish to undertake such migration, and the condition of the river in regard to the quantity of water. In their progress to the sea, when they reach the estuary, they pursue a course precisely similar to the fry,—not roaming about the banks like a clean fish, but keeping in the mid-channel. They are, at this time, comparatively weak; and, in thus betaking themselves to the deepest parts of the channel, they are better enabled to resist the deranging motion of the flood-tide, and to take advantage of the ebb tide in accelerating their migration to the sea.†

Sect. III.—*Of the Migrations of the Salmon betwixt the Rivers and the Sea.*

We have seen that the brood of the salmon, after a short residence in the sea, return to rivers greatly increased in size. Many practical fishers,—those especially connected with the river fisheries,—contend that not only the young brood, but the older salmon, always make efforts to revisit their *native* rivers. But when we consider, says Dr. Fleming, the numerous foes which unceasingly persecute the salmon during its abode in the sea, which must necessarily mix the families or tribes belonging to different estuaries and rivers, it seems difficult to conceive how, after such intermixture, the breeds of different rivers could again separate and collect into their original groups.‡ The assertion made by several experienced witnesses, that they can discriminate the salmon of different rivers by original peculiarities of form, may be met by that of others equally experienced;—Mr. Halliday, for example, who denies that any such distinction is practicable. "That salmon, however, do frequently differ considerably in point of form, from one another, I have repeatedly witnessed," says Dr. Fleming, "by looking at the fish taken at the same place by the same net, and collected together in a boat; but these variations are not greater than in other species of animals, subject to variations in the place of their residence, and in the quantities and qualities of their food."§

The migration of the salmon from the sea to the river, and back

* Report I., p. 112.
† Report II., p. 66.
‡ Report II., p. 70.
§ Report II., p. 70.

again from the river to the sea, would seem, in certain rivers, to take place at short intervals, through every period of the year.

But though the disposition in salmon to enter rivers, at short intervals, may be universally the same under similar circumstances; yet the fact that they are found in different rivers at different times, seems to point to some differences in the circumstances and conditions of those rivers which counteract these natural dispositions. Thus, in the rivers Ness and Thurso, in Scotland; in the Severn, the Eden, and others, in England; and in the Shannon and Lee, in Ireland; the months of December, January, and particularly February, are declared, by various witnesses, to be the best times in which salmon are taken in those rivers, both in regard to the quantity and quality of the fish; and some of these rivers begin to fall off after this period, and, towards April and May, yield few or no fish. Other rivers again, as the Tay and the Tweed, do not yield fish so soon as the former, but continue to afford them, in a marketable condition, till September; and others are said not to repay the expense of fishing them till March, or even April, and to yield the best fish in May and June. This difference of time, in the appearance of the salmon in different rivers, cannot be ascribed to any difference in geographical position, as far as regards these islands; for the Ness, which is one of the earliest rivers in Britain, is situated in the highest latitude. It must, therefore, be sought for in some local circumstances and conditions, which, more or less, adapt particular rivers to the taste and habits of the fish.

As the fish seem to decline entering rivers when much reduced in temperature, so, at other seasons, they seem equally to avoid them when the temperature is too high. During the summer season, the water, in many rivers, becomes so small, and gets so hot, that the salmon will not enter them, but linger upon the coasts and about the mouth of the river. "In one very dry and warm season, when stake-nets were in use in the estuary of the Tay, the salmon," says Mr. Halliday, "did not even approach the highest stake-net during the neap tides; but, when the spring tides became high, the fish then came up to those nets and were taken: when, again, these latter tides fell off, the nets on the lower parts of the frith caught a great deal more fish, which did not then float up so high as the upper nets." * Many other witnesses give a similar testimony as to the refusal of salmon to enter rivers when much heated. The temperature of the sea is probably that best suited to the economy of these animals; and those rivers, therefore, which come nearest to that temperature, will probably be preferred by them; and, as the ordinary heat of fishes is very near to that of the medium in which they live, a temperature either much above or below that of the sea is, in all likelihood, unsuited to their nature.

If, however, freshes and floods occur in any particular river during the hot season, salmon then move up them, even many months before the spawning season. Some of these may remain in the upper parts

* Report I., p. 72.

of rivers, if they find water sufficient to harbour and protect them, until that season arrives; but others, as we have seen, avail themselves of subsequent floods to revisit the sea, in which alone they may be said to thrive.

When it is supposed that salmon is in season at different periods of the year, in different rivers, the supposition is so far correct: it does not, however, depend upon the state in which the fish is at that period, but on the state the river is in. Salmon are extremely nice, and only go into fresh water when it is exactly to their taste; and when the river is in a state to induce fish to enter it, they are gotten of much finer quality than at a period when they do not enter so readily.*

In the migrations of salmon from the sea to the river in the winter and spring months, their course through the estuary seems altogether different from that which they pursue in autumn. In the latter period, impelled by the instinct of propagation, they pursue their route in the most direct way through the mid-channel, rushing up with the greatest eagerness where there is water sufficient to convey them, and braving all obstacles on their ascent: in the former, they roam over the banks of the estuary and of the mouths of rivers, borne up with the flowing tide as far as it will carry them, and often returning again to the sea with the ebb tide. It is, indeed, only when thus roaming over the banks, that salmon are taken in the estuaries, where stake-nets are employed; these nets being made to extend upon the coasts between high and low water mark. That salmon move upwards and downwards with the tide, is testified by many witnesses who have seen and intercepted them in their downward course; and, by the fact, that stake-nets are commonly provided with ebb as well as with flood courts, on purpose to meet this disposition in the salmon, and do actually catch sometimes as many fish in their downward as in their upward course. But why, it may be asked, do salmon thus visit the coasts of the sea and of the estuaries of rivers, linger upon them, and seem indifferent about entering rivers, unless they are, in all respects, suited to their taste? To this, they are apparently impelled by the strength of the appetite, which, next to that of propagation, exerts the greatest force over the movements of animals—viz. hunger.

"On the banks of estuaries, salmon," says Mr. Halliday, "find a great deal of food;" he has taken a great many salmon in the frith and estuaries, with worms passing through them; such worms as are to be seen on those banks.†

During the fishing season of 1823, Mr. Moir received all the salmon caught in the stake-nets set between the rivers Don and Ythan; also the whole of the fish taken in the Bay of Nigg; those taken, likewise, at the Bridge of Dee, and at nine other small fisheries in that river. As all these fish were cut up for the purpose of being preserved in a fresh state, he had an opportunity of examining the stomachs. In the stomachs of those taken in the upper river fisheries, he could never

* Report II., p. 121, 2. † Report I., p. 61.

detect any kind of food; whereas, those taken in the sea were frequently gorged with food, which was principally sand-eels.

That salmon do obtain the chief part of their food during their residence in salt water, seems certain, from the fact attested by various persons, that they are in greatest perfection when taken out of the sea, or very shortly thereafter; and that they fall off in condition in proportion to their abode in rivers. "Salmon taken in the sea," says Mr. Halliday, "are by far the richest and best; they are both weightier and fatter, and in firmer condition. If detained in fresh water, at any season, they become unsound; and if this happen during the warm weather of summer, they are soon rendered unfit for food." *

From the facts thus stated respecting the migration of the salmon, at different periods of its life, it would seem that it can begin to live only in fresh water, and that, in the earliest period of its existence, salt water is fatal to it; that, at a period somewhat later, it descends rivers on its way to the sea, where it increases rapidly in size; and, in two or three months, returns again to the river.

With respect to the *causes* which influence these alternate migrations of salmon, it would appear that they move towards the sea chiefly in search of the food found on its coasts, and on those of estuaries; whilst the chief impulse that urges their movements up rivers, is the propagation of their kind, where alone the spawning process can be duly exercised. As to the cause of their seeking fresh water, when not urged by that impulse, we can offer no other reason than that of a sort of *instinct*, which incites them to remove occasionally into fresh water, in which alone they were at first able to exist; whilst the appetite for food calls them again back to the sea.

Perhaps, if the water of rivers were always in sufficient quantity, and perfectly suited to the taste and economy of salmon, they would be moving backwards and forwards from the sea to the river, and from the river to the sea, at intervals more or less great; and, therefore, the different periods in which they appear in different rivers, are owing to the different circumstances and conditions in which those rivers may be, rather than to any natural differences in the economy or habits of the fish. How far they move into the deep sea is not known, but that they roam over the coasts, at great distances from the mouths of rivers, is certain from the fact of their being captured in such situations.

* Report I., p. 79.

HORSE-SHOEING.

[Continued from page 230.]

Fig. 4.

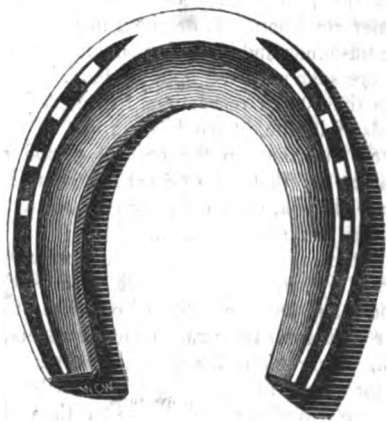

Fig. 4 exhibits the shoe that was proposed and adopted by Professor St. Bel, at the first establishment of the Veterinary College. He appears, on coming to England, to have been struck with the number of lame horses amongst us, and attributed it to the shape of the shoe. He determined on effecting an alteration; and, perceiving that the natural foot was concave, was led to apprehend that the bad effects of our system resulted from the flat bearing surface of the shoe on the ground. Accordingly, he produced that above represented: it is flat next the foot, and deeply concaved below; fullered completely to the heels for ornament and lightness, and the holes stamped *fine* in the English manner. "Its breadth should be considerably less than that of the common shoe, as it is totally *unnecessary to cover any part of the sole*;" and "its breadth at the heels should be one half that of the toe; and its thickness should decrease gradually from the toe, so as to be reduced to one-half at the extremity of the heels."* From this description, it is easy to gather the causes of its failure in general practice. St. Bel insisted particularly on a light shoe, and totally overlooked the necessity of extensive bearing on the ground; which is the more important to be attended to, as in the ordinary ruinous course of shoeing, the feet of most horses become smaller every year, instead of

* St. Bel's Elements of Farriery, 4to. 1797.

increasing, as they ought to do; and, in general, are never so large as at four years old. Let it also be remembered, that the unshod natural foot, besides being proportioned in size to the body, takes considerable bearing also, at times, on the outer edges of the sole and bars, and occasionally on the frog; by this means relieving itself very much. If, then, a narrow, trim, concave shoe be applied to the foot, especially those small, contracted feet we too often meet with, the animal will usually be found to step with less freedom than if the weight were distributed over more points of bearing; for the whole must necessarily repose on the outside rim, and produce the same effect as a man experiences in walking upon skates or high-heeled shoes; he goes, as the jockeys say, "like a cat on nut-shells." This rim, at the toe, is soon worn away, and then the shoe presents a bearing something like a ring cut horizontally,—the worst figure that can be imagined for a horse to go upon. So plausible, however, were St. Bel's arguments, that he had no difficulty in convincing the subscribers of the College, and from them the concave shoe received a fair trial: it was not found to possess the supposed advantages over the common one; and, for the reasons we have stated, it must, of course, be more oppressive. These causes of its failure, we believe, were not explained at the time; but being generally condemned in practice, it was laid aside at the death of St. Bel.

Fig. 5.

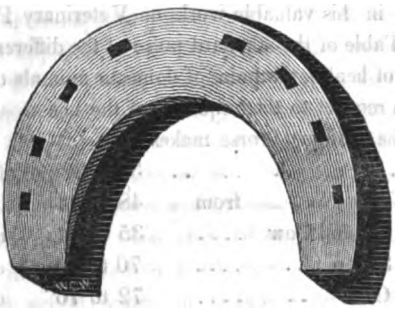

Fig. 5 is a copy of the thin-heeled shoe of Lafosse, a well-known French writer, who proposed it so far back as 1754; conceiving that the great evil in ordinary shoeing was the want of *frog pressure*, and that the frog was designed to prevent the horse from slipping, &c. His words are these:—"Apply a crescent or half-moon shoe, made thin at the heels; rather longer for those horses which have the wall weak,

but in good feet it need not reach beyond the middle of the foot." A similar shoe is mentioned by Blundevill, De Grey, and other old writers, and called the Lunette, but Lafosse is the first who used it to bring pressure on the frog. This thin-heeled shoe was quickly tried, condemned, and forgotten, in France; and it is only revived here, in order to show the origin of the unfortunate doctrine of frog pressure, which has been fostered for thirty-five years under the auspices of our College. For, soon after Mr. Coleman's accession to the Chair, he espoused, most warmly, this abandoned French doctrine, in his work on the Foot and Shoeing, hereafter to be noticed; and it forms part of the history of Lafosse's shoe, that it was again tried on English ground, under the Professor's eye, and universally condemned by the best Veterinary writers in this country. But the mistaken principle on which it was applied—of *frog pressure*—is still persisted in. This shall receive our earliest attention and unreserved criticism, and "Mr. Coleman's Patent Horse Shoes" will form a distinct chapter.

M. VATEL ON THE PULSE OF ANIMALS.

On the Pulse of Domestic Animals.

M. VATEL, in his valuable work on Veterinary Pathology, gives the following Table of the standard pulse of the different animals:—

"In a state of health, the pulse of domestic animals offers very great variations with respect to the frequency of the beats.

"That of the ordinary Horse makes

from			32 to 38	pulsations	in a minute.
That of the Ass ..	from		48 to 54	do.	do.
..... Ox and Cow			35 to 42	do.	do.
..... Sheep			70 to 79	do.	do.
..... Goat			72 to 76	do.	do.
..... Dog			90 to 100	do.	do.
..... Cat			110 to 120	do.	do."

ON BLISTERING HORSES.

BY MR. B. CLARK.

(In Rees's Cyclopædia.)

BLISTERING is a remedy much in use in the Veterinary art, for promoting the removal of a great variety of disorders; more especially, however, in reducing morbid enlargements of bone, or morbid thickenings of any of the softer parts, where its utility is principally obvious.

The vesication of the skin of the horse is attended with some remarkable circumstances in which it differs from the human, especially in the greater irritability of the skin; for the cuticle of the horse is raised by a blister of less strength than is required in raising the human cuticle; whence, perhaps, it may be inferred, that its sensation also is more acute. It is probable that the skins of animals covered with hair are, in general, more irritable than naked-skinned animals; the oil of turpentine producing a most painful irritation both in the horse and the dog, when applied to the skin, but not so in man.

Irritants, however, of the skin, without any blistering or vesication, may be had recourse to with very great advantage in the Veterinary art; as they can, without injury to the parts, be very frequently renewed, and with the happiest effects.

The mildest applications of this description, are the animal and vegetable oils; as hog's-lard, and the oil expressed from linseed or olives: where more irritation is thought requisite, the addition of the essential oil of origanum, or the oil of turpentine, will readily afford it. Lard alone, rubbed on the skin of the horse, we have often observed to produce a sensible irritation and increased warmth in the part,—so susceptible is this part in these animals,—and may serve as a basis from which we may proceed to the higher degrees of stimulus; firing the skin with the actual cautery, in lines more or less close, being the highest degree of irritation to which we can or ought to proceed.

That irritation which is produced by the cantharides, is, of all others, we believe, the most useful in its effects. It should be applied mixed with lard, or olive oil; to which it is usual to add the dried juice of the euphorbium. As, however, it is ever desirable to avoid unnecessary complication in the remedies we prescribe, by which their effects are rendered more certain, and the inductions more easy and clear; so we

proposed to try this medicine by itself, to ascertain its precise effects; and being mixed with olive oil, it was applied to the skin of the leg of the horse: no distinct vesication of the part followed, but it produced a considerable heat, and formed a brown scab, with very little discharge of serum; but, on the contrary, was particularly dry and irritating to the horse. We have since omitted it in the blister, and, we believe, without the smallest detriment to its operation; for the cantharides, when they act properly, and are not applied too strong, produce a plentiful vesication, and a copious discharge of thick serum, almost of the consistence of honey.

We have found also the pyroligneous acid, or the acid obtained by the distillation of wood in close vessels, and properly concentrated, a cutaneous irritant of very useful qualities. After the skin has been simply wetted with it, it slightly inflames it; and the cuticle, after two or three days, comes away dry, bringing with it any foulness of the skin, for the removal of which it is most particularly serviceable.

We have known some, from motives of economy, omit the cantharides in their blister, and use, instead of it, sulphuric acid. It in general, as far as we have seen, forms a dry, black scab, and is by no means so useful in its effects as the former.

It is a common habit with farriers practising medicine, to mix corrosive sublimate with their blister; and, where it may be desirable to destroy the skin, this should be used, but not otherwise; for it is no vesicatory, but a most violent caustic, soon destroying any living matter with which it comes in contact; and we have seen, from the ignorant use of it, the most deplorable effects, by its bringing off extensive sloughings of the skin, and even penetrating to the parts beneath, and so injuring them, as ever after to render the horse unserviceable.

There is an effect produced by the cantharides on the skin of the horse, which, as far as we know, has not met with much attention; though it is very remarkable, and not analogous to its effects on the human skin: it is that prodigious thickening of the integuments, after the operation of the blister, which sometimes does not subside for many weeks, being a great disfigurement: a blister, therefore, if one could be devised, not producing these effects, would be a desirable thing in the Veterinary Pharmacopœia. This effect we should, however, remark, is not constant.

PROFESSOR COLEMAN AND THE QUAGGA. DR. ENDALL AND PHILLIS.

PROFESSOR COLEMAN, in a late Lecture, related an extraordinary story of a chestnut mare that was bred from with a male quagga; and that afterwards the same mare was again bred from by a black Arabian horse, but that the offspring still exhibited a very strong and striking resemblance to the quagga, in form, colour, mane, tail, &c. But this wonderful occurrence falls very far short of the following *marvellous* circumstance—The late Dr. Endall, a learned physician, and a great connoisseur in pointing and setting dogs, in a conversation once on the subject of puppies, related the following singular tale of a bitch he had, of the setting kind:—

As he was travelling into Hampshire, going through a small village, the mastiffs and cur dogs ran out barking, as is usual when gentlemen ride by such places: among them he observed a little ugly pedlar's cur particularly eager, and fond of ingratiating himself with the bitch. The doctor stopped to water upon the spot, and whilst his horse drank, could not help remarking how amorous the cur continued, and how fond and courteous the bitch seemed to her admirer; but provoked, in the end, to see a creature of Phillis's rank and breeding so obsequious to such mean addresses, drew one of his pistols and shot the dog dead on the spot; then alighted, and taking the bitch into his arms, carried her before him several miles. The Doctor related farther, that madam, from that day, would eat little or nothing, having in a manner lost her appetite; she had no inclination to go abroad with her master, or come when he called, but seemed to repine like a creature in love, and express sensible concern for the loss of her gallant.

Partridge season came on, but she had no nose; the Doctor did not take the bird before her. However, in process of time Phillis waxed proud. The Doctor was heartily glad of it, and physically apprehended it would be a means of weaning her from all thoughts of her deceased admirer: accordingly he had her confined in due time, and warded by an admirable setter of high blood, which the Doctor galloped his grey stallion forty miles an end to fetch for the purpose. And that no accident might happen from the carelessness of servants, the charge was committed to a trusty old woman housekeeper; and, as absence from patients would permit, the Doctor assiduously attended the affair himself. But, lo! when the day of whelping came, Phillis

did not produce one puppy but what was in all respects the very picture and colour of the poor cur which was shot so many months before the bitch was at heat.

This affair equally surprised and enraged the Doctor. For some time he differed, almost to parting, with his old faithful housekeeper, —being unjustly jealous of her care: such behaviour before she never knew from him;—but alas! what remedy? He kept the bitch many years; yet, to his infinite concern, she never brought a litter but exactly similar to the pedlar's cur. He disposed of her to a friend of his in the neighbouring county, but to no purpose; the vixen still brought such puppies;—whence the Doctor tenaciously maintained, that bitch and dog may fall passionately in love with each other. The mare, perhaps, did the like with the quagga.

SEA SERPENTS AND COLOSSAL MEDUSA.

THE following extraordinary account has lately appeared in confirmation of the countless shoals of sea serpents which are to be seen off the coast of Bombay:—

"I, myself, have seen them for hours, accompanying the ship I was on board, in 1809, when going to Bombay; and every person I have spoken to on the point here, has appeared surprized that any doubt could exist about it. Those which I saw might be about 40 feet long, from estimation; they were beautifully coloured, and moved as rapidly as the ship, going seven or eight miles an hour: smaller ones were still more common. On the coast of this island an immense *medusa* was thrown on shore, in a violent gale of wind, in 1819; it was within seven miles of my Belomber estate. It must have weighed many tons. I went to seeit when the gale had subsided, which was not for three days after its being cast on the sand; but it had already become offensive, and I could not distinguish any shape. The sea had thrown it high above the reach of the tide, and I instructed the fishermen who lived in the immediate neighbourhood, to watch its decay, that if any osseous or cartilaginous part remained, it might be preserved: it rotted, however, entirely, and left no remains. It could not be less than nine months before it disappeared; and the travellers were obliged to change the direction of the road for nearly a quarter of a mile, to avoid the offensive and sickening stench which proceeded from it."—*Extract of a Letter from C. Telfair, Esq., July 20, 1827, to R. Barclay, Esq., of Bury Hill.*

ON THE

COMPARATIVE INFLUENCE OF THE MALE AND FEMALE IN BREEDING.

BY M. GODINE, JUN.*

FROM the commencement of my studies in Veterinary Rural Economy,† I have observed that the most interesting problem to be resolved, in order to the preservation, improvement, &c., of the various species of domestic animals, was to determine, as far as possible, by experiments and facts, the part or portion of influence that the male and female separately contributes in reproduction.

Having profited by all favourable opportunities to make observations and follow up my experiments during the time I occupied the Hygiæn chair at Alfort,—since which time I have not lost sight of the subject, which I consider as the proper basis of all plans for improvement,—I believe it useful to draw the attention of Agriculturalists and Veterinarians to an attentive observation of my researches. My object is to submit my deductions to sound criticism—a crucible which tries and examines all doctrines. I shall first give the observations and experiments I have made upon this subject, and endeavour to deduce from them the conclusions which appear to result therefrom. All the authors who have written on the management of horses in Arabia, appear to agree upon a point which is completely at variance with our European ideas respecting the influence of the male. I allude to the preference which the Arabs give to the mare, and the almost exclusive share which they attribute to her in maintaining and preserving their breeds. They are so deeply imbued with this idea, that nothing can induce them to sell a mare of the pure blood of Mahomet. If we may credit all these writers, the Arabs attach but little importance to the preservation of stallions of the same blood: they assure us even that they sell them without hesitation, whilst nothing can induce them to part with a valuable mare. This opinion, directly opposed to that observed in Europe, of the very marked influence of the male, and his superior importance in breeding;—is it a prejudice or superstition of the Arabs, or a fact incontestably proved? Now we should have no certain opinion to give on this point, if M. Damoiseau, Veterinary

* Journ. Pract. Médecin Vétérin., March, 1828.

† It is to be observed, that Rural Economy forms part of the Veterinary education in France.

Inspector of the Horse-market of Paris, had not furnished us with documents which appear to decide the question. This Veterinarian has lived several years among the Arab tribes of the Desert, and observed all the customs of this wandering people; and, besides that the facts which he states are in accordance with the best authorities in Europe, his remarks leave no doubt as to the motives of this belief of the Arabs. The Mussulmen, like all superstitious people, venerate everything which has had any connexion with their great men. We know that, from time immemorial, the Arabs of the Desert have been mounted upon mares, which they regard as the most valuable part of their property.

Mahomet, wishing to make known at Mecca, his native country, the great victory near Demas,—a victory which secured to him the sovereign power,—chose a hundred of the best mounted horsemen of his army to carry this interesting news; and ordered them to cross the Great Desert which separated these cities without stop or halt. Five only of these horsemen, mounted on their mares, arrived at Mecca; the others remained on the road, their horses having perished with fatigue.

To immortalize this victory, and all those who had taken part in it, Mahomet wished to ennoble, in some manner, the five surviving mares: accordingly, he made them a privileged and separate race, bearing the name of *Koélana*, or the pure blood of Mahomet: they were kept with particular care by the nobles of the country, who stained them round the eyes with *koël*, from whence their name of Koéhlaan, which the Arabs pronounce Kohailan, and which travellers have changed to Kochlani.

We comprehend now the reason why mares are preferred before stallions in Arabia and Turkey; their superiority is at this day, in the eyes of all good Mussulmen, a religious dogma, which admits neither of discussion nor doubt as to its reality or inconsistency. It follows, however, from this origin of the Arab horses of the first race, that they necessarily sprung from individuals of vigour and extraordinary strength; and who, by that alone, deserved to form a stock of great distinction. The brilliant qualities of the horses of the Desert fully justify, at this day, that high reputation: however, the Arab mares which have been transported to Europe at different periods, particularly with the army of Egypt, have not given us, especially in France, any proof of their superiority over the male horses of the same race, either for service or for breeding; notwithstanding the care they have received, they have not shown the same energy or the same capability of labour.

Covered, in France, by very distinguished stallions of the same blood, they have given produce inferior to the mongrel race bred from French mares and Arabian stallions. The English, more experienced in this matter, have made the same remark upon the produce of the pure and mixed breed of Arabian horses; they prefer, with reason, colts bred from their own mares and Arabian horses. They have even a sort of predilection for the mixed breed, especially on account of their increased height; which point is not acquired to the detriment of their vigour or speed. Is this degeneracy of the Arab mare transported to Europe, an effect of the change of climate, less sensible in the male than the female? We wish to form no conjecture on this subject, we seek only for facts; and we are not prepared to offer a reason for this observation deserving the attention of judges and physiologists.

According to the tradition of the Arabs of the Desert, the *Nedjud* was the *berceau* of their horses; also those of the pure race bore the name of Nedgdi. It is from this source that the *Koéhlaan* horses descended, divided into five families, sprung from the five mares who bore the news of the great victory of Mahomet. The distinctive names of these five breeds are—*Séhlauré* or *Selavoïs*, *Maniquyé*, *Zelphiza*, *Tréffyé*, *Tonayséy*, the names of the favourite mares of the Prophet; he made them anoint their eyelids with *koël*, as a distinctive mark of the individuals of illustrious families of those countries, and which is only applied to descendants of reigning princes. This tatooing is common in Asia and Africa, and belongs only to the chiefs of tribes. The Arab superstition adds, that Mahomet, wishing to enoble the five mares, placed his finger upon several parts of their bodies, saying to his people—"Behold the horses which the Prophet of the true God sends you to combat the Infidels." These marks are transmitted to their descendants, say the good Arabs, who thus explain the intermuscular cavities which are observable in all well-bred horses, and which horsemen have called *coup-de-lance*. This explanation deserves to figure in the *Arabian Tales*, since it is very certain, that before Mahomet, the Arab horses bore these marks *(de coup-de-lance)*.

According to this tradition, it is since this warlike Prophet that the races and families of Arab horses have been preserved and perpetuated by the dams; it is thus that a colt bred of a Koéhlaan dam and a sire of the Nedgdi race, is called Koéhlaan, the genealogy of the Arab horse being transmitted only by the maternal side; as they call a Nedgdi colt, that which is sprung from a dam of that race and a sire of another noble breed.

The Bedouins, or wandering people of Arabia, very much spread over Africa and Asia, are exceedingly scrupulous about the choice of a stallion: among them it is a crime to cover an Arab mare with a stallion less noble than herself; also they only admit to cover, such horses whose descent is well known. When they couple them, they draw up a certificate as rigorous as that which proves in Europe the birth of a prince: this document contains the true pedigree of the mare and the stallion. If she is found in foal without the male and female being verified, or if she has been accidently covered, in the fear alone that this mare may have been undermatched, her colt is regarded as a bastard, and consequently ranks in the common class of horses without pedigree,—which they call *Gdich*, pronounced *Guedich*,—however beautiful he may be; and such a colt is sold at a low price: thus there may be found among these discarded animals, horses of great value, and which can dispute for beauty and speed with the Arab of noble blood. In all these cases of chance produce, they cannot be bred of inferior sires; since the Arab quits his mare but little, and it is always by stallions of blood, which belong to the Arabs of the same tribe, that these clandestine intercourses take place, for the Bedouins have seldom horses but of noble race. I form these conclusions from the above facts, that it is not then true, as authors assure us, that the Arabs attach no importance to the choice of a stallion; and that, although their breeds of horses deduce their pedigree only from the maternal side, they do not the less admit the necessity, in order to preserve their original purity, to cross the mares with stallions of noble and well-known blood; that it is to this scrupulous care that they owe, from time immemorial, the preservation of these precious breeds; that it is from attachment to the precepts of the Koran that they are called by the name of the dam, and not from the opinion that has been falsely adopted by writers, of their denying the influence of the male, whose important share in his productions cannot be doubted in any part of the globe.

The horses of the Bedouins are always in their primitive state of purity; never have they been crossed with other races: they keep among them the most perfect horse, and prefer using their own stallion, although old and blemished, to employing a strange one, however perfect he may appear to them. Among the Oriental nations who lead a wandering life, we are acquainted with two other breeds, which are descended directly from the Arabian horse. The first, which is the most pure, is found among the Kurdes, who inhabit the borders of the Euphrates, in Mesopotamia, and who wander in the mountains

of Kurdistan: their horses being descended from the Arabian race Koéhlaan, they are preserved in their state of purity, but the climate, the food, and other causes, have changed their primitive form; they are higher, and although as hardy as the horses of the deserts of Arabia, the Kurdes are more furnished, which they owe to the excellence of their pastures in those regions: the Pachas and Turks of distinction prefer the Kurdes' horses to those of the Arabs, as being fitter for war.

The people of Kurdistan always admit the superiority of the pure Arabian stallion, and choose him in preference to leap their mares: they keep with particular care the descent and pedigree of their races, and have a custom of slitting the left ears of horses foaled on a Friday, a day sacred to prayer and the Prophet.

Twelve leagues from Killis there is a tribe, among which all the horses are mutilated by cutting off the tail, but not by castration: the reason given for this custom by the people of the tribe is, that they have adopted it to prevent the officers of the Pachas, who command in those countries, from robbing them of their horses.

The second breed, or Turcoman horses, spring from the Hoéhlaan: they take their name from a wandering people so called, who inhabit the fertile plains of Syria, in the neighbourhood of the city of Antioch, upon the borders of the Orontes. These horses are stronger, and more ordinary than the Kurdes; their form is more muscular and fleshy: they are found, however, to be very good, especially on the side of Jaffa, although the Bedouins call them *Gdich*, or *Guedich*, that is, bastards. They have the head large, the shoulders heavy, the tail thick and bushy, the coat coarser, and not so soft. The Turcomans, as well as the Bedouins, live by plunder; they surprise and rob the caravans, consequently that their horses should possess courage, swiftness, and hardihood: however, they are less temperate than the Arabian horses. The Turcomans are careless in their choice of stallions.

[*To be continued.*]

ROYAL VETERINARY COLLEGE.

A Black Cart Gelding—Six years old,

Belonging to Messrs. Hanbury and Co., was admitted into the Veterinary College stables on the 25th of January last, with the penis (or yard) hanging down from the sheath, considerably swelled and excoriated; apparently occasioned by a stricture of the prepuce, or sheath, preventing the return of the penis in its usual way.

The horse remained at the College till the 6th of March; during which period the following various treatment was pursued:—

Leeches, goulard water, bread-and-water poultices, warm water, fomentations were applied to the part, scarifications also resorted to, and the penis suspended by bandages; purging, diuretics, and rowels were not forgotten, and the horse was then taken away relieved.

On the 18th of March, this horse was again admitted with the penis swelled, which was supposed to have been occasioned by some stimulating application having been applied to the part.

Fomentations of warm water were directed to be frequently used, the penis kept up by a bandage, and the horse purged.

24th. Punctures or scarifications were made in the part, which was again ordered to be suspended, and the purge repeated.

28th. The penis and prepuce continued in much the same swelled state; bread-and-water poultice was directed to be applied.

April 3d. Eight pints of blood were ordered to be drawn from the femoral vein, the poultice continued, and the horse again purged. The swelling of the parts was a little reduced by these remedies.

8th. The sheath was more swelled, and the stricture of the prepuce was divided (as the horse could not void his urine) by Mr. Vines, and the horse relieved.

9th. Cold water was ordered to be applied to the part, and the horse to have a diuretic ball.

12th. The cold water was continued, and the horse purged: tincture of myrrh directed to be applied to the prepuce twice a day, and the penis supported, as before, with a bandage.

The prepuce continued very much thickened and enlarged, and the penis partly drawn, but was occasionally retracted, showing that the parts were not completely paralyzed.

Purging, and the application of a wash of sulphate of zinc and alum lotion, till the

17th. When tincture of myrrh was directed, and the horse to be again purged. The same treatment, with tincture of myrrh, and the penis still suspended, was pursued till the

25th. The horse was again purged.

29th. Half an ounce of white hellebore root *(veratri radix)*, in powder, mixed with a pint of water, was ordered to be given to the horse; and on the

30th. Six drachms of the same drug in a quart of water was given.

May 1st. One ounce of white hellebore powder, in three pints of water, was given: this dose produced great suffering to the horse, but ultimately its effect passed off.

3d. The penis was amputated by Mr. Sewell.

Alas! luckless pego, cut off in thy prime!—not "at one fell swoop," "but by slow and cautious cuts." A cut—a burn; a cut—a burn; again—a cut and burn; a cut and then a burn.

Considerable hemorrhage followed this *peculiar* operation; and cold water was directed to be constantly supplied, to *extinguish* the effect of the *hot iron*.

5th. The horse voided his urine with great difficulty, and in small quantities; appeared very much depressed in strength from loss of blood, which continued to be discharged at intervals. Fifteen grains of Croton powder were given, and a clyster of warm water.

Professor Coleman, during his perambulations, two days after the operation, inquired if the horse could draw his yard!—(Query.)—Who is the consulting Veterinarian?

A wag observed—"The poor member was '*drawn* into a bottle,' and deposited in the Museum."

6th. The sheath was still considerably swelled, and suppuration had taken place. It was directed to be fomented frequently with warm water.

7th. The fomentation was directed to be continued, and the horse to be purged.

9th. A seton was made under the belly, and the fomentations ordered as before.

10th. The sheath was increased, from the irritation of the seton, and there was considerable tumefaction under the belly. Purged, and the fomentation continued. Turpentine ointment to be applied to the seton.

13th. Considerable swelling from the seton, and the sheath much in the same state.

17th. Same treatment was pursued up to this time, when the

fomentation was discontinued, and half an ounce of white hellebore powder directed to be given in water.

The horse was taken away on the 23d, with the seton remaining, and the enlargement and thickening of the sheath, though somewhat reduced in size from the swelling, far from being cured: the part originally diseased still remaining.

ROYAL VETERINARY COLLEGE.

On Wednesday last, the 28th of May, the annual meeting of Governors and Subscribers to the Veterinary College took place at the Thatched House Tavern, St. James's Street, when about twenty only attended. The business was, to use a common phrase, "ready cut and dried" by previous private meetings; and, of course, was so managed as best to suit the purpose of the Professor, Secretary-Treasurer, and Co.

We understand that Messrs Cherry and Goodwin offered some spirited remarks and remonstrances on behalf of, and with a view of benefiting the Veterinary Profession; but, as we anticipated, with little effect. The time will come, however, when the labours and perseverance of these veterans in so good a cause will not be entirely thrown away.

MONKEYANA.

Some eminent writers have entertained an hypothesis, that mankind arose from one family of monkeys, on the banks of the Mediterranean, who accidentally had learned to use the *adductor pollicis*, or that strong muscle which constitutes the ball of the thumb, and draws the point of it to meet the points of the fingers, which common monkeys do not; and that this muscle gradually increased in size, strength, and activity, in successive generations; and that, by this improvement in the sense of touch, monkeys acquired clear ideas, and gradually became men.

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REMARKS ON THE ROYAL VETERINARY COLLEGE.

Addressed to His Royal Highness the Duke of Clarence, as President.

His Royal Highness the Duke of Clarence has recently condescended, it appears, to accept an office that associates him in some degree with our profession,—President of the Veterinary College.

It is so common for individuals in exalted stations to lend the sanction of their names to Institutions having the semblance of public benefit, that this circumstance, notwithstanding the singular mode of its annunciation to the subscribers of this misconducted and abused establishment, might well have passed without comment; but for the extraordinary and astonishing observation made on that occasion by one of the Governors, "that His Royal Highness was desirous to express *his high approbation of the manner in which the affairs of this Institution are conducted!!!*" This praise was unnecessary, and, perhaps, superadded; but if such a feeling were really expressed by His Royal Highness, it is clear that he has never seen the Rules and Regulations of this College, that he is unacquainted with the present state of the Veterinary profession, and has been led into a belief, by interested men, that it is the great source and support of true science; whereas it is now the sole means of suppressing it. This assertion may appear to be easily made and difficult of proof, but we who are honestly labouring to impress the public with a true sense of the magnitude of their losses, through the system of education and treatment pursued at this College, will take leave to lay before His Royal Highness a short statement of facts, by means of which he will be enabled to judge of the benefits it confers upon the nation, and see what it now does, and what it *ought* to, perform. It must first be premised, that within the last half century the Veterinary art, throughout Europe, has risen from the hands of ignorant and illiterate men, and taken its proper stand as a liberal and honourable profession.

Previous to this period, two Royal Colleges were established in France, supported by the government, on a grand scale—Professors

appointed to each separate branch of the art, superintendents appointed —students obliged to study at least three years, and finally undergo a strict examination before a well-qualified committee of Veterinarians, with whom France comparatively abounds, and where also the profession is entirely free from dependence on *Doctorial* aid, and is respected accordingly as a distinct and separate science. Mark the contrast. We, in England, were late in adopting public measures on this subject: there were good practitioners before this Institution was thought of; and we have no hesitation in saying, that it would have been better left to the "march of intellect" and exertions of private individuals, than to be fettered, as it has been, by private opinions promulgated under public authority. Our College (as it is called) was established by a society of noblemen and gentlemen, in 1792; but becoming embarrassed in its affairs, on the death of its first Professor, St. Bel, the original laws were neglected, and it fell into the hands of a medical gentleman, at that time ignorant of Veterinary affairs, under whose conduct it has since continued, and whose theories, adopted in haste and inexperience to meet the exigencies of his elevation, have since been taught and disseminated, instead of practical doctrines. Some years after, government attention was directed to the subject; and as no other school existed, it became a public concern, in consequence of grants of money from Parliament in consideration of supposed benefit accruing to the army service by the introduction of Veterinarians. It is chiefly supported by about 1200 subscribers who send their horses there, partly because it is called the College, partly because the patients are treated and obtain medicines at a much cheaper rate than can be afforded by any private practitioner.

Under the pompous title of a College, it is simply a livery-stables or Infirmary for Sick Horses, under the direction of a single Professor and his Assistant, who are virtually masters of the Institution: the former holds also a plurality of offices in the army. Thus he has the sole patronage of the Veterinary department of the cavalry; and the latter is both Treasurer and Secretary to the Institution.

About sixty pupils, from all parts of the kingdom, come annually and pay twenty guineas each to the Professor. There is not here, as in France, instruction on each branch of the art; they are left to teach themselves in anatomy, pharmacy, and in the performance of operations; they come and go when they please; and, finally, instead of a proper practical examination, they appear before a Board composed—not of Veterinarians—but of medical gentlemen, who gravely question, pass, and pronounce upon the competency of

students to practice an art of which they themselves are ignorant. No stated period of attendance is required; and it has been no uncommon sight for a raw shopkeeper to obtain, in a few months, the diploma of these gentlemen, authorising him to enter on a profession (the medical and surgical treatment of dumb animals) demanding, beyond a doubt, more judgment than any other.

It is to the insufficiency of this College, when compared with the importance of its objects to the state and the nation at large, to which we would more particularly direct His Royal Highness's attention. We call upon His Royal Highness to declare whether a fresh midshipman can ever be fit to command a vessel after only four months probation: there are lubbers in stables as well as lubbers at sea; and it cannot, surely, be less difficult to learn the anatomy, pathology, and medical treatment, of a living animal, than the tactics of seamanship. Yet this time has often sufficed, and the consequences of such admissions are to be seen in the degradation and debasement of the profession. As a matter, certainly, of minor importance, the shabby building that is dignified with this high title and pretension, is a disgrace to the country from having the character of a National Institution, and to the profession from containing only a miserable museum and utterly contemptible library. Since His Royal Highness has evinced such a laudable activity in visiting the Navy-yards, it would be by no means out of character to look in upon those cavalry gentlemen who have been so anxious to make our Royal Sailor President of their company, visit them in their camp, and take a view of the arrangements. This would be more than they contemplated; for, however desirous they might be to secure the patronage of His Royal Highness's honoured name, it was with no wish to be subject to his scrutiny, or troubled with his commands. It would add to their consequence to walk in the light of the Heir-apparent, while they secretly hope to find a nominal commander in the Lord High Admiral of England.

He will keep to his ships, say they, and leave the horses to our management. Without doubt, His Royal Highness has been told that the public in general have derived the greatest advantage from the Veterinary College. That many well-informed men have, of late years, adopted this profession, and improved it even in spite of the false doctrines they learned at St. Pancras, is very true; but we boldly assert that not one of Professor Coleman's peculiar hypotheses, on any given subject, has been practically useful to the country, in comparison with his numerous flagrant errors; and that no system could have been pursued more fatal to the horse, than that which has prevailed there

for the last thirty years. On the subject of shoeing, for instance, he has been so completely (craving pardon of His Royal Highness) at sea, as to maintain that the greatest pressure of the shoe should be on the softest part of the foot; and, in accordance with this principle, (frog pressure to wit) has taken out three patents for his private profit, but which he cannot prevail on his pupils or the public to employ. To have persevered in false doctrines on this point, is less culpable than to have opposed the truth; when it is known that the average life of the horse, in a natural state, perhaps thirty-five years, is cut short, in most instances, to twelve or fourteen, through the diseases brought on by the common practice of shoeing, which continues the same as when the College was instituted. No transactions, no useful works, not a single course, of experiments have been published by the College; and yet His Royal Highness will hear numbers say that Mr. Edward Coleman is an exceedingly clever man, and that the Veterinary art is greatly indebted to him. We will tell His Royal Highness what he can do, and what his performances have been. He is a man who does not change an opinion he has once formed, but can always support it by specious reasoning;—who pays more attention to exceptions than to general rules;—who is master of all the arts of persuasion; and, when seated with fifty raw pupils around him, can make them believe what he chooses—and best, when they cannot understand him. His performances have been of a nature that might be expected from such talents; always succeeding in pleasing and persuading his pupils and hearers, and opposing new doctrines, he has maintained popular favour from year to year by his address, without having done anything to merit it. His printed books are the living records of his errors, and he has wisely published nothing for the last twenty-five years.

When the immense public importance of that noble animal, the horse, is properly considered, His Royal Highness must readily agree that such an Institution, so conducted, and producing such fruits, is totally inadequate to the ends and objects in view, and a reproach to the British nation. It has hitherto had no rival; but we believe the time is not far distant when the Veterinary art will cast off the trammels of private monopoly, and all its accompanying evils. If His Royal Highness has actually been led, by the representations of interested and designing men, to express high approbation of the manner in which the affairs of this Institution have been conducted, he may be assured that he is lending the shield of his sanction, unwittingly, to a system which, from the certain consequences of its own venality and inefficiency, is drawing fast to a close. We entreat, therefore, His

Royal Highness's most serious attention to the subject; nor can anything insure him a more certain place in the hearts and esteem of Englishmen, who love and value their horses, than the credit of reforming an establishment so laudable in its objects, yet so miserably perverted.

APPEAL TO THE VETERINARY PROFESSION.

THERE has been found, in the history of all corrupt governments, whether of nations, corporations, or colleges, a period at which they became past hope of reformation.

Previous to this epoch, attempts may have been made to alter a part of their narrow and crooked policy, with some slight prospect of success; but corrupt bodies will seldom yield to the suggestions of reason or the demands of justice; and when they retire sullenly from the field of argument, entrench themselves amidst their prejudice and abuses, bidding defiance to the complaints of the aggrieved party and the opinion of the world, it should always be considered as a good omen. For this is precisely the point at which their situation is precarious; men who are easily put off with pretences, will rouse at a flat denial of all the rights they ask; and it is equivalent to saying, we will grant you nothing; our system is so rotten that it may be compared to a crumbling building, of which, if you remove one stone, the whole will come down together. Such is the present state of that vile oligarchy which has so long tyrannized over the Veterinary profession.

It has just offered us the last insult—the final indignity, by declaring that neither now, nor hereafter, will its members admit Veterinary surgeons to their councils, nor even permit us to have a voice in electing our own associates. Nay, they have gone farther than this. But in stating the facts, let us be careful that blame be thrown only where it is due; and here we cannot avoid becoming personal. We are all aware of the exorbitant power that Mr. Coleman has exercised for many years, and that in his trade of Veterinary surgeon manufacturer to the three kingdoms, he has been aided by an examining Committee of medical gentlemen; and that he has, in many instances, executed his orders with too much dispatch to guarantee the good quality of those he sent out. It is not our intention to say aught of the individuals composing this Medical Committee, except that some of them,—Messrs. Green, Bell, &c., particularly, are eminent as comparative anatomists, and quite in their right places; but there are several others who appear to have no proper business there, and whose seats should

be occupied by practical men. The Professor and his Assistant, Mr. Sewell, are the only Veterinarians; and when the peculiar doctrines of the former are considered, it will easily be seen that they *can* admit no others; for there is not a single eminent practitioner who will coincide with them on points of practice, or who would not have occasion to reject nearly every pupil for those very answers that he has got by rote to meet the day of examination. On that important subject, for instance, the Foot and Shoeing, Coleman's doctrines have been denied in print, and given up in practice, for years past, as foolish and impracticable. With no other Committee, therefore, than the present, can the system be carried on; for, in this, he has the matter all his own way. We foresaw what would happen when the first regular attempt was made to introduce Veterinarians. The plan has been laid before the Governors at two succeeding meetings; it has been bandied about between them and Mr. Coleman, and the Medical Examiners, and finally quashed in such a manner as to make it appear the act of the latter body. They once proposed to have a distinct Committee, consisting wholly of practitioners, with the two Professors, but the Governors objected to this plan, and the Examiners to the other, until, at length, at the meeting of the 18th June, the mask is thrown off, and we are flatly told "that the Medical Committee will admit no Veterinarians;" and further, to show that this was not a mere negative resolution, but the result of an active, arbitrary spirit, a law is proposed to exclude Veterinarians, merely because they are such, from all public or general meetings where other subscribers are admitted. The reason for this is very evident—none but practitioners know, or can expose, the manifold abuses in the government of the College, and the practice of its Professor.

But let us not be so blind as to suppose either that the Governors are concerned in thus withholding from the profession the rights which are enjoyed by other subscribers, or that the gentlemen composing the Examining Committee (excepting Sir Astley Cooper) have any real disinclination to admit a fair share of Veterinarians. No, it is Mr. Coleman, who dreads a scrutiny—who is the real author of this measure;* and it is not the first time (we shall be understood) that he

* It will not be disputed, that Mr. Coleman's power over the minds of the Governors is despotic. If he chose to declare that Veterinarians were necessary on the Examining Committee, what could hinder their admission? The Board of Examiners are equally swayed by him and his tried friend, Sir Astley Cooper, a firm supporter of the ruling powers, and perfect master of intrigue. The examinations are held alternately at their private houses, and all business is

has contrived to nonsuit the deserving applicants by underhanded means. If any one doubts that it is the act of the Professors, Mr. Sewell's mode of following up this arbitrary law will afford an evidence of their real feelings of hostility towards the independent members of the profession. We have been well informed, that he has thought proper, on his own authority, to declare that no Veterinarians shall be subscribers, and forbids the clerk to accept any subscriptions from them for the future; and this we repeat is on his own sole responsibility;---so that a practitioner who may have a case beyond his own skill, or on which he may wish to have the highest reputed opinion, is precluded from sending it to the College, either for his own benefit, or that of the pupils, because these thorough-paced monopolists are afraid of permitting any one to see their deeds, who is capable of exposing their ignorance.

This may be called an act of desperation: having rejected the just claims of the profession, they deem it no longer necessary to disguise their intentions; they deny us even common rights, and heap insult on indignity. Does Mr. Coleman mean to say that he can find no Veterinarians qualified for the office, among the hundreds whom he has taught during 35 years? He dare not urge such an argument: then he must admit that he solely opposes their election, because his peculiar system could not continue, if independent practitioners were to examine the qualifications of his pupils.

We shall not multiply comments upon proceedings so flagitious; if the Veterinary profession are dead to all proper sense of their own honour, it shall not be our fault that the facts of their degradation are not fairly placed before them and the public.

Many of our readers doubtless may have been pupils of Mr. Coleman, and have received favours equivalent to their 20 guinea fee; but allow us to remind them that there is a point where gratitude should cease; that the welfare of the profession is distinct from his aggrandisement; though hitherto he has succeeded in persuading many, that all who opposed his monopoly were enemies to the College and to science.

We are friends to the art and to the College; but, in common with every well-wisher to their advancement, we most cordially reprobate the conduct of the College rulers.

previously prepared in the same close conclave. Those best acquainted with the subject, however, will not need these facts to be persuaded, that let who will be the nominal Governors, Mr. Coleman and Sir Astley are the real ones.

LONDON VETERINARY SOCIETY.

HAVING presented our readers with the proposed Laws and Regulations for a new Society in our last number, we shall now proceed to give some account of the progress which it has made during the intervening month.

At the meeting on the 10th of June, a considerable number of respectable practitioners attended, several of whom, in their zeal, had come many miles from various parts of the country.—Joseph Goodwin, Esq. in the Chair.

The Laws and Regulations were discussed, and finally adopted, with a few alterations which we consider as improvements. On the members proceeding to the election of officers, self-interest *versus* independence and science became too evident, the veil was rent in twain, and the cloven foot clearly visible. A coalition had apparently taken place, and a party formed for the express purpose of setting Mr. Coleman forth, and placing him in the Chair, as their President; though, in a letter to the Secretary, with the utmost condescension, he stated, *that he could only accept the office on condition of not fulfilling its duties;* for, be it remembered—Oh fie!—that this wholesale dealer in patronage, places, and patents, had accepted even this office, and that too, before his election.

Those independent and well-wishing members who attended for the purpose of establishing a truly free and useful Society, strongly opposed the election of a man who, by his prejudices, patents, and medical committees, has thrown such obstacles in the paths of Veterinary science, and such discredit on the members of the Veterinary profession. Many very strong and well-urged objections were also further offered why Mr. Coleman should not be regularly invited to become President, particularly by that veteran in our excellent cause, Mr. Cherry, whose arguments had considerable effect on the meeting.

On its being proposed by Mr. Wm. Goodwin, and put to the vote, that Mr. Coleman should be invited to become their President, the insult offered to many of the members by this proposition became evident, and the upright and manly course which the Chairman pursued in giving the casting vote against Mr. Coleman's election, established the independence of the Society.

The Society having now decided that the President should be elected from their own members, Mr. Percivall, sen., was proposed, but modestly declined the honour. Mr. Joseph Goodwin was then proposed

by Mr. Cherry, and seconded by Mr. Percivall. Mr. Goodwin left the Chair, and observed, that he wished the question to be decided impartially. At this important period of the proceedings, those who had evinced a determination to place Mr. Coleman at the head of the Society, appeared disposed to break up the meeting, rather than allow the ballot for Mr. Goodwin to regularly proceed.

An adjournment was then moved to Tuesday, the 17th, at six o'clock.

At the adjourned meeting, F. C. Cherry, Esq. was unanimously called to the Chair, Mr. Joseph Goodwin having communicated, by letter, his intention of retiring, chiefly because he had seen with regret that it was the wish of some gentlemen, on the previous evening, "to make it nothing more than a Coleman club;" and also partly on account of his health. Much regret was expressed by the members at this determination of Mr. Goodwin.

The minutes of the former meeting having been confirmed, and other business disposed of,

It was unanimously resolved, that the thanks of the Society be presented to Mr. Youatt, for the use of his room.

The following subjects were announced for future discussion:---

On Broken Knees, and their Treatment, by Mr. F. C. Cherry.

On Blistering, and the Methods of exciting Irritation of the Skin of the Horse, by Mr. E. F. Cherry.

Mr. Rogers produced a diseased brain which exhibited two singular tumors of the plexus chorodes: the particulars of this case, Mr. R. promised to bring forward at the next meeting.

Mr. F. C. Cherry exhibited a preparation of a strictured larynx, in consequence of a blow from the shaft of a chaise, near the point of the sternum. The mare became a confirmed roarer, and even with difficulty respired at all. The operation of Tracheotomy was performed by Mr. Cherry, which completely relieved the breathing; but, as it was found that whenever the canula was withdrawn, and the wound permitted to close, that all the symptoms returned with violence, it was at length judged necessary to destroy the mare.

It was then moved by Mr. Rogers, and seconded, that a summary of the proceedings be transmitted to the Editor of "The Lancet," requesting their insertion in his journal.—Carried unanimously.

Resolved, that the next meeting be held on Tuesday, June 24th, at Mr. Dermott's Anatomical Theatre, in Little Windmill-street; that gentleman having most liberally offered it for the use of the Society. The meeting then adjourned.

At the further adjourned meeting, held at Mr. Dermott's Theatre, the Society assumed a more regular appearance. F. C. Cherry, Esq. was unanimously elected President. It was moved and carried, that the 10th Regulation, relating to the invitation of the Medical Examining Committee and Lecturers, should be acted on by the Secretary.

The following subjects were proposed for discussion at the next meeting:—

Neurotomy, and the state of lameness proper for its employment, by Mr. R. Rogers.

Inflammation of the Lungs, and the treatment.

The diseased brain, exhibited on the last night of meeting, was again produced, and the particulars of the case detailed and discussed. It appeared that the animal died from inflammation of the brain, preceded for some time by dullness; but whether the tumors or overexertion had been the exciting cause, was doubtful.

Much interesting conversation, relative to broken knees and fractured limbs, took place. Mr. Molden, of Winchester, a long established practitioner of the school of St. Bel, related some remarkable cases which had occurred in his practice.

An excellent paper on blistering, and the relative value, strength, effects, &c. of the various substances employed for that purpose, was read by Mr. E. F. Cherry, and discussed by the Society.

An adjournment was then moved, to Tuesday, July 8th, at seven o'clock. Several medical gentlemen were present as visitors, and took part in the debates, and a general invitation was expressed by the members to their Veterinary friends, as well as to medical gentlemen for the next meeting.

OBSERVATIONS

ON THE

DISSECTING AND PREPARING OF THE BODIES OF ANIMALS.

BY PROFESSOR CARUS.*

THOUGH the art of anatomising the bodies of animals is essentially the same as that practised upon the body of man, and though want of space precludes me from treating the subject minutely, I conceive that

* From Introduction to "Comparative Anatomy," by Professor Carus, translated by Gore, vol. ii. p. 389.

a few remarks may not be altogether unacceptable to those who feel desirous of pursuing such studies for themselves.

The first thing that I have to observe is, that all dissections of small and soft objects, *e. g.*, worms, zoophytes, insects, mollusca, and embryos, where it is desirable to obtain even tolerably accurate results, should be performed *under water*, by which the parts are kept floating and separated from each other; and, consequently, present themselves more distinctly.

A very simple contrivance for investigations of this kind may be prepared in the following manner:—A mass of tough wax (not too soft) is to be laid upon one or more porcelain saucers or capsules, of different sizes, which are then to be put in a warm place until the wax melts so as to cover the surface evenly, to the depth of a half, or one-third of an inch. If the object to be examined be laid upon this surface, it may be fixed by needles in any position that is wished; and, when covered with clear water, developed and dissected by means of suitable instruments. Of them, the best are very delicate forceps; pointed, well-made, sharp-cutting scissars; and small knives like cataract-needles, some round, others with cutting edges, and fixed in slender wooden handles. For separating parts, I have also employed small horn probes and fine brushes; whilst, for examining them, a good magnifying glass is frequently indispensable.

If it is wished to preserve a preparation thus made, wax, coloured at pleasure, as for the purpose of injections, is to be formed into little tablets about one-fourth of an inch thick: one of these is then to be placed upon the saucer or capsule containing the preparation; the latter may then be transferred to it, arranged suitably upon it, fixed there by means of short needles, and both together then placed in alcohol. Nor must I forget to mention, that the examination of very delicate organizations may frequently be conducted with greater facility and accuracy, if the object be previously allowed to remain some time in spirits, and thereby to become hard and contracted. This applies particularly to the dissection of nervous organs, and to the examination of very small embryos, of mollusca, and worms.

There are various modes of destroying worms, insects, mollusca, &c., for the purpose of dissecting, without injuring their organization. Mollusca,—snails, for instance,—as Swammerdam has remarked, are to be allowed to die in water, because, by that means, their bodies swell, and all the parts become more distinctly visible: they may afterwards be kept in spirits (though not too long) for dissection.

Worms, the larger zoophytes, (for the smaller must be examined

whilst alive,) caterpillars, &c., and also the small amphibia, and fishes, are best destroyed by means of spirits. Insects, on the contrary, by being dipped rapidly in boiling water, or in oil of turpentine.

As regards the dissection of larger animals, we may here use, with advantage, knives of a larger size; and, instead of forceps, suitable hooks with handles.

In animals of considerable size we can generally make artificial skeletons only after the bones have been sufficiently cleaned by boiling or maceration. In smaller animals, on the contrary, such as birds, amphibia, and fishes,—of which last, it is very difficult to make good skeletons,—the object will be best accomplished by at once making the bones as clean as possible, without injuring the capsular ligaments; soaking the preparation in water that is incessantly changed; and, lastly, bleaching it for some time in the sun.

Lastly, we may mention injections as affording a very essential assistance in zootomical investigations for physiological purposes: in small animals, and in the more minute parts, these must consist of compositions of wax, very fluid and coloured; but, above all, of mercury. The latter, however, is not suitable for very soft bodies, *e. g.* medusæ, &c., in which cases we may employ injections of coloured milk, and similar substances.

ON THE ADULTERATION OF VETERINARY DRUGS.

"You rogue, here's lime in this sack too: there is nothing but roguery to be found in villanous man."—Henry IV. Part 1st, Act II. Scene 4.

THE adulterations which are practised in the various articles employed by the Veterinary practitioner, are effected to a much greater extent than is generally supposed; and although there is as great a necessity for strictly attending to the genuineness of drugs, which are required in the treatment of diseases in animals, as to those used in human medicine, we regret to say that it is a subject so little attended to by the practitioner, who too often, from not being sufficiently acquainted with the real nature of drugs, so as to be capable of judging of their qualities, becomes a ready prey to the avarice of unprincipled men, who are ever to be found travelling the country seeking those whom they can impose upon, and cram with their vile trash, without regard to the credit of their customers, or the least feeling for the

sufferings of valuable and noble animals. From having repeatedly witnessed the ill consequences of this practice, we have been induced to take up the subject; but as a full exposition of the various adulterations would occupy much space, and cause repetition, we think it best to defer giving the particulars until the drugs and preparations are separately treated of, when the observations which we have to offer will be much better remembered, and the importance of attending to the subject more strongly impressed.

Those articles which are most commonly adulterated, are such as are purchased in the form of powder, essential oil, &c.; but other preparations are equally liable, when purchased of a druggist, as mercurial ointment, for which lard and ivory black are substituted in certain proportions; Venice and common turpentine, for which compositions of resin, oil, &c., are got up; powders of the various seeds, ginger root, &c., are constantly lowered with flour, bean, pea, oat, barley, or linseed meal, and much more frequently with finely ground sawdust; and in most drug-houses, a refuse cask is kept for the reception of all tincture dregs, and other waste articles which the concern produces: and these, when dried and ground into powder, form the basis of the different powders sold to Veterinarians as *genuine* powders of aniseed, caraway, diapente, &c., when properly coloured and scented with a little of the true seed, powdered. The common carrot root is dried and ground into powder by one firm, and sold in place of that aromatic and somewhat tonic root, turmeric; but though carrots are an excellent food for horses in a recent state, they become a very different one in dried powder—very inferior to any of the corn meals, though much superior in price.*

Now, as it is not by any means easy to detect these adulterations (any more than to get rid of a bad horse when you have purchased one), but by far more easy to avoid them, we shall proceed to lay down what we consider the best and most effectual means of avoiding them.

First, unless the practitioner give a good and fair price for his drugs, he has no right whatever to expect a genuine article (and as a good horse is rarely or never considered dear, so with good drugs they will even be cheap at almost any price); for if the practitioner wish a weaker effect from his medicines, he can very easily use a less dose, which he will not only find quite as economical, but will admit of this great advantage, that he will know with a certainty—what he is giving, and

* Dr. Reece, in his Gazette of Health for March, April, and June last, has made some very useful remarks and exposures on the practice of drug-grinders, well worth the notice of our readers.

what effects he ought to expect from its action; and all this too, without risk, danger, or disappointment, provided he be fully acquainted with the subject, and if he should not, we hope, by our future descriptions, to afford him some information.

It does not, however, always follow, that because a high price is given for a drug, it will invariably be good; much must depend on the credit of the seller: this, again, ought to strongly impress the necessity of every practitioner being able to distinguish a good from a bad or inferior article. In a catalogue of a large wholesale druggist, now lying before us, we observe a great many articles of different qualities, as Nos. 1, 2, 3, "with a request at the end, that their correspondents specify as explicitly as possible the particular qualities of articles they wish, as described in the foregoing catalogue." This we consider all very fair in the way of trade; for if people will have cheap articles, they ought to know they must be inferior, provided the No. 1 is genuine, and corresponds with the price given for it: but we have not had sufficient dealings with the house in question, to speak positively on the point; and it would perhaps be rather dangerous to set too high an opinion on any firm, as we know of one large house which prepares these adulterated powders in particular, for a considerable part of the minor houses and trade.

Secondly, by purchasing good seeds, roots, &c., such as caraway, aniseeds, ginger root, &c., and powdering and sifting them at home, which can very easily be done with a little labour, by pounding them with a large iron pestle in a mortar, then sifting through a fine wire sieve, and preserved in proper places; they will be always found far superior in effect to any of those which are generally sold, though the latter appear a better looking and finer article.

Those persons who prefer grinding their seeds, ginger-root, &c., can do so even much easier than pounding them, by having a proper hand-mill set up for that purpose; and so useful and convenient will these improved steel mills be found to the Veterinarian, that we can with confidence recommend them to their adoption, and they are now so made as to grind seeds, roots, &c. fine enough for use without even sifting.

The best mills for grinding these articles, which we have seen on inspecting a variety, are those made by Mr. Savage, Kenton-street, Burton-crescent, though we have not the least doubt but that there are many other good makers. The other suggestions shall be given under separate heads, in future numbers.

LITHOTOMY IN THE HORSE.

(From THE LANCET.*)*

"*Liverpool, 26th March*, 1828.

"SIR,—On Thursday last I operated upon a very valuable draught horse, for stone in the bladder, with complete success.

"Not having heard of any operation of the kind succeeding before, I shall feel obliged by your inserting the above in as early a number of the *Lancet* as convenient.

"I am, Sir,

"Your most obedient Servant,

"Veterinary Surgery, "ROBERT LUCAS, V. S.
"Great Charlston Street."

"[P. S. We should feel obliged if our Correspondent would favour us with the particulars of this operation.—*Ed.* L.]"

"SIR,—I perceive from Mr. Lucas's letter in your Journal, of the 12th April last, that he is not aware of the operation of lithotomy in the horse having been previously performed with success. For his information, and encouraged by your desire to be possessed of the particulars of the operation, I beg leave to transmit the following account of a case in which I operated successfully some years ago; it was published at the solicitation of the late celebrated Mr. James White, in the London Medical and Physical Journal for October, 1824.* About the same period an account of it was also given in the Sporting Magazine, and subsequently it has been quoted by Mr. Percival, in the 3d vol. of his valuable Lectures. I do not take credit to myself as the first operator in a case of this kind, for Lafosse, in his 'Dictionnaire d'Hippiatrique,' published in 1775, mentions one wherein he succeeded in cutting for the stone.

"But his mode of operating was complicated, as he made two lateral incisions in the neck of the bladder. Whereas by the mode I pursued, the whole was simplified, and the stone very readily extracted.

"I am, Sir,

"Your most obedient Servant,

"Guernsey, 17th May, 1828." "W. MOGFORD, V. S.

"*Case of Lithotomy successfully performed on a Horse, communicated by* JAMES WHITE, ESQ., *Veterinary Surgeon.*

"*To the Editors of the* LONDON MEDICAL AND PHYSICAL JOURNAL.

"GENTLEMEN,—The following account of the extraction of a stone from a horse's bladder, has been communicated to me by Mr. W.

* "It is useless to print papers in some journals. This operation, although performed, and pretended to be published four years since, is scarcely known to a member of the profession.—*Ed.* L."

Mogford, who was some years ago my pupil and assistant, and is now a respectable practitioner at North Lew, near Okehampton, Devon. Should you think it worth the notice of your readers, I will thank you to insert it in your valuable Journal.

"I am, Gentlemen,

"Your obedient Servant,

"JAMES WHITE.

"Wells, Somerset, Aug. 9th, 1824.

"The horse is the property of James Veal, Esq., near Hatherleigh, Devon. When taken up to be broke, he was found to be very restive, kicking off most of those who attempted to ride him; in consequence of this he received very rough usage, and has since been ridden rather hard. When Mr. Mogford was desired to attend him, he observed a peculiar stiffness in the movement of the hind legs; urine of a high colour and pungent smell, and a dribbling of urine from the penis for some time after staling; pulse between 70 and 80, and hard. By bleeding freely, clysters, fomenting and embrocating the loins, and a week's rest, he appeared sufficiently recovered to be sent to grass. He soon leaped over the gate of the field, and, crossing the country, got back to some pasture where he had been usually kept. This exertion caused a return of his complaint, and Mr. Mogford was again desired to attend him. He found him in the same state as before described. Wishing to examine the bladder, he introduced his hand into the rectum for that purpose, and immediately felt a hard substance, which appeared to him to be a stone in the bladder. He communicated the circumstance to Mr. Fisher, surgeon, of Hatherleigh, who could not be persuaded that it was a stone, until he had made the examination himself, when he also felt it distinctly. Mr. Mogford then proceeded to the operation in the following manner.

"Having drawn out the penis from the sheath, or prepuce, he passed a rod of whalebone up the urethra, until the end of it could be felt in the perineum. He then cut down upon the end of the rod, and through the opening thus made in the urethra he introduced a director; and with a probe-pointed bistoury, continued the opening as far as the left side of the anus. He then introduced his right hand into the rectum, and the two fore fingers of his left hand into the bladder, and, without any difficulty, pushed the stone against the middle finger, by which he guided it to the neck of the bladder, and then easily forced it out through the opening in the urethra. The stone weighed rather more than four and a half ounces. Some parts of the stone appeared to have been broken off and left in the bladder; these were easily removed by means of a piece of soft sponge tied to a whalebone probe, and some water. The wound quickly healed, except a small orifice, through which a part of the urine still passes; but the horse has worked hard since, and suffered no inconvenience from it. Mr. Mogford has no doubt that a stone of seven or eight ounces might be thus extracted.'

AN

INQUIRY INTO THE ROT IN SHEEP.

[Continued from page 264.]

CAUSES OF ROT.

It will naturally be expected, that, before the delivery of my own opinion, some notice should be taken of the various theories and hypotheses which have been advanced with respect to the Rot in animals.

The disorder has been imputed,

1st, To a vitiated dew.

2dly, To a gruft which adheres to the grass after wet weather, or the overflowing of running water.

3dly, To the luxuriant and quick growth of plants in hot, moist seasons.

4thly, To grazing upon certain herbs.

5thly, To fasciolæ hepaticæ, or their ova, being introduced into the stomachs of animals, by feeding on swampy and low grounds in moist weather.

6thly, It has been called the sheep pox, by Professor Vibourg, of the Veterinary College at Copenhagen.*

7thly, It is ascribed by Daubenton to poor diet, and drinking too much water.

8thly, It seems to be occasioned by poisonous effluvia, which, under certain circumstances, are emitted from marshy soils.

1st. It was formerly the received opinion, that dews, under various circumstances, differ very considerably from each other; and therefore we cannot be surprised that the Rot has been imputed to them. For the preservation of health, it was then judged necessary to close the windows of lodging-rooms before sunset, to prevent the introduction of night air. Since it is believed that aqueous vapours ascend from the earth during the day, and fall again in the night, to refresh the ground and vegetables, which had suffered by a hot sun, the dew is admitted to be pure water freed from earthy impregnations, and to be sent for wise purposes. If the Rot were occasioned by the dew, it should appear equally on all hands; but since it is only to be found in certain places, and under peculiar circumstances, I think it cannot be attributed to this cause.

2dly. By beating rains, I can easily believe that particles of the soil, or the gruft, as it is called, will be washed among the grass. In this way, sheep swallow it with their food, as they do on many other occasions; but how the texture and fabric of the liver can be so destroyed, is to me quite incomprehensible. Soft and continued rains are much more dangerous to sheep than violent storms; and flat and low lands, where the water does not discharge itself freely, and remains some time upon them, are most liable to rot animals.

* This is not properly a cause of the Rot.

3dly. In wet, sultry weather, the grass grows luxuriantly; and, at such times, it is well known, sheep are most exposed to the Rot; no wonder, therefore, that an attempt should be made to establish some connexion between this disorder and the herbs upon which they feed. And since no fresh vegetables could be supposed to spring up in a few hours, and be capable of producing such a virulent malady, they imputed it to some new and acquired properties in the plants themselves. If all luxuriant pastures were found to communicate the Rot in showery and hot seasons, this opinion would be more probable; but as the disorder is confined exclusively to certain grounds, we cannot suppose that it depends upon any change of vegetation.

4thly. Others have imputed this malady to feeding upon some particular herbs, and of these the Pinguicula vulgaris (the Butterwort), Hydrocotyle vulgaris (the White Rot), Drosera rotundifolia, (round-leaved Sundew), and Drosera longifolia (long-leaved Sundew), have been chiefly suspected. I have already observed, that twelve different animals are liable to become rotten, *i. e.* to have friable livers, and flukes in the pori biliarii and ductus communis, from feeding upon moist grounds. Of these, turkeys and poultry eat little grass, and pigeons none; these, therefore, are not likely to suffer from herbage of any kind; besides, both the Butterwort and the White Rot are too pungent and sharp for general pasturage. Accordingly, the former, and, I believe, the latter, is refused by sheep, cows, horses, goats, and swine.

Sheep, however, do not reject all acrid plants. In Italy, it is said, they feed greedily upon the ranunculus arvensis, and have been poisoned by it. When confined without other sustenance, they will eat the ranunculus sceleratus and bulbosus. Daubenton kept two sheep eight days upon this food, and they suffered no injury from it. This experiment induces him to conclude, that neither of the latter plants have any tendency to produce the Rot. Had the last season been favourable, I intended to have confined a few sheep of different ages on suspected grounds; and by killing them at regular periods, I expected to ascertain how far they had suffered from the soil and the herbage. By trials of this kind, with careful dissections, I conceive that much light would be thrown upon the Rot, and the disorders of sheep. It will be stated, in the progress of this Essay, that sheep have acquired the Rot by remaining only ten minutes on wet lands. In that time they could not have gorged much, even supposing them to be fond of any plants admitted to be pernicious; and the disorder has certainly been produced, where none of the suspected vegetables could be ever discovered. If the disorder is produced by feeding upon plants, I think it would occur most in spring or summer, when they are in the greatest vigour.

5thly. Of late this disorder has been attributed chiefly to flukes, or fasciolæ hepaticæ;* and they are supposed to be taken into the stomach along with the food.

If we admit the presence of these insects in every case of Rot, it

* See Letters, &c., by the Bath Agricultural Society. Amænitat. Academ. &c. For an account of their anatomical structure and form, see Bidloo, and a Paper by Mr. A. Carlisle, in the 2d vol. of Linnæan Trans.

will still be a difficult matter to impute to them the friable state of the liver; they can only affect those parts with which they come into contact—other portions are placed out of the reach of their influence. It may not be generally known, that, in some districts, most aged sheep contain flukes; and yet many of their livers, I will venture to maintain, from much experience, are perfectly sound.

Why, then, does it happen, that sometimes the liver is injured in its texture, and at other times is not disturbed in its functions, by these insects? The hay * of moist lands, under certain circumstances, gives a more virulent and dangerous Rot than any other. The contagions of the plague, and of several infective disorders, it is well known, are preserved for a long time in bales of cotton and in wearing apparel, from which they are emitted with increased virulence. We are, therefore, led by analogy to conclude, that the miasmata are preserved in the hay, which acts as a fomes to them, like cotton, &c. to human effluvia. On this principle the fact admits of a ready solution; though, on any other, we should have great difficulty in explaining it. To me it seems a very improbable supposition, that any being is able to live equally in moist grounds, in hay, and in the viscera of animals. The range of life will not, I conceive, admit of such a diversified existence.

Formerly it was supposed, that human worms were invariably received into the stomach and bowels with the ingesta, but the tinea and ascaris have never been discovered out of the human body; and as to the lumbricus, it is found to differ so much in its anatomical structure, that it certainly ought not to be confounded with the common earth-worm. I am informed, from respectable authority, that a worm, of a peculiar form, has lately been discovered in the mesenteric artery of horses, and in no other place.

In the 48th number of the Medical and Physical Journal, we are favoured with some account of a very curious case, which was read before the Medical Society of Paris, by Citizen Deleau Desfontaines. He states, that a man, who had been afflicted with some anomalous symptoms, died suddenly. Upon opening his body, a cavity was found in the middle of the concave surface of the great lobe of the liver: it was six or seven lines in diameter, and four or five in depth. This den contained a living insect of an extraordinary kind, and very unlike any hepatic worm that has been described by practitioners. It was four inches long, and of the thickness of a large silkworm. The colour was of a brownish red, and its body was articulated in the form of rings, each being marked by a white spot, in the middle of which was implanted a hair of a resisting nature, and extremely sharp; seen through a lens, it resembled the quills of a porcupine. The head of the insect was armed with an articulated proboscis. The inferior extremity terminated in a large flat tail, like that of a lobster.

How insects, or their ova, can penetrate into the substance of any

* Observations et Inst. sur les Maladies des Animaux Domestiques. Mr. Wright, of Fisherton, near Lincoln, has repeatedly found that the hay, taken from some moist land in his occupation, gives the Rot to beeves and sheep, though it be stacked and eaten in a dry and elevated pasture.

viscus, or into the blood-vessels, during life, I am utterly at a loss to conceive. I think it will be necessary for the supporters of such opinions, however numerous and respectable they may be, to find some of the fasciolæ out of the body, before they venture to assert, with so much confidence, that they are always admitted with the food, and are capable of living in other animals. John Christiani Frommani observes, in a dissertation, entitled De Verminoso in Ovibus et Juvencis Reperto Hepate,* that lambs in the womb were found to be affected with Rot. How fasciolæ, or their ova, can, by any means, find their way into the liver, before the birth of the lamb, is to me quite inexplicable. We know that a fœtus in utero is capable of suffering the fits of an ague,† which is admitted to be produced by miasmata; and therefore we are at no loss to believe, that miasmata can occasion the Rot in utero, with all its consequences.

It has been asserted, that suckling ewes, and beeves of more than two years old, are not capable of taking the Rot by grazing; although calves, and sheep of all ages,‡ are certainly not exempted from it. We know, from experience, that young persons are greater sufferers from contagious and epidemic disorders, than older people. As age increases, the constitution becomes firmer, and the nerves obtain a degree of tone, or possibly of apathy, enabling them to resist impressions, to which they could not have been exposed at an earlier period without apparent injury. It is in this way, as I conceive, that kine acquire, by age, a total exemption from the Rot, under circumstances which prove destructive to younger animals of the same species. I have likewise some reason to believe, that, as life advances, sheep become more and more secure, although they are never entirely exempt from the ravages of this fatal distemper.

During pregnancy the animal economy undergoes an extraordinary change; and, in consequence of it, becomes enabled, in the human subject, to suspend some obstinate mental disorders, and the progress of pulmonary consumptions. From a knowledge of these circumstances, I am inclined more readily to admit, that, during the period of suckling, ewes are in less danger of contracting the Rot than other sheep. Graziers are of opinion, that sheep, in new situations, are peculiarly exposed to the Rot; and new settlers, it is well known, are more harassed with agues and remitting fevers, in foreign climates, than the native inhabitants. In both cases, however, the predisposition seems to decline gradually, though it is never entirely removed.

Should these facts prove, upon further inquiry, to have been correctly stated, we must look to the nervous energy for an explanation of them; and not to the action of flukes upon the liver, nor to any of the other causes enumerated above. I may likewise be permitted to state, that the hepatic worms of the twelve animals enumerated in a former part of this Essay, are of different sizes, and probably of as many different species; but if they, or their ova, are invariably re-

* Vide Ephim. Act. Natur. Curios.
† See Dr. Russel's communication in the Mem. of the Med. Soc. of London.
‡ Bath, &c., Essays, vol. I.

ceived from moist grounds, they would resemble one another in every particular. The same egg always produces the same animal.

I may further observe, that the Rot always commences with inflammatory symptoms, and generally with an exudation of coagulable lymph under the liver. The quantity emitted varies in different cases, from a table-spoonful to more than four times that quantity; and it is in this substance, as I conceive, that the flukes are placed, when we find them, by some process of nature with which we are not fully acquainted.

"Mr. J. C——— observes, that, on killing a sheep lately, which was seemingly in good health, he examined the viscera carefully, and in some of the passages leading to the liver (which appeared turbid) he found a whitish thick liquor, which appeared to be all in motion. On applying a pocket-glass, he found it contained thousands of these flukes, which were apparently just hatched, and about the size of mites. These, if the sheep had not been killed, would probably have soon obtained their usual size, and proved its destruction."*

Mons. Veirac, a Dutch physician of great eminence, has carefully dissected sheep, and declares that flukes are sometimes not to be found even in the last stage of the Rot. Chabert, a celebrated Veterinary professor, observes, in an interesting memoir, that tainted sheep are much exposed to different kinds of worms. In such cases, the globulous tænia, he says, occupies the brain and lungs. Hydatids establish themselves in the abdomen: other worms are to be found in the trachea and bowels. Lastly, flukes frequently fix themselves in the liver, which, in that case, becomes swollen or ulcerated. From all these circumstances, I am inclined to believe that flukes are never the cause of this complaint, although they are commonly to be found in its advanced stages.

On the origin of worms I wish to be silent. The inquiry forms no part of my present design; and my time is too much engaged to admit of unnecessary disquisitions.

6thly. According to Professor Vibourg, the cow-pox has been found to protect sheep from the Rot, which he calls the sheep-pox infection. In Hungary too, as we are informed by Dr. De Carro, several proprietors have lately vaccinated their flocks, with the same expectation. I am inclined, however, to believe that both these gentlemen confound the Rot with the true *claveau des moutons*, which is a febrile and eruptive disorder. This complaint bears a strong resemblance to the small-pox, and probably is to be superseded by cow-pox inoculation. The *claveau*, as the term is used, in this country at least, is vague and indefinite. It comprises the scab and Rot, or pourriture, as well as the febrile disease properly denominated *claveau*. These are very different affections, and ought not, as I conceive, to be included under one general appellation.

The great danger of introducing the claveau into these kingdoms, along with the Spanish and Portuguese sheep, which are frequently imported by the favourers of fine wool, has been forcibly stated to the

* See Letters, &c., selected from the Bath, &c. Society, vol. I.

public by the Right Honourable Sir Joseph Banks.* The object is of national concern; for if this fatal distemper once obtains a firm footing, it may be impossible to eradicate it from among us. The Hottentots avoid the small-pox, by marking a boundary line, and punishing all persons who hold any intercourse with the infected. Had the example of these savages been universally adopted in the British empire, a vast addition would have been made to our population; for, before the practice of vaccine inoculation, upwards of 30,000 persons† were annually destroyed by the small-pox in Great Britain and Ireland.

Should the claveau ever make its appearance in this island, the infected sheep ought to be immediately killed, and effectual regulations carefully enforced, to prevent its extension to other flocks. The disorders that occasionally attack our domestic animals are deserving of much attention; and if some medical practitioners, of learning and experience, were to be selected, for the purpose of investigating them, I conceive that important advantages would arise from the measure.

When any epizoick makes its appearance in France, regular practitioners are immediately provided, at the expense of government, to inquire into its nature, and draw up a detailed report for the inspection of the public. By these means, animal medicine has, of late years, made a very rapid progress upon the continent. I humbly conceive, that the Honourable Board of Agriculture, by adopting a similar measure, would have its sphere of usefulness considerably extended, and thereby be entitled to a still greater proportion of national approbation.

7thly. Daubenton was led, by his penetrating genius, to reject the opinions of preceding writers, and to endeavour to supply their defects. From observing that poor sheep, especially such as by feeding on dry food were induced to drink great quantities of water, became liable to Rot, he concluded too hastily that poverty of food and large draughts of water were causes of this disorder. I have repeatedly observed, that the Rot is only to be acquired from particular situations, and that moisture alone will never produce it. I have been informed, by warreners, that in wet weather, the livers of rabbits always swell, and remain enlarged while the rain continues; they then recover their former dimensions;—and all this takes place without any inconvenience

* See Mr. Young's Annals of Agriculture.

† See a very interesting account of the baptisms, burials, and deaths, by small-pox, in the parish of Boston, for the last fifty-four years; to which are added, Reflections upon the probable Mortality in Europe, from the Small-pox, within the same period, and the happy Effect of Cow-pox Inoculation. By the Rev. Samuel Partridge, M. A. F. R. A. S., and Vicar of Boston, in the county of Lincoln. According to the ingenious observations of Mr. Malthus, the chief hindrance to population is to be sought for in the want of sustenance. Where that is abundant, the inhabitants of every country continue to increase, notwithstanding other impediments, till they become equal to the average consumption of its produce. And since the power of a nation depends upon the number of subjects, it appears to be the leading policy of every government, as much as possible, to multiply the food, and facilitate its diffusion among the lower ranks of mankind, in order to obtain an increased population. With this view, the diseases of esculent animals are entitled to every attentive consideration, because the strongest nourishment, and most invigorating diet, is extracted from them.

to the animals. I have it from unquestionable authority, that rabbits are very susceptible of the Rot; and, therefore, if it could be induced by moisture alone, the disease must be discoverable among them in all wet seasons; and yet I know several large warrens where the disorder is entirely unknown.

8thly. I observed, in a former part of this Essay, that the Rot in sheep has been frequently contracted in a quarter of an hour, by feeding upon marshy or moist lands, in hot weather. This information does not rest upon a single testimony. In the county where I reside, most butchers occupy some land, and are, in consequence, well qualified to discover the causes and early symptoms of this disorder. To them it is well known, that for a few weeks after being tainted, sheep thrive more than at any other period: this complaint is often, therefore, purposely induced for the sake of increased emolument. "Les moutons qu'on veut vendre ou consommer dans le pays, font conduits, lorsqu'ils approchent du moment de cette destination, sur les pâturages qui avoisinent les etangs, ou sur les autres lorsqu'ils sont couverts de la rosée et pendant les pluies: on sent que ceux de ces animaux qui sont ainsi nourris prennent bientôt un embonpoint marqué, mais il est de mauvaise nature, et est un acheminement à la pourriture."*

When I first entered upon this inquiry, I found it very difficult to obtain any satisfactory information on the subject; but of late the butchers and occupiers of land have acted with a degree of candour and liberality that calls for my particular acknowledgments. I must not forget my obligation to Mr. Harrison, of Fisherton, near Lincoln, to whom I am indebted for a great variety of useful information;† and if the summer of 1802 had been calculated for the purpose, we had arranged a series of experiments, which were to have been carried into execution under the superintendence of the Right Honourable Sir Joseph Banks.‡

Mr. Harrison resides upon a considerable inheritance, which was formerly tenanted by his father and grandfather. It consists of high and low lands of a loamy and tenacious nature. While a brook which runs through the farm remains overflowed, and the water continues upon the adjoining flat grounds, his sheep never suffer any inconvenience, though they are frequently obliged to wade for their provisions. As soon as the flood is subsided, the sheep can, at any time, be tainted in a quarter of an hour, while the land retains its moisture, and the weather is hot and sultry. The butchers are so well acquainted

* See also Instruc. et Observ. sur les Maladies, &c. ann. 1790.

† His information was communicated at a meeting of the Boston Agricultural Society, in 1802; of which I had been previously elected an honorary member, under circumstances highly gratifying to myself. For this and other marks of attention, I feel particularly indebted to all the members of that useful and respectable institution.

‡ Last season, a slight taint was given to a few sheep, by enclosing them in a confined bog; but the body of miasmata was too small, and they were not detained long enough on the ground, to produce any great effect. Sir Joseph Banks, whose zeal for the advancement of useful knowledge is unbounded, very obligingly came over from Rievesby to attend the examinations, and carefully opened the biliary ducts, without finding any flukes.

with the importance of this fact, that when my friend has disposed of any fat sheep, they are usually turned upon his rotten ground to make them thrive faster.

Mr. Harrison has, by judicious management, laid the greatest part of his farm completely dry, and is now little troubled with the Rot, unless when he wishes to give it to some particular animals. His neighbours, who have been less provident, are still severe sufferers by it; nor are their misfortunes confined to sheep alone. Pigs, cows, asses, horses, poultry, hares, and rabbits, become rotten in this lordship, and have flukes in their livers.

Many years since, the grandfather of this gentleman removed ninety sheep from a considerable distance to his own residence. On coming near to a bridge, which is thrown over the Barling's river, one of the drove fell into a ditch and fractured its fore-leg. The shepherd immediately took it in his arms to a neighbouring house, and replaced the limb. During this time, which did not occupy more than one hour, the remainder were left to graze in the ditches and lane. The flock were then driven home, and in a month afterwards, the other sheep joined its companions. The shepherd soon discovered that all had contracted the Rot, except the lame sheep; and as they were never separated upon any other occasion, it is reasonable to conclude, that the disorder was acquired by feeding in the road and ditch bottoms.

A Lincolnshire farmer purchased some turnips in Nottinghamshire, upon which he intended to winter a flock of sheep. The first division, consisting of about forty, were detained one night at a village near to the place formerly alluded to, by the overflowing of the Barling's Eau, and were put upon a piece of flat land, which leads to the river. The water had not returned to its former channel more than a day or two. Every one of the forty sheep became rotten; whereas the other division, which stopped nowhere by the way, escaped the disorder, and remained well. Sheep were formerly admitted into some adjoining pastures, in travelling to and from the neighbouring fairs and markets; but so many of them contracted the Rot, that, for some time past, the graziers in this country will not suffer their flocks to stop for a moment near the village. I have repeatedly examined the suspected ditches and pastures, but never observed either flukes, or any of the plants to which the Rot has been attributed; though I must candidly acknowledge, that I ought to have sought for them with more care and attention. These ditches communicate with a rivulet, which frequently over-rides its banks, and the enclosures are then deluged with water. The soil consists chiefly of loam or clay, and the surface is so flat and level on both sides of the river, that, for want of proper descent, the water is a long time detained upon the ground. I am credibly informed, that in this place the Rot affects swine, hares, and rabbits, as well as sheep.

I have likewise been informed, by Mr. David Wright, that a few years since, as a drove of sheep were passing through a long lane in the parish of Irby, one of them, being weary, fell down in the middle of the road. The others were permitted to range at large, till their companion was able to travel. They were then driven altogether into

a pasture, and it was soon discovered that only the tired sheep had escaped the Rot. As the flock had never been separated upon any occasion, we are entitled to conclude that the disorder was contracted while the tired animal remained upon the road.

I could state several more cases of the same kind; but as those which have been related are sufficiently numerous, and can be attested by respectable witnesses, I do not think it necessary to swell the account by further evidence in support of my opinion. From the various circumstances enumerated above, I think I am justified in attributing the Rot in sheep, and other animals, to paludal effluvia; but with respect to their nature and constitution, it is very difficult to form any rational judgment, as they have hitherto eluded the most subtile and delicate inquiries. It must, however, be admitted, *si causa latet, vis est notissima;* and consequently the subject, from its great importance to the public in general, is entitled to a serious investigation.

Without heat and moisture, no deleterious vapours can be generated; and yet it is equally certain, that both these causes are insufficient to produce either a recurrent fever or the Rot, since they are confined exclusively to particular situations. Other auxiliaries are therefore necessary; and I am inclined to believe that vegetable, or earthy particles, and probably both, are required, as well as heat and moisture, to constitute the noxious emanations or gases called miasmata paludum.

Probably it will be found, on further inquiry, that a great variety of animal and vegetable effluvia are extricated in different places; and that many disorders should be attributed to them, which are at this time imputed to other causes.

Poisonous vapours are extremely active, and sudden in their effects; of which proofs may be found in the history of every contagious and endemic disorder. We have, therefore, no reason to be surprized, that sheep and other animals are so immediately affected, by pasturing in moist places where these effluvia are copiously produced in hot weather. Other causes operate slowly, and require such a long continued application, that I do not think the Rot can be induced by them, though I am of opinion that, by occasioning general weakness, they make the constitution more susceptible, and lay it more open to morbid impressions. In the human body, we know that fatigue, cold, fasting, and other debilitating causes, are efficacious auxiliaries, although, of themselves, they are totally inadequate to produce any contagious disorder. They therefore seem to contribute equally, and in the same manner, to facilitate the operations of marsh miasmata upon the human body and other animals.

(To be continued.)

XENOPHON'S RULES

FOR THE

CHOICE, MANAGEMENT, AND TRAINING OF HORSES.

[Continued from p. 222.]

CHAPTER VII.

How to mount well, and have a good Seat on Horseback—Of the Reins, and manner of holding them—Of working a Horse and wheeling about.

1. BUT when the horse shall have received the rider who is to mount him; we will now show how the rider may best exercise himself and his horse in the art of riding. First, therefore, he ought, with his left hand, to take gently hold of the rein, which is fastened to the lower part of the bit, or to the chain that goes under the chin, handling it lightly so as not to hurt the horse. When he raises himself in mounting, whether by taking hold of the mane near the ears, or if he springs from his lance,* then, with his right hand, let him take hold of the bridle near the shoulder, and of the mane at the same time, that he may not, in mounting, hurt the horse's mouth with the bit.

2. When he has made himself ready to spring up, let him raise his body with his left hand, and stretching out his right, let him lift himself up (for, by thus mounting, his figure will not appear ungraceful from behind), but with his leg bent, and not touching the horse's back with his knee, but by throwing his leg over to the *off-side*. And when his foot is clean over, then, with his thigh, let him seat himself on his horse.

3. But as it may chance that the rider leads the horse with his left hand, and holds the lance in his right, it seems to us advisable that he should practise mounting on the *off-side*.† To do this, however, he

* This manner of getting on horseback from the lance or spear, has not been generally well explained. In the collection of the *Pates Antiques* of the celebrated Baron *Stock*, there is, however, one which represents a soldier mounting his horse by the assistance of his spear. The spear is planted at the side of the horse, and has a *hook* on the shaft, on which the man, placing his foot easily, bestrides the horse. This, at first sight, explains the above passage.

† Another gem in the same collection, gives us the figure of a soldier standing by a horse, in the attitude of going to mount him on the *right* side; and there are many other ancient impressions which show the same thing.

has nothing more to learn, than to perform those things with the left side of his body, which he had before done with the right side.

4. But we commend this way of mounting, for the following reason:—because, when mounted, he would be ready prepared in every respect, if it should be necessary to act against the enemy on a sudden.

5. But when he comes to be seated, either on the back, or on a cloth,* we do not approve of his being seated as in a chariot, but as if standing erect with his legs somewhat astride; for thus he holds firmer with his thighs to the horse; and being erect, he will be better able to throw the javelin, and to strike with force from his horse, if it should be necessary.

6. The leg, as well as the foot, ought to hang loose from the knee: for being held stiff, if it should strike against anything, it would be liable to break. But the leg being pliable, would give way if it should encounter anything, while the thigh remains unmoved.

7. Indeed, the rider ought to exercise himself to have all the parts of his body as flexible as possible; for thus he would be able to undergo more fatigue, and be less liable, if attacked, or pushed against, to be thrown from his horse.

8. But after being seated firm, he ought to teach the horse to remain quiet till he has got everything he wants, and has separated the reins, and also placed the lance in such a manner that it might best be carried: then let him hold his left arm close to his side,—this being the most graceful posture, and giving the greatest firmness to the hand.

9. We recommend reins which are even, and not weak, nor slippery, nor thick; so that the spear may be held in the hand when it shall be necessary.

10. But when the horse is to move forward, let him begin by walking; for this motion is least violent. If the horse should carry his head low, let the rider hold the reins high; but if more erect, then lower; for thus he will most display the horse's figure.

11. Further, by being suffered to go his common pace for some time, he will sooner feel the use of his limbs, and more willingly obey the whip. But since it is more approved to begin from the left, the horse would then best begin from this side; if, on his going off to the right, upon being mounted, he should receive a stroke of the whip.

12. For wishing him to take to the left, he would begin from thence; and when he would turn on the left, then he would begin the inflexion.

* The Greeks, instead of saddles, used housings; and some rode without any covering.

For a horse is wont, when turning to the right, to lead with the right foot; and when to the left, with the left foot.

13. We recommend that kind of exercising called the chain, which accustoms a horse to turn on both jaws. And to change the exercise is good, that the jaws may be alike, by being exercised both ways.

14. We recommend, also, the exercising a horse in a straight line rather than in a circular one. For a horse would thus turn more willingly when tired with going forward; and he would learn both to go straight, and to turn.

15. A horse should also be pulled in when he turns; for it is not easy for a horse, nor safe, when going fast, to turn short; especially if the ground is rugged or slippery.

16. But, in pulling him in, he ought to pull the horse as little obliquely as possible with the bridle; as also, to sit as little obliquely as possible himself; if not, let him be assured, that a little over-balancing is sufficient to bring himself and his horse to the ground.

17. When the horse, after having turned, looks straight forward, then he should be animated to go swift. For it is certain, that in war, the turnings are either to pursue, or for the sake of retreating. It is proper, therefore, to use him, after having been turned, to go swift.

18. After the horse shall appear to have been exercised sufficiently, it is right, when he has rested a little, to animate him on a sudden, to go on full speed; and that to, as well as from, the other horses. And when this has been done, to let him remain quiet in some place nearest at hand; and having stood still awhile, after turning him about, he ought again to be put on his speed. For it is certain, that occasions will occur, when he will need both of these.

19. But when, at length, it shall be time to dismount, it should never be done among other horses, nor in the midst of a number of persons, nor out of the place of exercise; but where the horse has been forced to labour, there let him enjoy his rest.

CHAPTER VIII.

Of teaching a Horse to leap;—Of riding him up and down steep places;—And of having a firm seat on such occasions.

1. But since it will be often necessary to ride swiftly up and down steep hills, and along the side of them; as also to leap over ditches,

and up high places, and to descend from them; it is necessary that the rider, as well as his horse, should learn and practise all these things; for thus they would contribute to each other's safety, and would, it should seem, be more useful.

2. If any one should think that we repeat the same things, because we make mention of them again; this is not a repetition. For when a horse was purchased, we recommended that he should be tried if he were able to do these things. But now we say, it is necessary that he should be taught them; and we mean further to show how he may learn them.

3. With a horse ignorant of leaping, the rider must take hold of the leading rein, and, going first over a ditch, then pull him with it, that he may leap over.

4. But if he will not, let some one having a switch or whip give him a very smart cut; and thus he will not only leap over the space required, but likewise much farther than is necessary. And afterwards there will be no occasion to strike him, for if he should only see some one coming behind him, he will leap.

5. When he has thus been accustomed to leap ditches, let him be mounted, and led first to small, and then to large ones; but when he is going to leap, let him be spurred. And, in like manner, let him be spurred when learning to leap up and down from any eminence; for, by doing all these things, in gathering himself up, he will do them with more safety to himself and his rider, than if he should drag his hinder parts after him in making his different leaps.

6. He ought first to be practised to go down steep places on soft ground; which, having once been used to, he would much rather go down them than up them. But some persons fear lest the shoulders of their horses should be broken in riding swiftly down steep places: let them be under no apprehension about it; knowing, that all the *Persians* and *Odrysians* ride races down steep hills, who have horses no less sound than those of the *Greeks*.

7. Nor will we omit mentioning how the rider should conduct himself on these occasions. He ought, then, immediately on the horse's raising himself, to lean forward; (for the hinder parts of the horse would be relieved, and he would not shake his rider so much) and as soon as he came on the ground, throw himself back. For thus he himself would be less shook.

8. When he leaps over a ditch, or goes up a steep place, it is advisable to lay hold of the mane,* that the horse may not have the

* Berenger, in his Horsemanship, remarks that this precept of Xenophon seems to be against truth, and the principles of the art. To persons, however,

bridle as well as the ground to struggle with. But in going down a declivity, he should hold himself back, and support the horse with the bridle; that neither he, nor his horse, may be carried headlong down the precipice.

9. It is right sometimes to perform the exercises in different places, and sometimes for a longer time, and sometimes for a shorter. For this will be less loathsome to the horse, than to be always exercised in the same place, and for the same length of time.

10. But since it is necessary for a rider to be seated firm, and have his horse under command in all kinds of places, and also to be skilled in the use of arms; where the country is proper for it, the exercise of horsemanship in hunting is not to be blamed: but when such an opportunity does not offer, it will be a good exercise, if two horsemen should agree together, that the one should fly through all kinds of places with his horse, and set off, often throwing his spear from behind him; and that the other, who was the pursuer, having his javelin rounded at the point, and his spear likewise done in the same manner, should, when he came within his reach, dart at him with his blunted javelin; and when within reach of his spear, that he should strike him, in laying hold of him.

11. It would be right, too, when they close together, that having drawn his enemy towards him, he should suddenly push him back; for this is the way to dismount him. It will then be the business of him who is pulled, to spur his horse forward; for by doing so, he who is pulled will more likely throw the person off his horse who pulls him, than fall himself.

12. But if, on two armies being opposed to each other, there should be skirmishes between them, and they pursue one another into their camp, and then fly back into their own; it is right on such occasions to know, that so long as any one is not far from his own people, it is commendable and safe, after having wheeled about, to rush forward with the utmost speed against those who are nearest at hand, but when he comes near the main body of the enemy, to pull in his horse; for thus he would, probably, be enabled to injure the enemy, and not be injured by them.

13. The *gods* have granted speech to men, that they may learn what they ought to do. But you can certainly teach a horse nothing by speech. If, therefore, when he does as you wish, you caress him,

who hunt a great deal, it will, perhaps, not appear in this light: as in leaping there is nothing more dangerous than that the horse, when lowering his head to leap, should find the least restraint from the bridle, the jerk of which is apt to throw the rider on the neck, and make the horse lose his balance.

and when he is disobedient, punish him, you will thus best teach him to perform what he ought.

14. This, indeed, is said in a few words, but it extends to the whole art of horsemanship. For a horse will rather take the bridle than not, if, when he has received it, he takes something good for himself: and he would jump over ditches, and leap down from eminences, and will perform all the other things required of him, if he should foresee repose, after having done what was signified to him.

CHAPTER IX.

How to ride and manage Horses which are spirited, as also such as are sluggish.

1. The rules which we have now laid down, will show how any one may be least deceived in purchasing a colt or a horse; and how he is least likely to be injured in being rode, especially if he would display a horse having those qualities requisite in war. It will now be proper likewise to write down in what manner any one possessing a very spirited horse, or one very sluggish, may best manage either of them.

2. First, then, it ought to be known, that spirit in a horse, is what anger is in a man. And as any one would least anger a man, who neither did nor said anything provoking to him; so he who did not vex a fiery horse, would least anger him.

3. Immediately, therefore, on mounting him, care must be taken that he be discomposed as little as possible; and after being mounted, he should be suffered to stand still a longer time than usual, and then be directed to go on by the most gentle signs. And having begun with the slowest pace, let him be led on to a swift one, in such a manner that the horse himself shall be least sensible of the change of motion.

4. A horse of a fiery nature is affected at every thing he sees, hears, or feels, that comes upon him on a sudden. It should, therefore, be remembered not to do anything to him unawares.

5. If you wish, therefore, to slacken the pace of a spirited horse, who is going faster than he should, this must not be done by checking him on a sudden; but by pulling him in by degrees with the bridle, and stopping him gently and not forcibly.

6. And the riding such horses in a straight forward course, rather than by making frequent turnings, pacifies them; and the letting them rest

a long time, keeps them likewise quiet and gentle, and prevents their being heated and angered.

7. But if any one thinks, by riding fast, and on a stretch, that he shall, through fatigue, make his horse gentle; he judges contrary to experience. For a high spirited horse, at such times, endeavours most to get the better by force, and with anger, like a man who is angered; and very often does irreparable mischief to himself and his rider.

8. An impetuous horse ought also to be held in, and not permitted to go on full speed; but by no means be suffered to run against another horse. Since, in general, those horses which are the most ready to outrun others are the most impetuous.

9. And bits which are light are more proper than such as are rough; but if a rough one should be put on, let it be made as loose as a light one. It is right, also, that the rider should particularly accustom himself to sit quiet on a high spirited horse, and touch him as little as possible in any other part than where it is necessary for the sake of being seated secure.

10. It ought also to be known, that it is usual to stop a horse with a whistling tone, and to incite him to go forward with a hissing one. But if any one should at first stop him with hissing, and animate him to go forward with whistling, the horse would learn to go forward with whistling, and be stopped with hissing.

11. In like manner, no one ought to approach a horse with the appearance of being alarmed at any noise, or at the sound of the trumpet, nor exhibit anything to him that may give him trouble; but at such a time, to do every thing possible to pacify him, and to lay before him his dinner, or his supper, if it can be done.

12. The best counsel of all, however, is not to purchase a horse that is very impetuous for war. But with a very sluggish horse, it seems to me sufficient to say, that the contrary things should be done to those we have recommended with a spirited one.

(*To be concluded in our next.*)

ON FRENCH SHOEING.

Fig. 5.

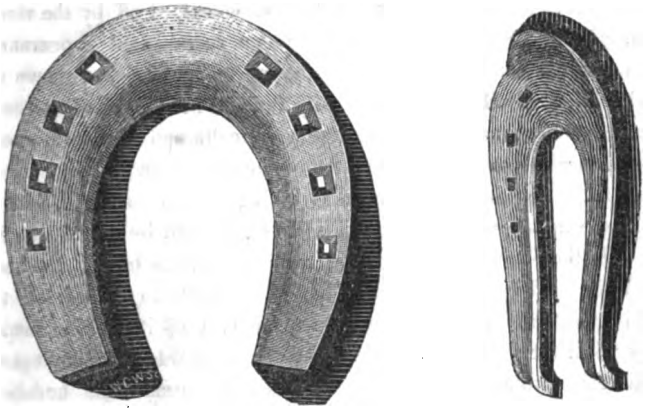

Fig 5 is the ordinary French shoe. It has never been used as here represented, in this country; but we have been obliged to give it in this place, in order to explain what has been amongst us falsely called *French shoeing*. The art appears to have continued nearly unchanged from a very early period in France; their common shoe is coarsely made, wide webbed, and usually concaved considerably on its upper surface, and the toe is bent upwards, so as to form a blunt, obtuse toe, similar, at its first application, to the figure which our shoe presents when it is much worn. This practice of turning up the toe is supposed by Mr. Clark to have originated from their having to fit natural unshod feet which were worn away at this part; it occasions a difficulty in fitting the shoe to the foot, as the level is departed from: but this will be discussed hereafter, as we must recur to it when treating of foreign shoes.

The most important point of difference is in the shape and position of the nail-holes, which, in French shoeing, are placed very *coarse*, or far from the outside edge, and are made with a very blunt stamp, forming a shallow, square nail-hole. The wall being the only part of the hoof that will bear nails, and in ordinary feet not *more* than half an inch thick, it follows that the nail-holes must always be made to come nearly in the same position (that is, just over the inner edge of the wall), whether the rim or border exterior to the holes be wide or narrow; if narrow, as in most English shoeing, the shoe must stand within the

foot; if wide, as in French, then the edge must project considerably, or at least stand *full*. Now there is the utmost difference, both to the ease of the horse and the preservation of the hoof, between these two methods. In the former case, all that edge of the hoof which is projecting over the trim, neat, English shoe, is rasped off by the workman, giving the foot what he considers a round, neat appearance; but when the shoe is removed again, unless the hoof has grown remarkably, the wall will be found only about the thickness of a crown-piece; the next nailing becomes very difficult, and the smith exculpates himself from all that may follow, by calling it a shelly, brittle hoof; forgetting that it was made so by his own proceeding. This is one of the most general and fatal abuses practised by our workmen. But with the French shoe, the edge comes out so far beyond the hoof, that while the bearing is extended and made easier to the animal, the wall is maintained in its full width, as no part of it can be rasped away when the shoe is on. We should be inclined to attribute it more to this circumstance, than any other practical reason, that horses in France are said to go better and with a firmer step than in England, though the difference may be chiefly and better accounted for by the vast variation that exists between the breeds of the two countries; their horses being of a coarser kind, have much less elastic feet, and consequently they suffer rather less from the contracting effects of the fixed iron than our delicate steeds.

This plan of broad bearing is sometimes carried to a great extent: their shoe for mules, in the south of France, almost covers the whole foot, and sometimes meets like a bar shoe, and is then called *plancke*, or flat. Old Blundvill mentions the bar shoe under the same name of "*Planche for weake heeles;*" and it continues, at the present day, to be the last, the best, and almost the only resource of the common smith, when the foot is ruined by the fettering system and his own bad measures,—affording relief by the increased surface it presents to the ground, and by defending the denuded heels.

We have given no plate of this well-known and useful shoe: it often becomes the only one in which a horse can go with ease.

The last nail-hole in French shoes is usually smaller than the others, which is a good plan; and the upper edges are often beat up round the hoof, instead of being filed off, as in our practice.

Mr. Clark conceives that the broad web and coarse nail-holes are adopted not so much from reflection or judgment, as necessity; their iron being indifferent in quality, it would burst out if their coarse stamp were driven too near the edge. It is certain that St. Bel adopted the

narrow shoe and fine fullering; but perhaps it was in compliance with English prejudices, which, on the subject of shoeing, are particularly strong.

Their reason for having so broad a countersink for the nail head is not very obvious, unless it is because a head of that shape is easier made in a tool than ours are by hand: but this will be treated of when we come to the subject of nails.

Their mode of driving the nail obliquely outwards appears to result partly from the coarseness of the holes, which require that it should take that direction, and also from the thickness of the wall in their horses generally, which admits of this more simple and easy method being practised with safety. It does not answer so well with our thin, delicate hoofs, and is nothing more than a summary and less artful plan than our own.

A few years ago it became very much the fashion to speak of French shoeing as of something very superior to English, and one well known Veterinarian, in particular, was extremely warm in its praise: the shoe he recommended, however, was a mixed affair, being concave next the ground like St. Bel's, but turned up at the toe, and with French nail-holes: it had its day of reputation, but, from the reasons we have stated, of course no particular advantage attended it, and it is now but little heard of.

STUPENDOUS LIZARD.

THERE is to be seen, near New Orleans (says Mr. Bullock, in his Travels, lately published), what are believed to be the remains of a stupendous crocodile, and which are likely to prove so, intimating the former existence of a lizard at least 150 feet long; for I measured the right side of the under-jaw, which I found to be 21 feet along the curve, and 4 feet 6 inches wide; the others consisted of numerous vertebræ, ribs, femoral bones, and toes,—all corresponding in size to the jaw: there were also some teeth; these, however, were not of proportionate magnitude. These remains were discovered, a short time since, in the swamp near Fort Philip, and the other parts of the mighty skeleton are, it is said, in the same part of the swamp.

ON CURB IN HORSES.

BY MR. BRACY CLARK.

(In Rees's Cyclopædia.)

CURB is a disease of the lower part of the hock of the horse, derived from the French *courbe*, and *curvus*, Latin,* distorted or bent from the proper figure. The back part of the hock of the horse, seen in profile, is nearly straight, or a little bending inwards,—that is, from the point of the os calcis to the head of the mesocynium, or shank, where the disease appears. If the hock be exerted beyond its strength, this part is apt to swell, and form a curved line outwards, or rather backwards, more or less elevated, according to the injury sustained. The advantageous purchase of the gastrocnemii muscles upon the os calcis seems to be the principal cause of the mischief; the parts being unable, in violent and sudden action, to sustain their effect, though the tendons of this part are singularly wrapped round and strengthened, obviously to enable them to sustain these shocks by the flattened, or sheath-like, expansion of the perforatus tendon. In leaping, violent riding, hunting, drawing, and especially in military charges of the cavalry, when they are suddenly stopped at full gallop, and often with injudicious and unnecessary suddenness, and without previous preparation, the horses are thrown on their haunches, and thus continually get diseased in this part, and often totally ruined. Nothing but imperious necessity, or the actual combat, one should suppose, could justify the frequent repetition of such a dangerous manœuvre; much depends, however, upon the hand of the rider in not making it injurious, as a very slight preparation or warning given to the horse is sufficient. These curbs often grow hard, lose all the active inflammation which attends their first production, and seem hardly to affect the horse's going; at other times they are attended with considerable tenderness and lameness; and it most frequently happens that the other parts of

* The term Curb, in the manege, is the designation given by horsemen to the bit, or mouth-piece, that is provided with a branch and chain. Kirble was the ancient word, and kirb should, we apprehend, be the proper mode of spelling it now, where any restraint is signified: on the contrary, where any curvature or inflexion is intended, this is the proper mode of spelling it, as in the present article; for they appear to us of different origin and meaning, and from different languages, and ought not to be confounded as they are at present.

the hock suffer at the same time; and spavin very frequently, and sometimes through pain, accompany it. After the gastrocnemii muscles have attached their tendon strongly to the os calcis, they appear to send portions for a second attachment to the head of the shank, and there it is the injury is sustained.

In recent cases, the cold bathing of the part is the best remedy, and rest, till the inflammation is subdued, with a dose or two of physic, if there is occasion. In more confirmed cases blistering, or in more desperate cases firing, is the best remedy: a straight line, in this case, is drawn by the iron down the back of the calcis and head of the shank, feathered on each side by diagonal lines at proper distances; and as the inside of the hock is apt to partake of the mischief, it may be well to draw a straight line down its middle, forming an angle to the former, opening upwards, and closing pretty much as the figure of the hock itself does; the diagonal lines from the former line forming with them a double feathered figure: the same also may be done to the outside, if the case shall happen to demand it.

ORIGIN AND PROGRESS OF MUSEUMS.

Antique Collections of Natural Curiosities—Hippocentaur—Museum of the Emperor Augustus—Ancient Modes of Preserving periskable Substances—Egyptian Method of Embalming—Cere-cloths—Remains of King Edward I.—Menageries—Origin and Progress of Modern Cabinets of Curiosities—Museum Tradescantinum—Kemp's Museum—British Museum.

NATURAL productions of uncommon form or beauty, and other rare objects, were, in the earliest ages, consecrated to the gods; and there is reason to suppose that the first collections of natural curiosities were preserved in the temples. There they were guarded with a pious reverence which secured them from neglect; and, being handed down to succeeding generations, they at length accumulated to an amount that may be considered large in the then infant state of natural history. Some account of these has occasionally been recorded, and a brief enumeration of a few among them may not prove wholly uninteresting.

Amongst other curiosities, the Temple of Juno, at Carthage, containing the skins of two of the hairy women discovered by Hanno on the Gorgades Islands, and which he deposited there, on his return, as a memorial of his voyage.

The enormous horns of the wild bulls which committed such havoc in Macedonia, were hung up, by order of King Philip, in the Temple

of Hercules; and, in the Temple of Delphi, there were suspended the horns of a Scythian animal, in which only the Stygian water, that consumed every other vessel, could be contained: these were presented by the Emperor Alexander, and the inscription by which they were accompanied, has been recorded by Ælian.* In the Temple of Hercules, at Erythris, were the horns of the supposed Indian ants: and in that of Isis, at Cæsarea, the skeleton of the crocodile that was found in the attempt to discover the sources of the Nile.

The skin of the serpent destroyed by the Roman army in Africa during the first Punic war, and which both Pliny and Valerius Maximus describe as being 120 feet in length, was hung up in one of the temples at Rome, where its jaw-bones remained until more than a century afterwards.†

In the Temple of Juno, in the island of Melita *(Malta)*, a pair of elephant's teeth, of monstrous size, were deposited; and these having been carried away by the Admiral of Massanissa's fleet, were afterwards restored, on its being found that they belonged to a sacred place.

In one of the temples of Diana, the head of a basilisk was shown; and the bones of that sea-monster to which Andromeda was supposed to have been exposed, were preserved at Joppa, whence they were afterwards carried to Rome.

The hide of the celebrated Calydonian boar was exhibited in one of the temples of Greece, in the time of Pausanius; and the huge tusks of the animal were afterwards brought to Rome, by order of the Emperor Augustus, and placed in the Temple of Bacchus.

But the most extraordinary of all was, doubtless, the hippocentaur, which is mentioned by several writers; and which, as we are assured by Pliny, the naturalist, was preserved, *in his time*, in the cabinet of the Emperor. The animal was said to have been caught in Arabia, and to have been brought to Egypt, where, having died, it was preserved in brine and transmitted to Rome. To those who, notwithstanding the authority of this respectable author, may still be inclined to consider the existence of such a creature as fabulous, it may be observed, that St. Jerome, who wrote in the fifth century, also mentions another hippocentaur, in his life of Paul the hermit; in which he describes the monster, and says that it was notorious to the whole world, that in the reign of Constantine, it was brought alive to Alexandria, where it was publicly exhibited; and, on its death, was preserved in salt, and sent to the Emperor at Antioch.

These curiosities were, however, rather kept in the temples as public memorials, or relics of ancient times, than to serve the purposes of science; and it does not appear that the learned among the ancients formed private collections of their own. The Emperor Alexander, indeed, ordered all huntsmen, fowlers, and fishermen, to send whatever rare animals they obtained to Aristotle; and we know that Pliny took every opportunity to procure rare productions of nature, in order

* Ælian, Hist. Animalium, lib. x. cap. 40.
† Plin. Hist. Nat., lib. viii. cap. 12. Valer. Max., lib. i. cap. 8.

to note their peculiarities; but still we hear of nothing like a Museum of natural curiosities, until the time of the Emperor Augustus, who, as we are informed by Suetonius, had one in his palace.

One of the chief causes, no doubt, that rendered such collections rare among the ancients, was the imperfect knowledge they possessed of the mode of preserving those objects that were subject to decay. The only methods with which they were acquainted, were those of immersion in brine, or in honey, or of covering with wax; all of which were defective, and far inferior to that by spirits of wine, which combines the advantage of preventing putrefaction with that of perfect transparency. The more scientific modern process employed in anatomical preparations was wholly unknown.

Of the methods then in use to prevent corruption, that by means of salt was the most ancient, as it certainly was the most apparent, and the easiest of execution. It has been supposed to have originated in Persia; and we have the authority of Dion Cassius, that when Pharnaces sent the body of his father, Mithridates, to Pompey, he had it placed in brine: but it seems probable that, in the East, nitre was more frequently employed for this purpose than common salt. At a later period, we learn that the heads of the early martyrs were preserved in salt by the monks; and Sigebert, who died in 1113, tells us that a similar process was used with the body of St. Guibert.

The custom of preserving dead bodies in honey was also employed at a very early period. The remains of several of the Spartans who died in foreign countries were thus prepared for transmission to their native home. The body of Alexander the Great is also said, by some authors, to have been thus deposited; although we are told by others, that it was embalmed in the manner of the Egyptians: and so late as the latter end of the sixth century, that of the dethroned Emperor Justin was laid in honey mixed with spice.

The Egyptian method of embalming consists in first extracting the brain through the nostrils, and injecting some viscous unguent in their stead; then opening the belly and taking out the intestines, the cavity being washed with palm wine impregnated with spices, and filled with myrrh and other aromatics: this done, the body was laid in nitre during seventy days; at the end of which it was taken out, cleansed, and swathed in fine linen, which was gummed and ornamented with various painted hieroglyphics expressive of the deceased's character and rank. When this process was completed, the body was deposited in a narrow coffin, enclosed in an outer case, and placed upright against the wall of the mausoleum of the family. It was in this manner that the mummies which have been preserved to the present time were prepared; but it was only employed for persons of the highest distinction. Another less expensive method was by injecting a dissolvent into all the cavities of the body; this, after a short time, carried off, in a liquid state, whatever it contained; and the body, thus purified, being dried by the nitrous process, was then swathed in the manner already mentioned: the poor merely drenched the body with injections, and afterwards dried it in nitre.

This invention is universally ascribed to the Egyptians; and the ac-

count communicated to us in the Mosaic writings, of the embalming of the patriarch Jacob, sufficiently proves the antiquity of the custom, and confirms the common opinion.* But the period of the operation is there limited to forty days, while the mourning is said to last seventy.

Among the nations of the East, dead bodies were sometimes covered over with wax; and this practice, which was early introduced into Europe, gave rise to that of wrapping the remains of persons of distinction in waxed cloth, which has been continued down to the present day. Of this the annals of this country present numerous instances. In that ancient record, the "Liber Regalis," we find directions, "that the remains of the kings of England shall be enfolded in waxed linen; but in such manner as that the face and beard may be discernible, and that each finger be separately covered." Accordingly, when the tomb of Edward the First, who died in 1307, was opened, in 1774, the body was found thus enveloped, and the form of the features and the hands were still clearly distinguishable. The body of Johanna, mother of Edward the Black Prince, was also, as we are told, "*wrapped in cered cloth;*" and that of Elizabeth Tudor, second daughter of Henry VII., "*was cered by the wax-chandler.*" Among the funeral charges of George II., is one for cere-cloth, and more recent examples must be in common recollection.

However these various modes of conservation may have been applied to scientific purposes during the reign of the Roman emperors, no trace of such an application can be discovered in the darkness of the middle ages; but in the treasuries of princes there were sometimes found, among antiquities and curiosities of art, a few specimens of the dried and stuffed remains of uncommon animals. When commerce had extended the intercourse between nations, these collections were enlarged: menageries were also formed, to add to the splendour of courts;† and while these diffused a knowledge of foreign productions, they also excited curiosity, and a taste for the more minute inquiry into the peculiar qualities of their various contents. As literature revived, public libraries were established, and became receptacles for such natural curiosities as were occasionally presented to them; and in Universities, the Faculty of Medicine collected, for dissection, various objects from the animal kingdom, as well as human bodies, and preserved the parts in spirits of wine. At a still later period, wealthy individuals began to form collections of curiosities, at first, probably,

* "And Joseph commanded his servants the physicians to embalm his father: and the physicians embalmed Israel. And forty days were fulfilled for him; for so are fulfilled the days of those which are embalmed: and the Egyptians mourned for him threescore and ten days."—*Genesis*, chap. l. v. 2 and 3.

† So early as the reign of Edward II., the Sheriffs of London were commanded to pay the keepers of the King's leopards, out of the fee-farm of the city, sixpence a-day for the sustenance of the animals, and three halfpence a-day for the diet of their keepers; and that part of the Tower of London appropriated to the wild beasts was built for that purpose in the reign of Edward IV.; but there was a menagerie there even in the reign of Henry III., to whom the Emperor of Germany, in 1235, sent a present of three leopards, which were kept in the Tower.

more calculated to please the eye than gratify the understanding; but these, as science became at once more extended and more defined, were classed in distinct departments, and hence have arisen the various cabinets of natural curiosities now to be found in every part of the civilized world. The earliest of these private collections, however, is not supposed to date farther back than some time in the sixteenth century; and the oldest known catalogue upon any systematic plan, is that of John Kentmann, a learned physician of Torgau, in Saxony, which was published in 1565. It consisted chiefly of minerals and other fossil productions; and although it only contained about sixteen hundred articles, it was then esteemed considerable, and cost, as the collector tells us, "sums which few could afford to expend."

The first museum in this country was formed towards the middle of the seventeenth century, by John Tradescant,* who procured the objects of which it was composed, in many parts of Europe, America, and the Levant. His collection of coins and medals appears to have been valuable; but among the natural curiosities mentioned in the catalogue which has been published under the title of "*Museum Tradescantinum*," are some that are not calculated to afford a very high idea of the science or the discernment of the collector: for we find an egg of a *griffin*, and another of a *dragon*; some feathers from the tail of a *phœnix*, and the claws of a *ruck*, "*a bird able to truss an elephant*;" together with others of a similar nature. After Tradescant's death, which occurred in 1652, this cabinet was presented, by his son, to the celebrated Elias Ashmole, who removed it to Oxford, where it forms a part of the Ashmolean Museum.

The next in order of time, was Kemp's Museum, which was open to public inspection in the Haymarket, in the beginning of the last century. It was originally founded by Mr. John Conyers, a well known antiquary; and among a great variety of Egyptian, Greek, and Roman antiquities, both natural and artificial, contained the skeleton of an elephant which was dug out of a gravel-pit in the neighbourhood of London, in 1689: it was supposed to have lain there since the time of the Romans, for a battle is recorded to have been fought near the spot in the time of Claudius; and in the same pit the head of a British spear was found, made of flint.

The splendid collection contained in the British Museum, was founded in 1753, by Sir Hans Sloane, and was purchased by Parliament for the national use, for the sum of £20,000. To this was afterwards added the Harleian collection of manuscripts, the Cottonian library, and that of the King, with other large additions, the Etruscan vases and other antiquities belonging to the late Sir W. Hamilton, and the Grecian marbles selected by Lord Elgin; which being now arranged together, form one of the most valuable cabinets of literature and science in all Europe.

* Gardener, for some time, to Charles I.

ON THE STRANGLES IN HORSES.

A Review, by M. M. DUCHATEAU *and* CREPIN, *of an Essay "On the Treatment of Strangles in Horses, by the Antiphlogistic Plan." Addressed to the Medical Society of Emulation of Paris, by* M. RODET, *jun., Corresponding Member.**

THE opinion of well-informed Veterinarians is made up as to the cause and treatment of Strangles; but dealers, and people in general, form a very erroneous opinion of it.

According to a popular author, the Strangles "*consists in a poison of an uncertain quality, which circulates in the blood until nature makes an effort to throw it off, and it settles on a part which is usually the nose or under jaw.*"

If the poison be not expelled, that is, if the horse does not have the Strangles, he is generally considered in great danger; and this opinion is even maintained by many persons in the profession.

M. Rodet, dissatisfied with this vague account, has made experiments which throw great light upon the subject, and has proved the absurdity of the vulgar opinion. He considers the Strangles as an inflammation of the throat, which differs in no respect from many other affections of these parts known under different names.

This author, who admits nothing which experience has not sanctioned, meets the advocates of the innate cause of Strangles with the following fact, which refutes them completely:—

The horses of warm countries, such as Arabia, the coasts of Africa, Spain, and even Italy, never have the Strangles,—a disease known only in the middle and northern parts of Europe. Now, have we not a right to ask, by what privilege the horses of the South are preserved from Strangles, if this affection were solely to be attributed to the existence of a particular poison? and also, why the Barbary horses (we cite them as an example) are less sickly and more vigorous than those of our own country, as they do not go through that purification—that cleansing which is here considered so indispensable to the health of our horses?

The inflammation called Strangles cannot be attributed to a native poison which circulates in the blood from the birth of the animal; and it is not the effect of any single cause: it is referable, according to M. Rodet—

1st, To the disturbance of second dentition which takes place between the ages of three and five, and is sufficiently painful to cause an increased action, more or less, of all the neighbouring parts;

2dly, To the castration of males;

3dly, To the changes in diet and situation which young horses undergo;

4thly, To the unusual fatigue which they undergo in training;—all

* Jour. Prat. Méd. Vét.

circumstances which happen about that period, and which add, more or less, to the activity of the first and principal cause.

The fact before mentioned, on the subject of southern horses, still comes in support of this opinion: they are free from the Strangles when not castrated, and left in their native country; but they lose this advantage if they are castrated, and taken young into cold and humid climates, where we find them placed under the influence of the above causes. They do not carry with them the germ of the complaint, but they acquire it in the country to which they are taken.

The errors in the treatment of Strangles have chiefly attracted the attention of M. Rodet. In consequence of the opinion that the Strangles, being a poison generated with the animal, is an indispensable complaint, —a crisis which is necessary to take place,—it is generally believed that we ought to assist it as much as possible; above all, to be careful of checking it by bleeding, which, however, is the best means of cure.

It is a great satisfaction to many people, when a horse with the Strangles has discharged well; it is a guarantee for his future health— the more goes out, the less remains, they think. This reasoning, which appears singular to physiologists, is, however, without any exaggeration, that of many persons who are not devoid of knowledge; but who, upon this particular subject, reason wrongly. Every day we hear amateurs and officers of cavalry complaining to dealers that they stop the Strangles on their horses, by bleeding them when it shows itself; and attribute all the complaints which may afterwards occur, to the Strangles repelled, or badly thrown out.

M. Rodet has not admitted any of these evidently erroneous opinions: he treats the Strangles by the antiphlogistic plan, in which bleeding is a principal agent, by powerful counter-irritation (setons, blisters, &c.) The success which he has met with in this rational plan has been very great, as may be seen in his Essay, which contains the history of twenty-two cases treated on this plan, twenty of which were successful; to the other two he was called too late, and in them he remarked a complication of symptoms. The author inquires, upon what this generally-received opinion is founded—that stopping the Strangles, and the non-expulsion of the supposed virus, can have injurious effects. He observes, that the dealers who have horses on the point of showing the Strangles, disperse the first symptoms by repeated bleedings, which check the inflammation; but they do not follow up the bleeding by any additional means to render its effects durable; and, besides, they continue to keep the animals under the influence of the causes which first produced it. It results, that inflammation, imperfectly treated, recurs again after a time, and gives rise to diseases of more or less importance, which ought to be attributed to this bad treatment, and not to the bleeding; which is good, and the most useful remedy in our power.

M. Rodet concludes, from the observations contained in his Essay,

1st. That the Strangles, far from being an affection *sui generis*, is truly an inflammation of the mucous membrane of the mouth, nostril, larynx, trachea, &c.: it may extend, by continuity or sympathy, to

the tissues which that membrane invests, to the glands, the lungs, and even the stomach.

2dly. That bleeding, aided by other antiphlogistic means, to which is joined the use of the most active counter-irritants, constitutes the proper treatment of the Strangles.

3dly. That bleeding, employed without the auxiliaries in question, may certainly have the bad consequences which have been attributed to it by ignorant people.

The Memoir of M. Rodet is most interesting: it treats in a new manner a subject on which much has been written, but which has not been well understood: he has made a grand step in this department of Veterinary Pathology.

HORSE CAUSES.

In the Court of King's Bench, Westminster, June 16th, 1828.

FULLER *v.* SIGMOND.

THIS was an action by a livery-stable-keeper, at Mary-le-bonne, against Dr. Sigmond, a physician, who had hired a pair of carriage horses of him by the year. The declaration alleged that the defendant had engaged to take proper care of the horses, but had failed to do so, and had, by improper treatment, caused the death of one of them. The action was to recover its value, which was stated to be about eighty guineas.

By the statement of the Common Serjeant, and the witnesses whom he called for the plaintiff, it appeared that in April, 1827, the defendant had agreed with the plaintiff for the use of a pair of carriage horses, at 150 guineas per year. They were kept in the plaintiff's stables at Mary-le-bonne. The horse in question had died in December, 1827. A short time before, it was found to be unwell. The defendant had had it out on Monday, the 26th of November, and it was brought home in the evening wet and fatigued. On its return home the next evening it was found to be worse, and, at the suggestion of the defendant's coachman, it was bled. Mr. Fenwick, a Veterinary surgeon, who was afterwards called in, found the animal in a very debilitated state, and he had no doubt that the bleeding, after the exertion it had undergone, was the cause of its death. It was only five years old, and a week before the bleeding was in a healthy state. Mr. Fenwick having, in the course of a few days, found that a re-action had taken place, bled the animal again, after giving it some medicine; and in

two days after, it died. According to the agreement for the hire of the horses, the defendant was to have a pair of young horses for day work, and a pair of old ones when he had occasion to go out at night. The plaintiff was in the habit of sending to the defendant to know whether he had occasion for the horses in the evening; but on the evening in question the person whose duty it was to call on the defendant omitted to do so, and it was proved that the young horses, which had been out on the Monday, were not in a fit state to leave the stable on the following day.

Sir James Scarlett, with whom was Mr. Brougham, addressed the jury for the defendant.—A livery-stable-keeper, who let out horses in this way, took all the risk on himself, and could not maintain an action of this kind, unless he proved that the party had treated the horses improperly. Here there was no evidence of improper treatment. The plaintiff, in letting out these horses to a medical man, did so knowing that they might be wanted at any hour of the night. He was not bound to supply the party with any particular pair of horses. His business was to see that the horses which were sent out were in proper condition to perform the work. If they were not in a fit state to leave the stable, he should take care that they did not go out. The defendant was not answerable for taking them out when they were not in a proper condition to go. There was no evidence that he had treated them improperly by exercise; and as to the first bleeding, supposing that to be improper, it was impossible to say that it had been the cause of the death, because the person who had been called in on the plaintiff's part, had thought proper to bleed the horse a second time.

Lord Tenterden left the case to the jury, upon the single question, whether the death of the horse was occasioned by the first bleeding.

After a quarter of an hour's deliberation, they found for the defendant.

PITT, ESQ. *v.* ALLEN.

THIS was an action on a warranty of a horse sold by the defendant to the plaintiff, a gentleman residing at Kensington, in February last. The horse was warranted sound, and the price paid for it was forty guineas. It died on the 22d of March, of a disease of the lungs. The only question in the cause was, whether that disease existed at the time of the sale. The horse was found to have a cough a few days after it had been placed in the plaintiff's stables. The cough increased, and the plaintiff had the animal bled several times. On being opened after its death, it was found that several abscesses had formed on the lungs, and the chest was full of water. These facts were deposed to by the plaintiff's coachman and another witness.

Mr. Henderson, a Veterinary surgeon, who examined the lungs, stated that the whole of the disease might have taken place within a week from its first indication. There were tubercles on the diseased lungs. A cough always followed that disease, but there might be a cough without tubercles.

Mr. Coleman, an experienced Veterinary surgeon, who had not seen the horse, but had heard the statements of the other witnesses, deposed that the existence of tubercles was an indication of a slow disease, but he was of opinion that a cough might be unconnected with tubercles. His opinion as to the existence of tubercles in this animal, at the time it was sold, would depend upon what the condition of the animal was at the time it was sold. If it was fat, and in good condition, he should say the probability was, that there were no tubercles.

Sir James Scarlett, who appeared for the plaintiff, then re-called the plaintiff's coachman, who stated that the horse was in very good condition when it was brought to the plaintiff's stables.

Lord Tenterden. — Well, Sir James, are you in very good condition?

Sir James Scarlett.—I think not, my lord.

Plaintiff nonsuited.

ROYAL VETERINARY COLLEGE CASES.

An aged brown Gelding,

Of the cart-horse breed, belonging to Messrs. Cook and Co., was admitted on the 18th of May. The horse had been under home treatment for several days, as bleeding, &c.

The disease was stated by Mr. Sewell to be *inflammation of the lungs.*

The pulse was feeble, but very quick; the mucous membrane lining the nose appeared rather more vascular than usual, a slight discharge escaped from the nostrils, but the mouth did not appear particularly or unusually hot or dry: the horse evidently laboured under considerable debility; and the man who led the horse stated he had been exercising him for an hour or two, by the direction of the farrier, and that it was with considerable difficulty he got him to the College.

The horse was placed in an open shed, and five quarts of blood taken away. Half an ounce of aloes was given in a ball, and a mash diet.

The next day, the horse *not being better,* was directed to have a rowel inserted in the chest: three quarts of blood were taken away, and clysters of warm water directed to be frequently given.

On the 12th, the horse, not being any *better*, a rowel was inserted in each thigh, and two drachms of white hellebore powder ordered to be given two or three times a day.

13th. The rowels were dressed with turpentine ointment, and the hellebore discontinued, as it produced purging; the pulse was now very feeble at 58.

The next day the pulse was found to be more frequent, but extremely weak; the breathing difficult; great exhaustion, and the legs and ears cold.

Three quarts of blood were taken away; another rowel inserted in the belly; the legs were directed to be well rubbed, and flannel bandages applied.

THE HELLEBORE WAS AGAIN GIVEN.

15th. The horse was considerably worse, and rapidly sinking under this treatment, and in the course of the night he DIED.

Post Mortem Examination.

The lungs were found highly inflamed, and gorged with blood; the intestines also considerably inflamed (probably from the effect of the hellebore).

Query—Why was hellebore given? Why take away blood, if intended to subdue inflammation, and at the same time administer a drug to cause the same evil? Pray, Mr. Sewell, do attend to these points for the future.

We beg leave to ask the Professor, for what purpose white hellebore was administered at all in this case? We have always found this drug to produce inflammation of the stomach and intestines when given in large doses; but, for the better information of our readers, we have subjoined M. Magendie's observations and opinion on Veratrine, which is the active part of white hellebore root.

In speaking of the action of Veratrine on animals, he states, "that if a *small* quantity come in contact with the mucous membrane of the intestines, it becomes inflamed, the irritation spreads, that purging (and in some animals vomiting) will be produced." In a much larger dose the substance induces a very great acceleration of the circulation, and of respiration, soon followed by tetanus and death.

A small quantity thrown into the jugular vein also induces tetanus and death in a very short time; and, even in this case, Veratrine produces an effect on the intestinal canal; for, on dissection, the mucous

membrane will be found highly injected and inflamed. The lungs also presents signs of inflammation and of engorgement.

A black Mare—Aged 6,

Belonging to Messrs. Cubitts, was admitted on the 5th of June, which had been under previous treatment, as bleeding, &c. The disease was stated to be Catarrh.

The mucous membrane of the nose was inflamed, and a considerable discharge present: the glands under the jaw were also enlarged, the breathing difficult, and the circulation much increased.

A mash diet was directed, and a rowel made in the chest.

6th. Not being any better, and the breathing still difficult, three quarts of blood was taken away. Two drachms of aloes, with three of turpentine, were given in a ball, and a rowel inserted under the jaw. Late in the evening such a considerable degree of difficulty in breathing was present, as to render bronchotomy necessary in order to save the animal's life, which was accordingly performed by Mr. Vines.

An incision was made through the integuments, and an opening afterwards into the trachea; a leaden tube was then introduced, and properly secured with a bandage round the neck; the animal was immediately relieved, and continued to breathe through the tube without inconvenience, till it was removed several days after, when respiration was completely restored through the natural air passages.

The animal continued to recover till the 12th, when oil of tar was directed to be applied to the wound left by the incision, which was discharging good pus, and throwing out healthy granulations.

On the 13th, a solution of sulphate of zinc was directed to be applied.

On the 14th, this application was changed for a solution of sulphate of copper, which was directed again on the 16th; and on the 19th the animal was discharged, relieved of the complaint, and the wound nearly well.

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THE BULL-DOG *(Canis Pugnax.)*

"Dogs are honest creatures, they never fawn on those they love not; and I'm a friend to Dogs."

Among the various breeds of dogs observable in this country, none possesses a stronger claim to be considered an original native of it than the bull-dog; and his degeneration in foreign countries, when imported from this island, will, in a great measure, account for the imperfect descriptions given by some continental authors, as well as the silence of others respecting him.

Buffon, who has written at length on the canine race, has given only a few unsatisfactory lines respecting this extraordinary branch of it.

He supposes that the shepherd's dog, brought into temperate climates, and among a civilized people, as those of Britain, France, and Germany, would, by mere influence of climate alone, lose his rough aspect, his erect ears, his rude, thick, long hair, and assume the figure of a bull-dog.

No such change, however, appears to take place even in the smallest degree in this country; never partaking of the round head, the under-hanging jaw, and smooth coat, of the bull-dog, they remain unalterably the same, and the supposition of this celebrated naturalist falls to the ground. Although Great Britain has always been famous for her fighting dogs, and long for her bull-dogs,* it does not appear from any accounts of them, that the bull-dog of the present day was the one intended by ancient authors; as the description they give accords much better with the mastiff, which was used for these purposes, and with which it has been confounded by some writers. The period at which this breed came into repute is unknown, and has eluded the researches of the most vigilant on the subject: that the mastiff was the dog in estimation and use till within a few years, the writings of many appear clearly to prove; for even so late as the time of Gay, that accurate observer of nature's varied forms and manners has

* Abergavenny, in Monmouthshire, once celebrated for a particular breed of bull-dogs, and famous for the sport of baiting, is now no longer heard of as such, and the breed is entirely lost.

expressly mentioned, in his Fable, the Bull and the Mastiff; and we can scarcely suppose, that had the bull-dog and the mastiff been as distinct as at present, his critical judgment would have misplaced the one for the other.

The late Mr. Sydenham Edwards, who paid very considerable attention to the breeds of different dogs, and who was also a most excellent judge of these animals, supposes "that about the time the mastiff was common in England, and after the time of Gay, when bull and bear-baiting, with similar amusements, were rapidly declining, especially among the great, the small Dutch mastiff, or pug-dog, was much in fashion; and probably, by accident or design, the mixture of these two produced the intermediate variety in question, possessing the invincible courage of the one with much of the form of the other. Some objections may arise on account of the smallness of the pug; but it should be remembered, the diminutive size of many of these creatures we are accustomed to see, is owing to their being bred as small as possible, for the purpose of lap-dogs,—their original size being much larger."

The bull-dog is, in height, about eighteen inches, and weighs about thirty-six pounds; head round and full; muzzle short; ears small,—in some, the points turning down—in others, perfectly erect, and such are called tulip-eared; chest wide; body round, with the limbs very muscular and strong; the tail thin and taper, curling over the back, or hanging down, termed tiger-tailed, rarely erected, except when the passions of the animal are roused; the hide loose and thick, particularly about the neck; the hair short; the hind feet turned outwards; hocks rather approaching each other, which seems to obstruct their speed in running, but is admirably adapted to progressive motion when combating on their bellies: but the most striking character is the under jaw almost uniformly projecting beyond the upper; for if the mouth is even, they become shark-headed, which is considered a bad point.

The colours are black, salmon, fallow, brindled, and white, with these variously pied; the fallow, salmon, and brindled with black muzzles, are deemed the most genuine breeds, and the white to possess most action: there is a strong general resemblance between a brindled bull-dog and the striped hyæna.

The properties of the British bull-dog are, matchless courage and perseverance, even to death: bred for the combat, and delighting in it, he evinces, against an unequal adversary, invincible courage;*

* Dog-fanciers invariably prefer, and consider those best bred, which are large behind the ears. See Plate No. 2, of this work, Fig. 1, 2; also, Animal Phrenology, page 73.

roused by injury, or led on by his master, he attacks the most powerful animal, and rushes upon it without the slightest indication of fear; disdaining stratagem, he bravely assails the enemy in front—the bull, the buffalo, or bear; and if successful, fixes his powerful jaws on the nose, bringing the head to the ground, pins it there, destitute of the power of resistance, till, in loud roarings, his superiority is confessed. The smaller animals, as rats, mice, &c., he rarely regards.

Although the wounds the bull-dog inflicts are not severe, yet, by his unsubdued and obstinate courage, he will, in general, conquer any other of an equal or even superior size. It is probable that the teeth, not acting in immediate opposition from the great projection of the under-jaw, may prevent his tearing like other fighting-dogs: but the principal reason is his retaining to his uttermost the same hold; and though successful in overpowering, not proceeding to destroy his enemy. It is probable, too, this apparent deformity,—the elongation of the under jaw,—facilitates his seizing objects above him in combating, as the nose of the bull, bear, &c. Destitute of scent, nearly incapable of tuition, slow and sluggish in his manner, loose and irregular in his gait, in his pacific moments he is apparently inoffensive and stupid, sulky in the eye, and averse to action; but roused by noise, and easily wrought to a pitch of madness, seizing whatever presents or opposes him; nor is he deterred from the furious assault by lacerated limbs or broken bones.

They may be *over-bred;* that is, too deep game—suffering pain without resistance.

They are properly crossed with any other dog, where courage is the requisite.

The cruel and barbarous practice of bull-baiting, for which this dog was almost exclusively used, is now, by a humane act of the legislature, generally prevented; but as the custom of baiting animals is one of considerable antiquity, we shall lay before our readers a brief outline of what has been collected respecting this disgraceful and cruel diversion.

ROYAL VETERINARY COLLEGE.

H. WARBURTON, ESQ. moved in the House of Commons, on Friday night last, July 25, for a return of the account of all grants made by the Parliament to the Veterinary College from its commencement to the present time.

We shall have to comment extensively on this subject hereafter.

VETERINARY PROFESSION.

In our endeavours to promote the improvement and amelioration of the Veterinary Profession, by enlightening its members on what may be called their political degradation, we have found it necessary to pass censure on the conduct of certain public individuals, and, as usual in such cases, our statements have been met only by a violent cry of *party*.

We defy them to prove that anything like a party exists for this purpose, but shall be gratified to learn that a sufficient number of persons are of our opinion on these points, to deserve that appellation; as we cannot see why truth is less true, when supported by the suffrages of many, than when advocated only by a single impartial pen.

We disclaim every other motive in the proceedings we have adopted, than the welfare of the art; and it matters not from whom or whence these statements proceed, when they are so correct, that from the commencement of this publication to the present time, not a single fact or argument of ours has been controverted, or attempted to be denied by those whom they concern. Our pages are free—this silence speaks for itself.

Those who may think our censure on Mr. Coleman is too general, must understand that, at some future day, we have yet heavier charges to prefer against his practice, than any that have hitherto appeared; and it is not from "wantonness," as a correspondent supposes, but from a deep feeling of the injuries the profession has sustained at his hands, that we have been so severe.

It surprises us that Veterinary surgeons can identify themselves with a man who has always shown himself so regardless of their interests, as to sacrifice them, on every occasion, to his own; and that they should permit themselves to be duped, when a single glance at facts will prove the above assertion.

In our last number, it was shown that Veterinarians were excluded from the Examining Committee of the College, by and through the means of Mr. Coleman, who, in short, could not retain his situation if such admissions were to take place to a proper extent. Yet it is generally acknowledged that they are necessary—that the present mode of examination is the greatest injustice to the profession and injury to the public; and that only a wish to perpetuate ignorance can dictate their exclusion.

In order to see how much we will quietly bear, and remove all doubt respecting his intentions, it is proposed by his particular friend

among the Governors, to shut out Veterinary surgeons from the College altogether, and not allow them even to become subscribers—lest they should expose his practice to the world; and his deputy has issued orders that this exclusion shall be immediately enforced.

What ought to have been Mr. Coleman's conduct in this case, supposing these steps to have been resolved upon without his consent? To have opposed them, which he could have done successfully; or, in case of failure, he should have resented a declaration so dishonourable to the Veterinary body, by immediate resignation. But he consented, it is said, to the admission of practical men on the Examining Committee; of course he would do so, he could not act otherwise; but that would not prevent him from using all means in his power to prevent it, for we all know that Mr. Coleman's public measures are uniformly of a circuitous character. It was threatened, that the Medical Committee would all resign if the regulation were adopted: there are some whose services we should be sorry to lose; but better so, than that things should remain in their present state. It is absurd and ridiculous that men of one profession should alone decide on the qualifications of young men intended for another. There would be something rather more reasonable in a body of Veterinary practitioners granting diplomas to *physicians*, for they *ought to be* well acquainted with the general principles of anatomy, physiology, and medicine; while, on the other hand, the medical man can know little of the peculiar diseases of the horse, and is absolutely ignorant of those important subjects—the Foot and Shoeing. But it is enough;—in future we are to have no voice in electing our own associates; and for the disgrace, we have this for a consolation—that such is the will of our mighty Professor: and the respect we must, of course, have for a man who taught us a string of errors, and for his "constituted authority," is to preclude us from any "wanton exposure" of his interested views.

We repeat, that no deed of his is known to us in which he has not consulted his private interest before that of the profession. What has he done to deserve so much gratitude? Perhaps something formerly. We know that, many years ago, he proposed to recommend, to the utmost of his power, such Veterinary surgeons and shoeing smiths, as would enter into a bond to pay him 50*l.* per annum. *This* was probably for the general good of the trade.

Another most disinterested scheme for our benefit was, his famous plan of establishing branch Drug Establishments in every town in the kingdom, for the sale of horse medicines under the College sanction, finding, no doubt, that the post of druggist to the army was a lucra-

tive concern; and nothing but the *spirited remonstrances* of the pupils, led on by Mr. R. Lawrence, and the upright conduct of the Governors of that day, prevented him from executing this outrageous monopoly, which would have carried certain ruin to the country Veterinarian.

His three patents, the Artificial Frog, the Clip Heel, the Frog Shoe and the Spit Bar, might be adduced as so many separate proofs of venality: for a share in the first, it is said, he obtained some hundreds from an inexperienced pupil; and the right to use the two latter—a right, by-the-bye, but seldom exercised—was once on sale to all who would give him ten guineas.* But we prefer to argue on a broader bearing: if those shoes, &c. were, in his opinion, so useful and important, why does a paid servant of the public attempt to limit their utility by patents? or how does this conduct evince any liberality or regard for the interests of the profession? That luminous discovery, of which we propose to give some account—his three farthing artificial frog, was sold at the exorbitant price of three shillings; and his four guinea useless book is another instance of a true catchpenny.

We mention these merely to say that we can more freely pardon the worst extortion, than the manner in which he has depreciated the labours and abridged the profits of the Veterinary surgeon, by permitting the sale of cheap drugs at the College. This is a *cheap* monopoly, and more destructive to the practitioner than all the foregoing; but its consideration must be deferred to another number. Our object is to lay before our readers a short account of what Mr. Coleman has done, and tried to do, for himself; and let his friends, in return, inform us of a single measure he has ever taken to advance their interest or respectability. There are few men in the world who have his particular talent for conciliating the good offices of others, without ever doing anything to deserve them; but it will be acceptable to us to hear of any better motive to account for the general apathy, than blind respect or stupid fear. But if, on one hand, there are but few who know and feel the amount of injury he has inflicted upon us, or are bold enough to speak their opinion; so, on the other hand, the refuge of his cause is silence, and those who know it best, are best aware of its weakness.

* Report says, that even his *protégé*, Mr. Sewell, who ought to have known better, was readily *squeezed* out of a cool hundred by the proper application of the frog pressure shoe of the *ingenious* Professor.

VETERINARY SOCIETY.

THE members of this Society met on the 11th ult. to resume their discussions, and, after the minutes of the preceding meeting had been read and confirmed, the subject of Ophthalmia, and its treatment, was proposed by Mr. C. Clark; Grease, and its treatment, by Mr. E. F. Cherry.

Letters were then read by the Secretary, from the following gentlemen, in answer to his circular under Rule 10:—From Dr. Pearson, Messrs. Brodie, Coleman, and Morgan, desiring to be considered as honorary members; and from Sir E. Home, Dr. Cooke, Mr. Stanley, and Mr. Sewell, expressing their good wishes for the success of the Society.

G. Dermott, Esq., Dr. Spurzheim, and Dr. Harrison, were proposed, and elected honorary members.

It was moved and seconded, that a statement of the views and objects of the Society should be prepared, and a Committee was appointed for that purpose.

Mr. F. Cherry produced the leg of a horse, in order to demonstrate a novel mode of operation in cases of broken knees, by excising the injured part of the skin, and making perpendicular lateral incisions in order to heal the knee without blemish.

Dr. Cox, who was elected an honorary member, read a paper on the Quarter Evil; much interesting discussion followed respecting the diseases of cattle in general,—a subject heretofore too little attended to, and in the treatment of which there is great room for improvement.

On the 23d July the Society met again, and after confirmation of the former minutes, a letter was read by the Secretary from Mr. C. Bell, applauding the objects of the Society.

The question of the best mode of castrating the horse was brought forward and discussed; but it was difficult to gather the opinion of the meeting; for, as Mr. F. Cherry observed, dexterously and properly performed, almost any of the various plans in use would succeed; but that so much depended on the previous preparations and subsequent attention which the animal received, as to make it difficult, without very numerous experiments, to decide.

Some cases of practice were related, and the meeting adjourned till seven o'clock on Tuesday, the 5th of August. Veterinary practitioners, and members of the medical profession, are invited to attend.

VIEWS AND OBJECTS OF THE SOCIETY.

The objects of the Veterinary Society are to induce free discussion on all subjects connected with Veterinary science, and the practice of the art. The horse in all states will, of course, be a leading object of attention.

The breeding and rearing of live stock, and their treatment, both in health and when labouring under disease, will also be subjects for discussion.

Written communications on any of these points will receive candid consideration. It is intended to form a library of books relating to these subjects; donations of books, and manuscripts or descriptions of scarce books, will, therefore, be acceptable.

It is in contemplation to form a museum; anatomical preparations of parts in health, and specimens of morbid anatomy, with the history of such specimens, will, therefore, be acceptable. And it must be evident, that a library and museum, so formed, will concentrate a body of practical knowledge, which would be sought for in vain while diffused throughout the profession.

It is intended that books, manuscripts, and preparations, unless made donations, shall remain at the disposal of the original contributors.

With these views and intentions, the Veterinary Society call upon the profession and the public for their cordial and powerful support; the names already added to their list, afford the best proof of the importance of these objects, and the manner in which they are appreciated.

THE GODOLPHIN ARABIAN.

We may confidently assert that this famous stallion contributed more to the improvement of our native breed, than any other horse before or since his day: in proof whereof we add a list of his *get;* remarking, in corroboration of the position advanced, that all our present *first-rates* partake of his valuable blood.

Unlike the majority of foreign horses, no *pedigree* was brought over with him; indeed, it is altogether conjectural whence he came. All we know with certainty is, that Mr. Coke obtained him in Paris;

that he parted with him to Mr. Williams, who at that time kept the St. James's Coffee House; and that the latter gentleman presented him to the Earl of Godolphin, in whose stud he died, in December, 1753, at Gogmagog, Cambridgeshire, aged twenty-nine.

In 1730 and 1731, the Godolphin Arabian was teazer to *Hobgoblin* (a son of Aleppo, by the Darley Arabian); and on the latter refusing to cover *Roxana*, she was put to the Arabian, and that cover produced *Lath*, admitted by judges to have been one of the finest and best horses that had appeared on the turf since the days of the Duke of Devonshire's *Childers*, by the Darley Arabian out of Betty Leedes. This accidental circumstance, as it must be deemed, brought the GODOLPHIN ARABIAN into repute, and the best mares were put to him,—happily for those interested in the breed of an animal, which, says Buffon, "declines no service, exerts all his strength, and, that his obedience may be complete, will strain every nerve till he even expires under his generous efforts."

As something *wonderful* and *strange* usually accompanies celebrity, Mr. SCOTT, author of "*The Sportsman's Repository*," in compliance with a time-honoured custom, tells us, that "he was actually employed in the drudgery of drawing a cart, in Paris;" but he does not acquaint us with the source whence he derived his information. *Non bene ripæ creditur*, says Virgil. It was generally believed, however, that he was stolen, and smuggled into France from the coast of Barbary.

A faithful picture of the Arabian was taken by STUBBS (from which the accompanying portrait was copied), who has introduced the cat towards whom this extraordinary stallion evinced so strong an attachment, from constantly living in the stable with him; and this affection the horse manifested in a remarkable degree, on the death of his favourite. To conclude: the Godolphin Arabian was a bay horse, about fifteen hands high, with some white on the off hind pastern.

COLTS.

Those against whose names an asterisk (*) *is placed, were the first produce of their respective Dams.*

Name, colour, when foaled.	Dam.	Owner.
*Alchymist, b. 1750	Crab mare	Mr. Popham
Babraham, b.....1740	Large Hartley mare (1)	Lord Godolphin

(1) This mare was got by Hartley's Blind Horse (a son of the Holderness Turk), out of Flying Whig, by the Woodstock Arabian. *The Little*

Hartley Mare was got by Bartlet's Childers, also out of Flying Whig. In 1732, Mr. Hartley sold both mares to Lord Godolphin's stud-groom, for 200 guineas.

Babraham was a magnificent horse, sixteen hands high, master of eighteen stone. When in training, he beat Bustard, Little Driver, Old England, Sultan, Wafer, &c. Of his excellence as a stallion, the Stud Book affords ample proof. Few instances can be adduced of a horse running in such high form as Babraham did, and covering mares the same season. This fine racer and good stallion died in 1760, aged twenty.

Bajazet, b. .....1740 Whitefoot mare ..... Mr. Greville

April 11th, 1748, *Bajazet* beat *Babraham*, in a match, at Newmarket, carrying 12 st. each, *six miles*, fifty guineas. Bajazet was sire of many good runners.

Blank, b.....1740 Little Hartley mare .... Lord Godolphin

An apt illustration of the uncertainty attending *breeding* is here shown; and which we cannot pass without noticing: *Blank* and *Old England*, two brothers; the former was a stallion deservedly in high repute, but a very middling racer, while the latter proved an indifferent stallion, but a truly good runner. Take also *Lath* and *Cade*, both out of Roxana: the former, a racer of the first order, but, as a stallion, much below the mark; the latter scarcely to be called a runner, but, as a stallion, ranks high indeed.

•Blossom, gr.....1748 Blossom ..... Lord March
Bragg, gr. .....1751 Blossom ..... Duke of Grafton
Buffcoat, dun .....1742 Silverlocks ..... Lord Godolphin
Cade, b. .....1734 Roxana (2)..... Lord Godolphin

(2) *Roxana* died within a fortnight after foaling, and *Cade* was reared with cow's milk; hence his name, *cade*, tame, soft; as a *cade* lamb. See Johnson's Dictionary.

Chub, b. .....1746 Hobgoblin mare, 1739 .. Lord Godolphin
Colt, b.....1739 Danger mare ..... Sir John Dutton
Colt, b.....1739 Young Kitty Burdett.... Lord Godolphin
Colt, b.....1741 Young Kitty Burdett.... Sir T. Reade

Young Kitty Burdett, the first produce of her dam, bred by R. Burdett, Esq., foaled 1720, was got by Old Smales (a son of Whynot), out of Kitty Burdett (sister to Whimsey), by the Darley Arabian; grandam, the Young Child Mare, by the Harpur Barb; great grandam, Old Child Mare, by Sir T. Gresley's Bay Roan; great great grandam, Vixen, by the Helmsley Turk, out of Dodsworth's dam, a barb mare imported in the reign of Charles the Second, and styled a ROYAL MARE. Soon after his Majesty's death, the Studmaster sold her for forty guineas, at twenty years old, when in foal with Vixen.

Colt, gr. .....1754 Crab mare ..... Mr. Vernon
Creeper, gr.....1752 Blossom ..... Lord Godolphin
•Cripple, gr.....1750 Blossom ..... Lord Eglintoun
Cygnet, gr.....1753 Blossom ..... Lord Godolphin
Deputy, afterwards Lofty, b..... } 1753 Spinster ..... Mr. Panton

Spinster, perhaps better known as *The Widdrington Mare*, bred by Mr. CROFT, of Barforth, in Yorkshire, in 1735, was got by Partner, her dam (sister to the dam of Cornforth's Forester) by Mr. Croft's noted stallion, called *Bloody Buttocks:* of which horse, it is to be regretted that nothing further is known, than that he was a gray Arabian, with a *red* mark on his hip, whence he derived his name. Spinster's grandam, sister to Guy, was got by Old Greyhound; great-grandam, Brown Farewell (Matchem's grandam) by Makeless—Brimmer—Place's White Turk—Dodsworth—Layton's Violet Barb Mare.

In 1740, Spinster, then belonging to Mr. Widdrington, won the King's plate at Black Hambleton, beating fourteen others. She afterwards became the property of Thos. Panton, Esq. of Newmarket; and October 1st, 1741, won the King's plate at that place, carrying 12 st. R. C. at *four* heats; beating *Volunteer*, by Young Belgrade; *Favourite*, by Bethell's Arabian, who broke down after winning the second heat; and *Staghunter*, by Young Childers. Spinster was a brood mare in Mr. Panton's stud; she was dam of *Spinster*, Shepherd's *Crab*, *Rocket's* dam, and *Fancy*, by Crab; *Deputy* and *Posthumus*, by the Godolphin Arabian; *Golden Grove*, and a bay colt, by Blank; a filly, by Snip; and a grey colt, by the Panton Arabian.

Dimple, b.....		Hobgoblin mare, 1739..	Lord Godolphin
Dismal, gr.....1733		Alcock Arabian mare ..	Lord Godolphin

In April, 1738, *Dismal* won the great stakes of 1000 guineas, at Newmarket, beating *Careless* and eight others. June 13th, won the King's plate at Ipswich, beating the Duke of Bolton's *Poppet* and three others. Dismal was sold to Mr. South, of Newmarket; and, in 1739, he won the King's plate at Guildford, 12 st. each, four mile heats; beating Mr. Panton's *Blaze*, who won the third heat; Lord Portmore's *Spectre* winning the first. Five others started. June 4th, won the King's plate at Salisbury, 12 st. each, four mile heats.

Mr. South's gr. h. *Dismal*.....	2	0	1	1
Lord Weymouth's b. h. *Figg*, by Young Childers	3	0	2	2
Duke of Bolton's gr. h. *Hopeful*.....	1	3	3	3

The second heat was so closely contested between Dismal and Figg, that the winner could not be distinguished.

July 18th, walked over for the King's plate at Canterbury. September 3d, won the King's plate at Lincoln, beating the Duke of Ancaster's *Dart*, who was drawn after the first heat. Dismal was never beat; he covered, however, few blood mares.

*Dormouse, b.....1738	Partner mare	Lord Godolphin
Entrance, b.....1749	Hobgoblin mare, 1739..	Duke of Cumberland
Fearnought, br.....1751	Hobgoblin mare, 1739 ..	Lord Godolphin
Feather, b. 1751	Childers mare	Mr. Panton
*Gower Stallion, b..1740	Whitefoot mare	Lord Gower
Godolphin Gelding, b.....	1748	Hobgoblin mare, 1739..	Lord Godolphin
Janus, b.....1738	Little Hartley mare	Lord Godolphin
*Infant, b. 1746	Hobgoblin mare, 1737 ..	Lord Sandwich
*Lath, b.....172	Roxana	Lord Godolphin
Marlborough, bl....1745	Large Hartley mare	Duke of Marlborough

Name, colour, when foaled.	Dam.	Owner.
Matchless, b. 1754	Sorebeels mare	Mr. Panton
Mirza, b. (3) 1749	Hobgoblin mare, 1737 ..	Mr. Swymmer

(3) *Mirza* was never beat. Sir James Lowther offered to run him against *Snap* for ten thousand guineas, and allow him four pounds, but the challenge was not accepted. Mr. Swymmer gave Mr. Panton 100 guineas for Mirza, and sold him to Mr. Greville for 450 guineas. After winning the Jockey Club plate, in 1758, at Newmarket, beating *Matchem*, *Jason*, *Feather*, and *Forester*, 9 st. each, B. C., Mr. Greville disposed of him to Sir James Lowther, at the price of 1500 guineas. Mirza proved a very inferior stallion.

Mogul	Large Hartley mare	Lord Godolphin
Noble, b.....1744	Hobgoblin mare, 1739..	Mr. Greville
Old England, b....1741	Little Hartley mare	Lord Godolphin
Posthumus, b. 1754	Spinster	Mr. Panton
Regulus, b. (4) 1739	Grey Robinson	Lord Chedworth

(4) *Regulus*, also, was never beat; when six years old he won *eight* King's plates and a *50l.* plate—viz.:

1745, May 17th, *50l.* at Epsom; beating *Puppet*, *Brisk*, and *Chance*. (This race was run in the name of *Sweetlips*.)

June 12th, the King's plate, at Winchester; beating *Teazer*, by the Bolton Starling.

June 18th, walked over for the King's plate, at Salisbury.

July 2d, the King's plate, at Nottingham; beating *Wormwood*, by Hutton's Blacklegs; *Champion*, by Goliah; and two others distanced.

July 30th, the King's plate, at Canterbury; beating *Teazer*.

August 16th, the King's plate, at Lewes; beating *Grey Lincoln*.

September 10th, the King's plate, at Lincoln; beating *Champion*.

October 3d, the King's plate, at Newmarket; beating *Grey Lincoln*; and *Lowther*, by the Lonsdale Arabian.

1746, April the 3d, the King's plate, at Newmarket; beating *Teazer*.

Regulus did not start afterwards: on being taken out of training, he was sent into Yorkshire, where he proved himself a most valuable stallion; he was sire of many capital racers, and brood mares; he covered at Ten Guineas. This good horse died in the neighbourhood of Catterick, in 1765, aged 26.

Skewball, b.....1741	Whitefoot mare	Lord Godolphin
Sultan	Whirligig	Mr. Greville
Tarquin 1745	Scarborough Colt mare..	Lord Godolphin
Weasel, b.....1752	Fox mare	Lord Godolphin
Whitenose, b.....1742	Childers mare	Mr. Panton

FILLIES.

Amelia, b. 1748	Childers mare.....	Mr. Crofts
Anna, b. 1754	Cloudy.....	Lord Townshend
Dainty, br.....1751	Crab mare	Lord March
Daphne, b. 1753	Fox mare	Lord Godolphin
Emma, b.....1751	Hobgoblin mare, 1737 ..	Mr. Lincoln

Name, colour, when foaled.	Dam.	Owner.
Filly, b.....1750	Hobgoblin mare, 1737 ..	Lord Grosvenor
Filly, b.....1746	Large Hartley mare	Lord Craven
Filly, b.....1752	Soreheels mare	Lord Waldegrave
Filly, b.....1746	Whitefoot mare	Mr. Dutton
*Brilliant's dam..1738	Silverlocks	Mr. Crofts
Hip's dam 1752	Hobgoblin mare, 1737 ..	Lord Godolphin
Marplot's grandam1751	Blossom	Lord Eglintoun
Merlin's dam....1739	Little Hartley mare	Lord Godolphin
Pan's dam 1747	Hobgoblin mare, 1737 ..	
Well-done's dam 1739	Silverlocks	Sir J. Moore
Jilt, gr.....1749	Blossom	Mr. Panton
*Miss Cranbourn, br.1763	Miss Western.....	Duke of Cumberland

Miss Western, the first produce of her dam, a chestnut mare, foaled 1746, bred by Sir Robert Eden, was got by Sedbury (a son of Partner), out of Mother Western (the grandam of Eclipse), by Smith's Son of Snake—Montagu—Hautboy—Brimmer. In 1751, she won the King's plate, at Hambleton; which event is said to have laid the foundation of the handsome fortune accumulated by Mr. JOHN HUTCHINSON, under whose care the mare was, and who backed her to win, to the extent of his then slender means. In thus alluding to Mr. HUTCHINSON, that others may be stimulated to follow the same path, Justice and Truth require us to record, that, to persevering industry and the strictest integrity, he added much skill in training, and knowledge in breeding.

Miss Windsor.....1754	Young Belgrade mare ..	Duke of Cumberland
*Shepherdess, b.....1743	Hobgoblin mare, 1739..	Mr. Martindale
Sophia, b.....1748	Hobgoblin mare, 1737..	Mr. Harvey.

BULL-BAITING.

Roman Venatiæ—Combats of Wild Beasts—Spanish Bull-Fights —English Bull-Baits—Bull Running.

IF cruelty to animals could be justified by the examples of antiquity, abundant authors might be found in the records of the ancients. The *Venatiæ*, instituted by the Romans in honour of Diana, consisted in three distinct sports, which were all designated under that general appellation: in the first, oxen, deer, and even sheep, were turned loose into the arena of the amphitheatre, where the people were permitted to pursue them, and to appropriate those they caught to their own use; in the second, ferocious animals were made to combat with each other; and in the third, they were forced to contend with man.

The men who actually engaged on those occasions may, indeed, be exempted from the charge of cruelty, for they were generally slaves

or malefactors, who were unwillingly compelled to risk their lives in an unequal contest with the most savage natives of the forest; but the nobility of Rome, who, in some instances, hired them, the government which permitted such exhibitions, and the people who delighted in them, must all be included in the reproach.

These spectacles were commonly exhibited on the commemoration of victories, and on other solemn occasions; and as the Italian territory produced no other beasts of prey than the wolf and the bear, no cost was spared to procure every other species from abroad.

Thus the poet Claudian tells us—

> "All that with potent teeth command the plain;
> All that run, horrid with erected mane,
> Or, proud of stately horns, or bristling hair,
> At once the forest's ornament and fear;
> Torn from their deserts by the Roman power,
> Nor strength can save, nor craggy dens secure."

The havoc thus made, was, indeed, so unrelenting, that three or four hundred animals were sometimes butchered in one day; and history informs us, that the incredible number of 11,000 were destroyed during four months that were consecrated to the celebration of Trajan's victory over the Dacians.

Among the animals that were matched against each other, the wild bull was conspicuous; sometimes being opposed even to the lion and the elephant, and at others baited by dogs. They were also occasionally attacked by the men,—which custom is said to have been introduced by Julius Cæsar, who is supposed to have learned it from the Thessalians; but the details which have been preserved respecting these combats, are not sufficiently minute to enable us to ascertain the manner in which they were conducted.

BULL-FIGHTING is still a favourite sport among the Spaniards and Portuguese, who, indeed, pursue it with a degree of enthusiasm that partakes more of a passion than a taste. They have large, uncovered amphitheatres appropriated solely to that purpose, and men trained to the employment; the combats are celebrated with considerable share of pomp and ceremony, and are attended by persons of the highest rank, amongst whom crowds of elegant females are seen to join their plaudits when a successful *matador* has destroyed his opponent.

The ambition of gaining this valued homage to their bravery sometimes induces young men of the highest families to venture their persons in the contest; and a life thus sacrificed, is not considered as ignobly lost. The combatants appear on horseback, armed with a spear and sword, and gaudily dressed in a peculiar costume; and after parading round the interior circle of the amphitheatre, they all retire, except one, who is to engage singly. A door, which communicates with the den in which the bull has been already confined, and goaded almost to madness, is then opened, and the animal rushes forth into the arena, snuffing the air and bellowing with rage. So soon as he perceives his antagonist, he generally eyes him for a moment; paws the ground, as

if bracing himself for the assault, and then suddenly darts forward with terrific violence. The dexterity of the combatant consists in evading this attack; for which purpose he gallops off, and wheeling round the arena, still pursued by the infuriated bull, watches a favourable opportunity to become, in his turn, the assailant. In this conflict, the horses are often gored to death: or should the rider be dismounted by accident, he is then obliged, by the established rule, to continue the combat on foot, with the aid of the sword alone. He, in that case, wraps his left arm in his cloak, which he holds before him to distract the attention of the bull; and, boldly advancing to the encounter, awaits the moment that the animal bends his head with the intent to toss, when he instantly thrusts his sword into the chest, beneath the shoulder blade, and despatches him. In this manner successive bulls are destroyed; but they sometimes wreak their vengeance on their persecutors, and lives are not unfrequently lost in the contest.

This custom is generally supposed to be have been derived from the Moors; but the large roofless amphitheatre, the dens communicating with the arena, and much of the ceremonial, are all evidently borrowed from the Romans. It is also to be presumed, that had it been established among the Moors, before their invasion of Spain, some remains of it would still be found in Barbary, where, however, it does not appear to be known; and the stronger probability seems to be, that it has existed among the Spaniards from a much more remote period of antiquity.

The first BULL-BAIT, in this country, is said to have been held at Stamford, in Lincolnshire, about 1209, in the time of King John, and had its rise from the following circumstance:—William, Earl of Warrene, Lord of the town of Stamford, standing upon the castle walls, saw two bulls fighting for a cow, in the adjoining meadow, till the butchers' dogs being roused therewith, pursued one of the bulls (maddened with noise and multitude) quite through the town; which sight so pleased the Earl, that he gave the castle meadow, where first the bull's duel began, for a common, to the butchers of the town,* after the first grass was mowed or eaten, on condition that they should find a mad bull, the day six weeks before Christmas Day, for the continuance of the sport every year; which custom occasioned the proverb (used among the people and others, in that county and elsewhere), *As mad as the baiting-bull of Stamford.*†

In 1661, another amateur of this sport, Mr. George Staverton, bequeathed "the whole rent of his dwelling-house at Staines, to buy a bull annually for ever; which bull was to be given to the poor of the town of Workingham, in Berkshire, to be there baited, then killed, and properly divided; the offal, hide, and surplus gift-money, to be laid out in shoes and stockings for their children. The aldermen,

* We believe that not long since, a legal point and objection, relating to this grant, was brought forward, as not coming within Mr. Martin's act against cruelty to animals, but which we have not hitherto heard the result of.

† Butcher's Survey of Stamford.

and one Staverton, if one of that name should be living in the town, to see the work done honestly."

Charity, therefore, was one plea upon which this practice was continued; and the efforts made in the House of Commons to obtain its abolition were for a long time opposed and rendered abortive by the specious pretence, *that it tended to keep alive the spirit of the English character*, and to forbid it would encroach *on the liberty of the subject!*

But ultimately, through the perseverance of Mr. Martin, an act to prevent cruelty to animals was obtained, much to the credit and humanity of that gentleman.

If we accuse the Spaniards of barbarity, on account of their attachment to bull-fights, we forget that they risk their own lives in an open encounter, and that if they are cruel, at least they are not cowardly; while here, in this inhuman amusement, the bull is securely fastened to a stake by an iron chain or rope strapped round his neck, and with his horns muffled at the points. The range allowed to him is not large, and his dastardly assailants take especial care to keep beyond it,—irritating him by every means in their power, until they find him sufficiently enraged to begin the *sport*. A single dog is then let loose; and should he not succeed in pinning the animal, by seizing his nostrils and holding him to the ground, he is aided by a second, and a third; but should he still foil their efforts, and gore or tire them, successive dogs are again turned upon him, until the exhausted victim falls beneath their united attacks.

BULL RUNNING was a sport confined to the town of Tutbury, in Staffordshire,* as appears by the charter granted to the king of the minstrels, who amused the crowd attendant on the hospitality of the ancient Earls and Dukes of Lancaster.

By the custom of the manor, since the year 1374, a bull was annually given by the Prior of the Abbey, to the minstrels. After having undergone the torture of having his horns cut off, his tail and ears docked and cropped, and his nostrils filled with pepper, his body was smeared with soap, and in that condition he was turned out to be hunted. When taken, or held long enough to pull off some of his hair, he was brought to the stake, and baited in the manner already described. To the honour, however, of the inhabitants of the town, this custom was abolished in 1778.

* Plot's Nat. Hist. Staff. chap. x.

IMPROVEMENTS IN THE VETERINARY PROFESSION.

SUGGESTED BY MR. F. CHERRY.

In the early part of December, 1826, I informed Mr. Coleman of my intention to address the Governors of the Veterinary College respecting the constitution of the Medical Examining Committee, and on other points connected with that Institution, and sent him, for perusal, a letter I had written for that purpose.

In this letter I brought arguments used by him, certainly for another purpose, to bear on this particular question, and made them show, I think, in a strong point of view, the necessity of having recourse to Veterinary surgeons to render efficient the examination of Veterinary pupils.

Through the month of January, 1827, I endeavoured to ascertain when and where the Governors of the Veterinary College held their meetings for conducting the affairs of that Institution; a direct answer to these questions was evaded by Mr. Sewell, to whom I was referred by Mr. Coleman. The replies of Mr. Sewell to my repeated applications, were pertinaciously evasive; but they left it to be inferred, that no other meeting of Governors took place than an annual one.

Mr. Goodwin's opinions respecting the Veterinary College were well known;* and in the month of February, 1827, that gentleman and myself were invited by Mr. Coleman to detail the measures we wished to see carried into effect as most likely to promote Veterinary science: the invitation was accepted, and cordially acted upon on our part; many difficulties, however, occurred in pursuing the subject, but at length the points enumerated in the subjoined paper were unanimously agreed to.

"Several meetings having taken place between Mr. Coleman, Mr. Goodwin, and Mr. Cherry, for the purpose of taking into consideration some of the means by which the education of Veterinary pupils may be improved, the Veterinary College made more useful, and the Veterinary profession advanced, it has been agreed to propose the following alterations, and to support the attainment of them by all means in their power:—

"That the Committee of Examiners be increased to twelve members, exclusive of the President, and exclusive of Mr. Coleman, or

* See Preface to Mr. Goodwin's Treatise on Shoeing, 2d edition.

any other teachers at the Veterinary College that may hereafter be appointed, and that the new members be selected from the Veterinary profession.

"That the nomination of the members to be added to the present number, be with the present Committee, subject to the approval of a majority of Subscribers present at the next General meeting.

"That each vacancy, as it occurs, shall be filled by a Veterinary surgeon, until one third of the members, exclusive of teachers as above described, be Veterinary surgeons; and that these relative proportions be preserved.

"That the President be a physician or surgeon.

"That an efficient Demonstrator be engaged, who shall be constantly present in the dissecting room from ten till four o'clock, during three days in the week, besides occasional attendance on other days, throughout the season, for dissections.

"That experiments regarding the effects of medicines be made, and the results of those experiments be accurately registered; and also all cases admitted into the College, and the result of those cases be likewise registered, and so far promulgated as to be free to the access of Veterinary surgeons at all reasonable times.

"That, adverting to the advantages resulting from attendance at a slaughter-house, it is desirable that one should be established on some part of the College property, or as near to the College as possible, so arranged and conducted as to avoid its becoming a nuisance.

"Or, in the event of this measure being deemed impracticable, that then a supply of subjects, not exceeding three at one time, be provided at the expense of the College, for the purpose of obtaining knowledge by experiments.

"That prize medals be offered yearly to the profession, for the best dissertation on any Veterinary subject which may be proposed by the Committee of Examiners.

"That a catalogue of all the preparations in the Museum be forthwith made.

"That, in the event of Mr. Coleman introducing any person to a share of the lectures heretofore given by himself, it shall be incumbent on such person to give the general structure and economy of cattle, sheep, dogs, swine, and other domestic animals, the diseases to which they are subject, and the remedies proper to be applied.

"That measures be forthwith taken for the formation of a Library.

"The foregoing propositions are agreed to, on the supposition that the present members of the Medical Examining Committee continue

their services: but in the event of those services being withdrawn, the following propositions have also been agreed to:—

"That in the event of the present teachers withdrawing the privilege of gratuitous admission to their lectures, and other teachers not consenting to supply their place, that then arrangements be made by the Examining Committee with some one teacher of anatomy, chemistry, surgery, and pharmacy, respectively, for the attendance of the whole of the Veterinary pupils at one school; or that teachers be engaged to deliver lectures at the College at the discretion of the Examining Committee, sanctioned by the Subscribers at a General Meeting.

"That towards defraying the increased expense of this proposed arrangement, should it be necessary, the sum of Five Guineas be deducted from the amount of the fee at present paid by each pupil to the Professor."

The occurrences connected with these first steps towards the independence of our profession; towards increasing the facilities for its study; towards rescuing it from leading-strings; and towards placing it on the footing on which it ought to stand in this country, famed for its horses and for its horse knowledge,—are of a character that deserve free and ample discussion: this they must receive from those who, thinking for themselves, will banish sophistries, and look steadily and impartially at the conduct of individuals who, by placing themselves, or being placed, in public situations, become fair subjects for public scrutiny.

F. C. CHERRY.

July, 1828.

ON CONDITION IN HORSES.

BY MR. B. CLARK.

(In Rees's Cyclopædia.)

CONDITION, applied to horses, is used to signify that a horse is well fed and of good appearance: it also has another signification; that of his being brought by suitable treatment into a state of body that gives him the fullest use of all his faculties in performing any very difficult or arduous exertion or exercise, as for hunting, racing, trotting, or the arts of the manège. A horse that is moderately fat may be said to be in good condition,—and so he is for sale, or for slow, heavy draught service; but such a one would be totally out of condition for any of the above exercises. To condition a horse for these, a proper share

of clean, nourishing food and exercise is necessary; as much only as would confer the utmost point of strength and power, without adding any useless incumbrance of matter to the body that might clog the freedom of respiration, or increase the weight and bulk of the animal, and impede, rather than assist, the functions of the organs, viscera, and limbs. This art, if properly understood, should impart the greatest facility of wind, and join to lightness of the body the greatest possible elasticity and strength of the muscular system. Such is properly the art of *training*, to which we refer the reader; and in which, though great things have been done, more wonderful might be yet effected, if, to a well founded view of nature in these animals, were added all that consummate and well placed art could bring to her assistance; for nature, we are led to believe, has been but too often thwarted, instead of assisted, by the arts of stable-men, jockeys, and smiths.

Though mere practice alone will teach much, yet, when combined with a just system or knowledge of cause and effect, the art, whatever it may be, may be carried to much higher perfection than it can otherwise. For the present we only treat of condition in horses for the common and ordinary purposes to which they are applied.

To stable servants is left, in general, the physicking, dieting, and conditioning the horse; and a mystery has often, with the ignorant, more charms than the clear face of truth herself. The effects of drugs upon horses are very little known, perhaps, except the purgative effect of aloes, and the diuretic effect of soaps, and turpentines, and neutral salts; we have scarcely any medicine whose effects we really know upon the horse, or that appears at present likely to be known, yet are grooms ever physicking their horses with some drugs or other: good clean food in plenty, dry lofty stables, gentle exercise, and attention to the skin in keeping it clean, will bring almost any horse that is out of condition into condition, unless there be some lurking disease. Yet nauseous drugs are added to their food, and they are pleased to fancy that the effects they experience result from them; though it is more probable, as far as they go, and in the uncertain and often idle doses in which they are exhibited, that they prevent, rather than assist, the purposes they have in view, and rather disturb their digestion and weaken the stomach, than assist it; or more certainly render nauseous and loathsome the food they would otherwise relish: antimony, nitre, brimstone, elecampane root, &c., are among their secrets for this purpose. Antimony is, however, believed, by better judges than these, to affect the skin of the horse, and promote perspiration; this it may possibly do. We may, however, just remark, that where it affects the skin, it has the power of affecting the stomach; but with pigs, horses, and a variety of other animals, it does not affect the one, and one should doubt whether, in these cases, it would affect the other; for in no quantity whatever,—and we have given four ounces at a dose,—does it appear to affect the stomach: nitre, in larger quantities than they are used to give, will increase the urine; but how this promotes condition, we have not yet been informed. The rest of their nostrums are obviously inert; at least their actual effects, when pushed till they become externally sensible, have never been exhibited; and unless they are, we cannot

know them. There is, however, another and a more certain purpose answered in the administration of the drugs, and to which the science of medicine, in ignorant hands, is but too frequently made subservient, and without which, we believe, there would not be so much anxiety about the administration of them.

There is one instance, however, in which we rejoice to have it in our power to concur with these men in the use of medicine, and that is on horses coming from grass: this appears to be really a useful practice; and we think, from sufficient experience, we can vouch for the fact, though, to give medicines without a direct indication for their use, would, at first, appear repugnant to reason; yet it is usual with grooms to give one, two, or more doses of physic on the horse being brought out from grass, "to clear him out," as they say; but if such were the only effect, there would be no occasion for it, as the grass would very naturally come away from him without its good effects. We shall give a different account of the sudden change of life, from green, relaxing, watery food, as grass, to dry hay and stimulating corn;—from free, open air and nightly dews, and all kinds of weather;—to a close, low, foul, and crowded stable, the air of which is heated to an excess, and filled with stimulating exhalations from the dung; the water which had been received in quantities unrestrained, is now portioned out (though it is really more necessary) in miserable pittances. The body before exposed is wrapped in rugs and cloths, and the whole system becomes heated and inflamed by the sudden changes; inflammatory complaints of the lungs, eyes, palate, throat, intestines, and feet, are produced; and it is therefore useful on this account, in keeping off these attacks, to lower the habit by physic, after the horse has been a few days in the stable, and to pass, by slow degrees, to the excessive use of these vigorous stimuli. Dealers like to mix carrots with their corn, and bleed occasionally, and give bran mashes, which has the same effect.

In turning out also, grooms are again for physicking their horses, and under the same pretence of clearing them out, and preparing them for grass. They will, however, be sufficiently lowered and reduced by the grass itself, without any additional reduction by physic. It may not be an useless precaution, however, to withdraw, by degrees, the use of the corn, previous to turning out and the removing all sort of clothing, to give water in greater abundance, that the change may not be too suddenly felt, and bring on broken wind, farcy, and the diseases induced by too great debility.

In Arabia, where the finest horses in the world are produced, a late traveller in those countries (Mr. Barker) informs us of the extraordinary simplicity of their treatment of them. They do not use any instrument for dressing or cleaning them. They merely fasten them to a picket, by the leg or a halter, to give them their food, which, during the spring, consists only of grass; and when the earth no longer produces that nutriment, they supply the want by camel's milk,—which, he says, is most assuredly preferable to any kind of grain.

Beans, malt, oats, hay, and meadow hay, are the general food of horses in England, and are supposed to be stimulant or invigorating

to the system of the horse in the order in which we have placed them. Barley was the ancient food for horses, the discovery of oats being comparatively of modern date. In the North of Holland they feed their horses principally on the black, sour bread, called bumpernicke, made of buck wheat; and there it is eaten also by a large share of the inhabitants: for this purpose, they alight from their vehicles, and, without taking the horses out of their hempen traces, cut it in slices, and give them to eat. We observed that they appeared relaxed by it, but apparently without much debilitating them, as they seemed to do their work very well.

(To be continued.)

UNGUENTS.

How widely does the College practice, of standing horses on wet straw,* differ from the simple precepts of the ancients. Xenophon even forbids daily washing of the hoofs; "probably," says Mr. Clark, "because it rendered them too soft for their use without shoes." And the Romans were most assiduous in the use of unguents, finding they caused the horn to grow fast, and become tough and hard. So extensively was this anointing of the hoofs practised in those days, that it appears to us to have originated the word *unguen* or *unguentum*, for all ointment whatsoever, from *ungula*, the hoof, and *ungues*, hoofs or claws; though we believe this suggestion is a novel one, and it only occurred to us *en passant*. *Ungula* seems to be purely Latin, and the Greek words, μύρον, ointment, and οπλή, the hoof, are distinct in all respects.

It is probable that the first, or at least most general and necessary, application of ointment, was to the horse's hoof, from which, therefore, it took its name. Horne Tooke observes, that language is derived from substantives, because they had first existence and gave rise to the other parts of speech. In this case the verb *in-ungo*, to anoint, the adverb *inunguem;* and the whole family of ointments, *unguentum*, may owe their name (if pharmaceutists have no objections to offer) to their former intimate and useful connexion with the hoofs of the noble horse. The French *onguent*, and even our *ointment*, have the same source.

* See page 251 in the Number for June.

AN

INQUIRY INTO THE ROT IN SHEEP.

[Continued from page 313.]

PREVENTION OF THE ROT.

It is confirmed by experience, that whenever any place is laid dry by judicious management, it ceases to occasion the Rot.* For my own part, I am acquainted with many sound parishes, which, during their open state, were so injurious to man, and to other creatures, that I cannot sufficiently impress upon my readers the importance of effectual drainage for the preservation of health. When, from circumstances, the land cannot be laid dry, during the summer months, it requires to be occupied with great caution, since moist grounds are the most prejudicial and dangerous to animal life. I have had occasion to observe, that miasmata are produced, in some way or other, by the sun's action upon moist ground; and, therefore, when it is well covered with grass, early in spring, we have less danger to apprehend, provided we maintain a deep herbage, till the commencement of frosty weather.

Mr. Young, of Claxby, is of opinion, that when land is well covered with grass, it becomes less dangerous to cattle. In 1792, he divided a flock of sheep, and placed fifty upon some good aftermath, where, in other seasons, the Rot had frequently prevailed. Only this part of his flock escaped the disorder; which he attributed to the meadow not having been grazed, before it was well covered, and defended from the weather.

Some time since, he purchased a close in his own neighbourhood, which was reputed to be unsound. Before any sheep were turned upon it, he permitted the grass to grow, till it would cover a man's ancle; and, during the whole summer, he took care that it should remain an exceeding good pasture. The Rot did not appear in the field, though an adjoining close, in his own occupation, and another in the tenure of Mr. Thorpe, of Owersby, suffered more than usual during this year. He ascribes his good fortune entirely to the length of the herbage, which defended and preserved the soil and roots of the grass from the solar influence. It is well known, that a wet and warm autumn is always fatal to sheep, because, at this season of the year, the sun's power is considerable. When farmers float their meadows, to produce aftermath, they should never discontinue irrigation until the grass be well grown; by which means the soil becomes defended from the direct influence of the sun, and the generation of miasmata is prevented.

* See Letters, &c., selected from the Bath and West of England Society, vol. i. p. 341.

Luxuriant pastures seldom rot, unless they be eaten bare in hot weather. Whilst the ground is well concealed, it is so completely defended and protected, that the sun exerts no deleterious effects upon it. In the fatal year, so often particularized, Mr. Elmhirst, of Bag Enderby, an experienced and zealous agriculturist, who occupied two hundred acres of land in the parish of Croft, near Wainfleet, sold all his heavy beasts, and many sheep, early in the summer. His pastures were thinly stocked with sheep only, during the rest of the year. The Rot was extremely destructive in all the adjoining pastures, yet in his closes it never appeared. This exemption from the general calamity of his neighbours, he attributed partly to his land being always well covered with grass, and partly to his grazing, during that summer, entirely with sheep. In wet weather, beasts and horses, by treading the ground, leave foot-marks, where the water stagnates; and, in consequence of it, as he believes, the Rot is produced. In justice to the testimony of Mr. Elmhirst, it may be proper in me to add, that he has been an active and judicious cultivator of land on a large scale, for a great number of years. Every observation of his is, therefore, entitled to particular attention.

I have remarked, that sheep are most liable to Rot immediately after losing their fleeces; and in the month of November, when the cold first begins. No Rot can be contracted without warmth, or in spring, before the sun's influence is become considerable; but when the disposition is once acquired, it can only be subdued by frost, or a long succession of cold weather. Gabriel Plats assures us, with confidence derived from the experience of seventy-four years, that the only infectious months that beget the great Rot, are May and June, when excessive moistures befal those months.* In a few instances, it has appeared in April, when showery weather and great heats have prevailed. In ordinary years, meadows may be irrigated till May, without any injury to the occupier. In doubtful cases, the generation of miasms will be effectually restrained, by continuing a copious and regular watering till the grass is well grown. The late Mr. Bakewell was of opinion, that after May-day he could communicate the Rot at pleasure, by flooding, and afterwards stocking his closes, while they were drenched and saturated with moisture. In summer, rivers and brooks are often suddenly swollen by thunder-storms, so as to pass over their banks, and cover the adjacent low lands. In this state, no injury is sustained during the inundation; but when the water returns to its former channel, copious exhalations are produced from the swamps and low lands, which are exceedingly dangerous to the human constitution, and to several other animals, as well as sheep. I formerly mentioned, that during the summer, Mr. Harrison could give the Rot to his sheep in a few minutes, by grazing them upon the moist soft land, from which the water of the Barlings had just retired. While there is any current, the sheep will never become tainted, although they often wade in search of their food.

"The rainy season in Bengal lasts from the beginning of June to

* See Boyle's Works.

the middle of October. All this interval is considered as an unhealthy time, but especially in the latter part of it, for the earth then begins to grow dry; the slime left upon its surface, consisting of decayed vegetables, and other putrescent bodies, begins to corrupt, and the sun, by its violent and continued action, raises up into the air, not a pure water, but water impregnated with putrid particles of all kinds." *

"Till very lately, Cherson, a city endeared to Britons, as containing everything mortal of the philanthropic Howard, was the seat of naval architecture for the Euxine, and the residence of a great number of men belonging to the naval establishment; but it was found so very unhealthy in the months of July and August, during the prevalence of a pestiferous wind, that comes charged with a putrid miasmata, generated by the great heats in the low grounds to the left of the Dnieper, which are regularly overflowed every spring, when the river is swelled with melted snow and ice;—I say, it was found so unhealthy at this season, that the loss in men became a national object, even independent of considerations of humanity; and it was abandoned for Nicolayef; yet not entirely, as the docks are still left for building ships, where two of seventy-four guns are now on the stocks. The necessary garrison is likewise left; and as the profits of trade are considerable, I scarcely need add, that the unhealthy Cherson is not abandoned by the merchants, who we see brave all climates, and all extremes of temperature, where profit invites; but, indeed, those very gains enable them to evade the fatal blast, by quitting the city during its baneful influence, and leaving the seasoned clerks to transact the business. The heat is quite insupportable, in the day-time, for two or three months of the year, while the evenings and nights are remarkably cool: an extraordinary phenomenon, which certainly assists the putrid miasmata in producing that fatal remittent of this country, which laid the all-powerful Prince Potemkin in the dust, with so many thousands of the army that he commanded, and much more terrible to Russia than the Turkish cimeter, which her cannon and bayonets kept at a distance."†

The overflowing of the Nile puts a stop to the plague in Egypt; and it is notorious, that formerly, agues and putrid fevers were much more frequent in the fens of Cambridgeshire and Lincolnshire, in very dry than in wet seasons. Probably, since these counties have been better drained and cultivated, they suffer more in wet than in very dry seasons. According to Sir John Pringle, "The moisture and corruption of the air were much increased by the inundations (which had been made about the fortified towns since the commencement of the war), and sensibly became more noxious upon letting off part of the water in the beginning of summer, after the preliminary articles of the peace were signed. For these grounds, which were once entirely covered, being now half-drained and marshy, filled the air with moist and putrid exhalations. The States of Holland being made sensible of this, by

* Watson's Chemical Essays, vol. iii.
† A Tour through the Tourida, &c., by Mrs. M. Guthrie.

the sickness which raged at Breda, and in the neighbouring villages, gave orders to let in the water again, and to keep it up till winter."*

When miasmata are once formed, they preserve their noxious powers and destructive influence unimpaired, till the cold weather puts an end to their force and activity. In mild seasons, epidemic diseases have been known to afflict the human constitution, during the greatest part of winter; and the pastures which have once become unsound, are only to be recovered by the setting in of frost, or a succession of cold days and nights.

The autumn and winter 1799 and 1800 were remarkably mild and warm. At Candlemas time, sheep that were pasturing on the fen and commons at Washingbrough, near Lincoln, took the Rot, and died in the following autumn. No farmer in that parish recollected to have suffered, at any other time, from the Rot in spring. Mr. Thompson, of Horncastle, informs me, that many years since his brother occupied a low wet close in the parish of Hatton, and lost all his sheep before winter, of the Rot. From that time, the land remained unemployed till about Candlemas. It was then filled with strong, healthy sheep; but they were all rotten, and many of them dead before the following May-day. He recollects that there was very little frost during that winter, and, consequently, the effluvia were kept alive by the abundance of the herbage. Plats gives it for an infallible symptom, that when bees fail, and their hives feel light, a great Rot of sheep is to be expected: which gives a very seasonable warning to bleed sheep under the eye, or in the mouth, as oft as they see occasion in the end of summer, or in autumn; or to accustom those which are suspected, to lick salt in troughs, or to take some brine with dry food, as they may easily be trained to it by gentle degrees; or to force down a dose of salt, as is directed.†

Where necessity requires the pasturage of moist grounds in summer or autumn, the shepherd ought carefully to remove his flock into a dry situation before the evening, and provide them with corn, and good hay, or green food.

A considerable farmer of Bohemia kept his sheep sound in the wet and fatal year, 1769, by feeding them every night, when turned under a shed, or into stables, with hashed straw; and, by eating it greedily, they were all saved. By this judicious practice, the sheep were removed to sleep in better air, as well as preserved in a more vigorous state of body. Sir John Pringle informs us, that persons have maintained themselves in good health, during sickly seasons, by inhabiting the upper stories of their houses; and I have reason to believe, that merely by confining sheep on high grounds through the night, they have escaped the Rot.

After the dew is exhaled by the sun's heat, sheep may be suffered to range in moist and swampy places, with less danger, because the

* See Observations on the Diseases of the Army, p. 62; and Chapter I., of the Air and Diseases of the Low Countries.

† See Boyle's Works, vol. vi. p. 356.

miasmata which are formed in the night, and remain entangled among the grass, or float in the lower part of the atmosphere, are chiefly dissipated with the dew. Therefore, unless they be very copiously produced in the day-time, or are unusually virulent, they will not be sufficiently concentrated to do much injury to healthy sheep. While at rest and asleep, the operations of the system are more feebly performed, and then sheep are peculiarly exposed to diseased actions. By conforming to these regulations, I have known one flock escape entirely, while others have suffered materially in the same open field.

It is confidently asserted, that decoctions of bitter herbs, with salt, have frequently preserved sheep from the Rot. Salt is supposed to constitute a part of Fleet's celebrated nostrum: and we know, that bitters are deservedly recommended to prevent intermittents, the dysentery, and other disorders, which originate from exhalations.

In Oxfordshire, Dr. Lower has frequently known six or seven spoonfuls of strong brine and stale urine, with soot steeped in it, to be given with great success. This is done at spring and fall of the year, when the dew is counted most dangerous. This course of physic is continued eight or ten days, or till the sheep eat their meat heartily; and if they were taken in time, there seldom died any in a whole flock. For the same purpose, Ellis recommends the following medicine in his Practical Husbandry:—

"Take a peck, or better, of malt, and mash it, as though you would brew it into ale or beer, and make eleven or twelve gallons of liquor; then boil in it a quantity of shepherd's purse, comfrey, sage, plantain, penny-royal, wormwood, and bloodwort; add yeast, and afterwards salt, to the mixture: then turn the liquor into a vessel. After April comes in, give seven or eight spoonfuls to every sheep, once in the week, if the weather be wet, and it dry, not so often." *

The mortality of our soldiers, I am persuaded, would, on some occasions, have been less considerable, had the situations for encampments and military hospitals been chosen with more care and attention. They should always be placed upon dry grounds; and, where it is practicable, at a considerable distance from stagnant waters and moist plains.

The evening and night air is to be carefully avoided in unhealthy situations, except when duty obliges the soldier to expose himself to it. At such times, he should lie down as seldom as possible, or remain inactive, and ought to be covered with warm clothes. A dose of the bark, and a proper quantity of wine, or of some generous liquor, will

* Both these compositions have a purgative operation; and it is on the same principle, as I conceive, that Doctor Harris, of Jamaica, has preserved so many inhabitants, especially new settlers, from the yellow fever, and the ravages of the climate. If persons residing in unhealthy districts, or between the tropics, were occasionally to empty the intestines, in dangerous seasons, with neutral salts, and other cooling remedies, I think they would be enabled, by that means, frequently to avoid the accession of parenchymous inflammation, with all its terrible consequences. The medicine employed by Dr. Harris is calomel; and, although I do not mean to object to its use in these cases, yet mercurials, under one form or another, are now so generally recommended, that I fear much injury has been done by their indiscriminate application.

sometimes be necessary, to maintain the vigour of the constitution, and protect it from surrounding exhalations.

Those especially, who are exposed to the night air, should put on additional clothing. In the rainy season, woollen clothes will be found both comfortable and necessary. It is a very frequent custom with those who have resided long in Africa, to wear only a shirt and trowsers, and in this dress to expose themselves at night, when the land-breeze blows, or, at other times, to sit in a current of air: but, however agreeable the present gratification may be, it is always followed by a feverish dry skin, owing to a stoppage of perspiration, and very often proves a cause of violent diseases; so that it is a practice by no means to be imitated.* It is generally admitted, that ploughed fields, well laid down with grass seeds, are not in much danger for the first two years. After this time, the herbage gradually declines, and, in consequence of it, sheep become liable to the Rot.

In defenceless places, miasmata have been known to affect persons at a considerable distance from their source. Of this Dr. Frazier has favoured us with a remarkable and striking example, in the 55th No. of the London Medical Journal. Upon succeeding to his father's estate, Mr. Lomax, of Essex county, cut down a grove of trees, which obstructed his view of the Rappahamac River, and of a marsh which lies near it. In the following and several succeeding years, intermittents became very prevalent among the whites and negroes in his house. At length, suspecting the cause, he replanted the trees, and in a few years his family was again completely freed from the ague.

The injurious effects of marshes and swampy districts may, therefore, be moderated, by planting rows of early and late growing trees, to intercept the vapours, and supply oxygen to the atmosphere.

Till experiments have been carefully made for the purpose, we shall be unable to determine at what distance brute creatures can be assailed by miasmata, and whether they are infected through the stomach or the lungs.

I am of opinion, that the generation of noxious exhalations may be restrained in some measure by judicious husbandry, and by covering the ground with marl or lime. Whether the same object can be effectually obtained by animal manures or other means, is a matter concerning which I am not sufficiently informed; but since judicious drainage constitutes the basis of agriculture, and contributes essentially to the preservation of animal life, I would recommend this system to be vigorously prosecuted in all moist situations.

* See Med. Directions, &c. by Dr. Winterbottom, Physician to the Colony at Sierra Leone.

XENOPHON'S RULES

FOR THE

CHOICE, MANAGEMENT, AND TRAINING OF HORSES.

[Continued from p. 320.]

CHAPTER X.

The Whip and Spur not to be used indiscreetly—Of the Manner of Bridling.

1. If any one should desire to have a horse useful in war, and at the same time stately and beautiful to behold, he must refrain from pulling his mouth with the bridle, and from spurring and whipping him, which many, by doing, think they show off their horses; for such persons do quite the reverse of what they wish.

2. For, by drawing up their mouths, they blind their horses, and prevent their looking before them; and they become so frightened by being spurred and whipped, that they are bewildered, and run headlong into danger. But these are the actions of horses averse to being exercised, and that do everything awkwardly and without grace.

3. But if any one should learn his horse to go with a loose bridle, and to lift up his neck, and curve it under his head, he would thus lend a helping hand to make the horse do everything with which he is most pleased and delighted.

4. A proof that he is pleased with these things is, that when he goes towards other horses, especially if they are mares, then he raises his neck, bends his head with quickness, lifts his legs high, and throws up his tail.

5. When, therefore, any one can prevail on him to do these things, which he has done of his own accord, when he wishes to appear beautiful, he will then exhibit his horse pleased with being rode, and having a magnificent, stately, and beautiful appearance. How we think these things may be performed, we will now endeavour to show.

6. First, therefore, he ought to have not less than two bits. Of these, let one be smooth, with large rings, and the other have rings that are heavier, and lower, and with sharp points; that when this latter is put into his mouth, being offended with its sharpness, he may be glad to get rid of it; but that when he changes it for the light one, he may be pleased with it for its lightness. And those things which

he has been taught with the sharp bit, should be practised with the light one.

7. If, however, despising its lightness, he should frequently bear on it too much, large rings must be added, that, being forced to widen his mouth, it might be more under command.

8. The rough bit is made to operate more or less, according to the working of the hands. But whatever number of bits are necessary, they should all be easy and flexible; for when a horse takes one that is stiff, the whole of it bears on his jaws, in the same manner as when any one lays hold of a spit, he takes up the whole of it.

9. But the other is like a chain, which is only firm where it is held, but all the rest is flexible. The horse, feeling this in his mouth, endeavours to catch it with his teeth; and by twisting his tongue and jaws about, lets it drop lower down than it ought. To remedy this, some rings are fastened in the middle, which the horse playing with between his tongue and his teeth, prevents his endeavouring to get the bit between his jaws.

10. If any one should be ignorant what is meant by a bit that is flexible, and one that is hard, we will explain this. A bit is flexible which has large and smooth joints, that it may be easily bent; and every bit is easy in proportion as its joints are large and pliant.

11. But if the parts of the bit do not move easily, and are ill put together, it will be hard. Whatever sort of bridle, however, is used, the rider ought to do all the things here mentioned with it, if he wishes to display his horse in the manner already described.

12. The mouth of the horse should not be held tight, so as to confine it, nor so loose as not to feel the rein. But when, on being held up, he raises his neck, the bridle should be immediately given him; and he ought, besides—what we must not cease to repeat—be caressed whenever he does well.

13. But when he should perceive that the horse is delighted with the raising of his neck, and the looseness of the reins, he ought not then to put him to anything difficult, or force him to labour, but caress him, as wishing him to repose himself. For, by confiding in this, he would be led into a swift career.

14. That a horse is pleased with going swift, may be known, because no horse when he gets loose goes slow, but runs. And with this pace he is naturally most delighted, if he is not forced to run longer than is reasonable. For whatever exceeds the bounds of reason, is not pleasing either to horse nor man.

15. When, however, he has been brought to move himself with

grace, he should be accustomed, in the first riding, after wheeling about, to go into a swift career. But if any one should pull in a horse that has been thus taught, and at the same time make him the signal to go forward, he would press forward his chest, and lift up his legs with anger, but not in a pliable manner. For horses, when they are vexed, do not move their limbs with pliancy.

16. But if any one should give a horse thus inflamed, the bridle, he will immediately bound forward with joy, in thinking himself free from restraint; and, exulting in his graceful figure and supple joints, will endeavour to display that same elegance, as when he approaches other horses.

17. And those who view such a horse, will call him noble, and majestic, and well trained, and courageous, and superb; and not only beautiful, but, at the same time, majestic to behold. If any one, therefore, desires qualities like these in a horse, we have here shown how they are to be attained.

CHAPTER XI.

Of Horses for Parade, and for the Manège.

1. But if any one wishes for a horse that is magnificent and splendid, and brilliant, these things are not to be looked for in every horse; but such a one must be of a courageous disposition, and of a robust body.

2. The power of raising the body, does not depend, as some think, on the pliancy of the legs; but in having the loins supple, and short, and strong (but we do not say those near the tail, but those between the sides and the haunches, near the belly). For such a horse would be able to extend his hinder legs far forward under him.

3. But if any one should raise such a horse with a bridle, he would balance himself on his haunches, and lift up the fore part of his body, so as to display all the lower parts of it to those who were opposite to him. But when he has done this, the bridle ought then to be given to him, that he may do willingly that which is most beautiful to behold in a horse, and may appear to do so to the spectators.

4. There are some who teach horses to raise themselves, by striking their fetlocks with a stick; and others, again, order some one to strike them on the upper part of their legs.

5. We, however, look upon that to be the best method which we

have already mentioned; that when they do what is required of them, they should be suffered to rest.

6. For those things which a horse does by compulsion, as *Simon* also observes, he does without understanding, and with no more grace than an actor would perform his part if beat and scolded all the time. For both man and horse, when treated roughly, will do more things amiss than they will do well. The rider ought, therefore, by signs to teach him to do what is most beautiful and splendid.

7. If, therefore, after he has been exercised so as to be much sweated, on perceiving that he raises himself well, you immediately get off and unbridle him, there is no doubt, but that he will always be ready to raise himself on his haunches when it is required of him.

8. Upon horses like these, the Gods and the heroes are represented to have rode; and such men as are able to ride them with address, are looked up to with admiration.

9. For a horse that raises himself well, is a sight so beautiful, so astonishing, and so delightful to behold, that it attracts the eyes of all those who see him, both young and old. And no one leaves him, or ceases looking at him, so long as he displays himself in his splendour.

10. But if the person who happens to be possessed of such a horse is an officer, he ought not to be satisfied with enjoying this distinction alone, but should rather endeavour to make the whole of the cavalry under his command likewise worthy of being beheld.

11. Now, if such a horse should precede the rest, as those horses are most esteemed who can raise themselves very high, and repeatedly, the other horses would, no doubt, follow him step by step: there would, however, be nothing splendid in this.

12. But if they were all equally well exercised, and moved together in exact time, neither too fast nor too slow, there would arise such a harmony from the justness of their motions, enlivened by their neighing and blowing, that the whole would exhibit a most striking spectacle.

13. And if any one should buy horses with judgment, and bring them up so as to undergo fatigue, and exercise them skilfully, not for the purposes of war, but likewise for pomp and parade, nothing but ill luck could hinder him from rendering them much more valuable than when he bought them; and he would not only have his horses esteemed, but he would be esteemed himself, for his skill in riding.

As the XIIth and last Chapter of this work treats only *Of defensive Armour for Men and Horses*, we have omitted it.

ROYAL VETERINARY COLLEGE CASES.

An aged Black Gelding,

BELONGING to Lundy Foote, Esq., was admitted on the 21st of April, with Inflammation of the Eye (Ophthalmia).*

Fomentations to the eye, purging, and bleeding both from the jugular and angular veins, were directed, with mash diet, till the 24th, when Goulard water was substituted for the fomentation.

On the 26th, half an ounce of aloes was given in a ball, and the horse placed in an open shed.

28th. Half a drachm of calomel, with half an ounce of turpentine, was given in a ball.

May 2d, half an ounce of turpentine, with two drachms of aloes, was given. On the next day, a seton was inserted under the eye, and the fomentation again resorted to; the treatment hitherto used not having afforded relief.

4th. The seton was directed to be dressed with the turpentine ointment.

On the 7th, fifteen grains of croton powder were given, and four drops of the following infusion directed to be applied to the eye every day. Tobacco two drachms; boiling water six ounces: infuse for use.†

10th. The seton removed; Goulard water again directed to be applied; again bled; two drachms of aloes and half a drachm of calomel given in a ball.

12th. Aloes, one drachm; calomel, half a dram, every day.

14th. Infusion of tobacco, to be used twice a day.

15th. Blood-letting again, with two drachms of aloes.

17th. Sulphate of copper, three drachms; and aloes, two drachms; in a ball. Goulard water, as before.

21st. Turpentine, 4 drachms; sulphate of copper, 3 drachms; to be repeated every day, in a ball.

23d. Blood-letting again directed, and three drops of tincture of opium to be put into the eye every day.

31st. Two quarts of blood directed to be taken from the palatine

* Mr. Coleman states, that Ophthalmia, in the horse, is occasioned by *dung, and breath, and urine, and perspiration*, like gout in the human subject; but that we ought never to reason by analogy.

† Lundy Foote snuff is also occasionally blown into the eye as a remedy for Ophthalmia, at the Veterinary College.

arteries; the eye to be fomented, and one drachm of aloes given in a ball: the appearance of the eye was nearly the same, with great secretion from the conjunctiva, &c., and the cornea very opaque.

June 3d. Half an ounce of sulphate of copper, in solution, was directed to be given: this very soon brought on the gripes; and to relieve which, a clyster of warm water, with one ounce of soft soap, was ordered. Two quarts of blood taken away; the legs to be stimulated with turpentine liniment, and bandages applied; clysters to be frequently given; the blood-letting to be repeated; and the horse to have as much cold water as he likes to drink.

4th. The extremities feel cold, and the respiration is laboured; the pulse 68; the horse did not appear to have lain down, though somewhat relieved; the bowels were lax; the bandages to be continued; to have green food and mash diet.

On the 5th, the pulse 55; appeared better, and to have lain down; ordered two drachms of aloes, and a clyster.

6th. To leave off the bandages, and a rowel to be inserted between the jaws; the horse feeds, and appears better; has a slight cough, with a discharge from the nose.

7th. The rowel to be dressed with turpentine ointment.

9th. To have turpentine, six drachms; calomel, half a drachm; given in a ball; the eye still considerably inflamed, and the cough much the same; to have mash diet and green food.

12th. Three drops of tincture of opium put into the eye.

On the 14th, the quantity was increased to five drops; the eye appeared clearer and less inflamed, and the horse somewhat fresher; ordered tares and common diet.

16th. Croton seed and calomel, each ten grains, in a ball, every day; sulphate of zinc, thirty grains; water, half a pint; dissolve for a lotion, to be applied to the eye frequently.

On the 22d, the opacity and inflammation was much increased; the lotion and ball ordered to be discontinued; three pints of blood to be taken from the angular vein, and the eye to be fomented with water; to have half an ounce of aloes given in a ball, and the same food as before.

24th. Goulard water to be constantly applied to the eye.

26th. Two drops of tincture of opium to be put into the eye, and two quarts of blood taken from the neck.

27th. A rowel directed to be made under the jaw, the lotion discontinued, and half an ounce of sulphate of copper to be given in a ball.

29th. Considerable œdematous swellings have takenplace in several parts of the body, but more particularly in the extremities. Three quarts of blood were directed to be taken from the neck; the rowel to be dressed daily with turpentine ointment, *to promote a discharge;* a diuretic ball to be given, and clysters of water twice a-day.

July 1. The extremities are rather reduced in size, but the face and muzzle are considerably more swelled. *The bleeding was directed to be repeated from the palatine arteries; a rowel to be inserted in the chest, and also in each thigh;* to be dressed as the former: six drachms of turpentine and two of aloes to be given in a ball.

2d. *The blood-letting was directed to be repeated,* and a seton to be inserted underneath the abdomen; the pulse quick and feeble, and the horse worse.

3d. Sulphate of copper, two drachms, and turpentine, half an ounce, to be given in a ball; the seton to be dressed with turpentine ointment. Punctures were made in the abdomen for the effused fluid to drain out: pulse very quick and weak, and the swelling getting rapidly worse.

4th. The nostrils are nearly closed by the increase of the swelling, which has extended higher up, and the mouth can scarcely be opened; punctures were made under the jaw for the effused fluid to drain out; the pulse was very feeble, above 80; the rowels discharged a sanious fluid, having ceased to suppurate.

Mr. Coleman ordered calomel and opium, each half a drachm; turpentine, six drachms in a ball.

On the 5th, early in the morning, the animal fell, and after struggling for more than two hours, died.

Post Mortem Appearance.

A considerable quantity of serum was found effused in the cellular membrane, more especially about the extremities, the head, and muzzle. The muscular parts were blanched and flaccid, particularly the heart. Serum was also effused into the cavity of the abdomen and chest. The mucous membrane of the intestines was inflamed.

Since Mr. Coleman has favoured us with the four causes which, according to his elegant definition, occasion Ophthalmia in the horse, we should thank him, or Mr. Sewell, or any other person, to account for the varied and inconsistent treatment pursued in the above unfortunate case.

If all these depletive measures—to wit, thirteen bleedings, sundry

rowels and setons, aloes, calomel, clysters, turpentine, croton-seed, as well as opium, &c., divers times repeated, were necessary and not merely experimental, for what purpose was sulphate of copper so perseveringly administered?

A Bay Gelding, aged 5,

Belonging to J. Grissel, Esq., was admitted on the 15th of May, with Mange.

The parts most diseased were the neck and sides of the head. The turpentine liniment was well applied, and repeated on the 16th. Half an ounce of aloes was directed to be given in a ball.

19th. The liniment was again well applied.

On the 20th, the horse was washed with warm water and soft soap, and then exercised.

22d. Liniment of tar was directed to be applied instead of the turpentine liniment.

23d. The same liniment was again used, and six drachms of aloes given in a ball.

28th. The horse was washed, exercised, and the liniment again applied.

30th. Liniment repeated.

June 2d. Repeated in a smaller quantity.

4th. The horse was washed, and exercised till dry.

6th. Twelve grains of croton seed were directed to be given, the horse well exercised, and then washed with soap and water.

10th. Turpentine liniment was again ordered to be used.

12th. Exercise, and soap and water.

14th. Turpentine liniment once more.

15th. Again exercised; soap and water; and on the

18th. The horse was sent out cured.

A Chesnut Horse, aged 6,

Belonging to W. Windham, Esq., was admitted on the 18th of April, to be castrated.

Directions were given for the horse to be fed on mash diet.

On the 19th, six drachms of aloes were ordered in a ball.

On the 22d, the operation was performed by Mr. Sewell, *when the* RED HOT *iron, resin, and cold water, were alternately and liberally used.* Cold water to be constantly applied.

24th. The part was very much swollen, together with considerable

irritation of the system. Three drachms of aloes directed to be given in a ball, a common clyster, and fomentation to the part.

26th. Part beginning to suppurate, inflammation somewhat less; turpentine ointment to be used for dressing, and the fomentation directed to be continued.

28th. Ordered half an ounce of aloes in a ball, with tincture of myrrh to be applied to the part.

29th. Turpentine ointment directed to be applied to the part; the fomentation as before; to have gentle exercise, and two drachms of aloes, with half an ounce of turpentine given in a ball.

May 1st. Appears better, and to be going on favourably.

9th. Considerable inflammation and irritation came on; the discharge decreased and became very fetid; was directed to be bled to the quantity of two quarts, and have three drachms of aloes given in a ball.

10th. Warm water was ordered to be injected into the scrotum, fomentations to be continued, and a common clyster given.

12th. Directed to have turpentine ointment applied to the part daily, and the fomentations continued.

14th. Ordered half an ounce of aloes in a ball, and a clyster.

16th. Oil of turpentine directed to be applied daily to the part, instead of the ointment: the horse is reduced very low; to be exercised by walking half an hour a-day.

19th. Appears about the same; considerably reduced; fomentations to be continued, and dressed with turpentine ointment.

22d. Four ounces of salt, and two pints of water directed to be given every day.

24th. The horse appeared rather improved; the swelling and discharge lessened. Fomentations to be continued, and clysters occasionally.

28th. The salt ordered to be left off; the horse rather improved in condition.

June 9th. Ordered half an ounce of aloes in a ball; going on much the same.

20th. A solution of zinc directed to be applied to the scrotum every day.

27th. Compound tincture of myrrh to be applied.

July 2d. Turpentine ointment ordered to be used daily.

25th. The horse still remains, the sore not quite healed, but improved in condition.

ON THE

COMPARATIVE INFLUENCE OF THE MALE AND FEMALE IN BREEDING.

BY M. GODINE, JUN.

[Continued from page 285.]

On Breeding the Arabian Horse.

MARES are usually put to the horse in the spring: the Arabs choose the period when she is horsing, and the leap is performed at liberty, and without constraint, that is to say, they are turned loose together. The stallion leaps the mare twice following, and he can cover three mares a day, which makes six copulations in twenty-four hours: our stallions in Europe could not perform such service, for far the greater number of mares would not be got in foal; it requires the energy and activity of the vital functions which distinguishes the Arabian horse, to perform service so exhausting and debilitating.

Some Bédouins, who possess distinguished stallions, with well-known pedigrees, travel with them from tribe to tribe, for the purpose of covering mares; the common price of a leap is a Spanish piastre. The owner of a stallion will not sell him for any price, during the covering season; after this, it is easy to purchase him,—but always at a higher price, according to his qualities and pedigree. At this period, it is not difficult to procure stallions of the best breed: travellers who pretend to the contrary are in error; the male horses are sold without distinction, from the first month of their birth, until the age of four and five years old; we even find among them but a small number above three, because the Turks buy them before that time, and the Arabs keep only those which are intended to cover.

Thus they show themselves disposed to sell their colts and stallions; whilst they are scrupulously attached to their fillies and mares: nothing can induce them to part from these. The mare continues her work during the period of gestation, often foaling a few minutes after a course. Under certain circumstances, she is obliged to travel with her colt a few hours after its birth. If the produce be a male, they put over its nose the skin of a hedgehog, or a cross of wood

with sharp points, to prevent it from sucking, as is the practice amongst us, to wean them; then the little one remains with its dam during this period of privation, and is nourished with the milk of camels, the Arab reserving for his own use that of the mare. If, on the contrary, it is a female, as she is more precious in the eyes of her master, she is allowed to suck her mother during six weeks or two months; at the end of which time she is weaned, and attached to the tent of the Arab, she partakes of his repast, and forms part of his family.

The Arab sojourns all the year in the desert, he camps near a spring or brook, where vegetation is most luxuriant; the borders of these brooks afford reeds or sweet *aròndos*, which their horses are very partial to, and which they reserve more particularly for the suckling mares, and the covering stallions. The remainder of the stud graze together upon the pasturage, after the reeds intended for the mares have been gathered and preserved near the tents. The stallions are separated and alone, to prevent promiscuous coupling; they are secured by all four feet, by means of cross shackles, composed of rough iron rings, which wound the pasterns and coronets; and it is not rare in these regions to see these parts blemished and scabbed. They take more care of the mares, and give them more liberty; they are fastened with cords of camel's skin, felted with hair, and rarely are all the four legs shackled at the same time, which exposes them less to injuries.

The Arab horses which go beyond the usual height (five feet six or seven inches) are loosely framed and weaker. Horses of this height are rare in the desert; the Turkomans are higher and more furnished, their forms less shapely, their paces less graceful and lively, and the root of the tail is smaller. The Arabs attach great importance to this part; they measure its length with care, and believe that horses which have the tail too fleshy fail in vigour and wind, and that they are only proper for the pack-saddle.

The most common colour of the horses of the Desert is grey; seven-eighths among the Bédouins are of this colour, the rest are bright bays and sorrels: the roan is found with the sorrel. Black horses are very rare in Arabia, but common in Angola, where they have white legs and blaised faces.

It is generally believed, in Europe, that the full, well-formed head is constantly found in the Arabian horse. This is an error. Among the most celebrated races of Arabia we find horses with heads as long and strait as among the Norman horses in the plain of Caen; only

they are more graceful and lighter. The Turks are partial to this form of head, because they find with it a better and more commanding shape.

The influence of the stallion in Europe is beyond doubt; it is everywhere acknowledged as the most powerful means of preserving or regenerating stock. I have, myself, made the following observations:—The more the male is superior to the female in strength and the energy of his vital powers, the more will his produce partake of his character and appearance: this observation not only applies to the horse tribe, but also to the bull and ram; it is shown particularly in the experimental flock at Alfort, that this observation is founded upon uniform facts, repeated during many years.

The matching of the male with the female is, without doubt, of the greatest importance in order to obtain a good offspring; but the choice of the male is, in fact, the principal condition. The most beautiful mare covered by a weak and ill-formed stallion, will only produce an inferior colt; whilst a weak and ordinary mare, by a stallion of blood and distinction, will give a produce resembling its sire, but not its dam.

The stallion *Desire*, of the stud at Alfort, with a light and graceful form, stamps his qualities and defects upon all his produce, however the mares may differ; colts of his get resemble him in all respects. I say this of all the Arabian and English stallions whose produce I have observed. The colt of a vigorous mare bears, on the contrary, the likenes of its dam, if the stallion is weak, or a bad constitution. Rhinoceros, and some others of the stud at Alfort, have furnished me with numerous converse proofs of the influence of the sexes, when the female is more vigorous than the male.

In drawing a general principle from the facts which I have gathered, I believe myself justified in making the influence of the female consist principally in determining the comparative size and full developement of the progeny. Thus a she ass covered by a horse, gives the *bardeau* a mule which resembles, in shape, the horse more than the ass; but which, in height, approaches more to that of the latter: on the contrary, a mare covered by an ass gives the proper mule, which is like its sire in form and temper, and the dam in height and size. Food, climate, and some other causes, may modify these results, but not destroy these principles. Nothing is immutable—everything changes successively—nature is a vast laboratory where new modifications of new aggregations are continually combining, and the effects produced are disappearing insensibly; animals, in common with all other natural bodies, are

subject to these eternal laws. The horse bred in the warm regions of Asia and Africa, loses his energy by slow degrees, when transported into the cold or temperate climates of Europe: to renew his constitution and preserve his original qualities, it is necessary to go back continually to the fountain head of life from whence he originated: without this precaution he will gradually lose a portion of his nature through the change of climate and food, and, consequently, degenerate.

The English, more enlightened than all other nations on this important branch of rural economy, do not wait till these influences are perceived; without ceasing, they endeavour to perfect their various kinds of domestic animals; and the stallion, from the Deserts of Arabia, comes to renew, in their valuable breeds of horses, the primitive fire—the sacred fire, which would become extinct without this precaution. If we wish to follow, and, even in the end to equal, perhaps finally to surpass them—for our climate is more favourable than theirs—it is necessary to adopt this wise and indispensable measure. The same principle applies to all other species of animals, and it is not less evident in the sheep and the goat.

(To be continued.)

REMARKS ON THE TREATMENT OF RED WATER IN COWS.*

M. SANITAS states, in a short paper, that he adopted the following treatment with good success in the case of a cow that was attacked with red water—viz.: a full and extensive bleeding, together with a spare diet, and clysters of cold spring water frequently repeated, as well as pouring water on the loins.

This was the only treatment employed; and he states, that since that time, he has had occasion to treat the same complaint in a Chilian cow, where the bleeding and cold water, together with attention to the diet, effected a cure.

[Saline purgatives are found of great utility in this complaint, as the Glauber and Epsom salts (sulphate of soda and magnesia), as well as common salt (muriate of soda), in their proper doses.—ED. F.]

* Jour. Prat. Med. Vétér.

To the Editor of the FARRIER *and* NATURALIST.

MR. EDITOR,

I HAVE taken in your publication from its first appearance, and beg to thank you for much amusement and instruction; but still, as in Solomon's day, there is an evil under the sun. Why endeavour to degrade, in the eye of the world, the only constituted Establishment we have? I take for granted you are, or have been, a member of the Veterinary College, and any unnecessary exposure appears to me like the wantonness of Ham. Read again—"Under the pompous title of a College," and say if the same thing does not apply to all the medical schools in London. Yet are English surgeons no way inferior to the French; and if I may judge from the Continental Veterinarians I have come in contact with, notwithstanding their ingenious essays, we are not, as practical men, at all in the rear.

This brings me to the object of my letter, which is to ask information on a point where our practice is decidedly at variance. On the Continent they continue to cut out the cartilages in Quittor, and in very many cases of lameness they draw the sole. Is this latter cruel operation *ever allowable?* In contracted feet, for instance, would you not obtain a greater and more permanent expansion, the sole growing entirely, *de novo*, than by merely thinning it? I do not advocate the system; but, perhaps, some of your experienced and travelled correspondents will favour me with their opinion on the point, and they will greatly oblige,

Sir, their and your
Most obedient humble Servant,
A FARRIER.

[Mr. Coleman not being the father of our art, we owe him no particular paternal duty, and our modesty is not so great as to induce us to turn aside or go backwards, in order to avoid seeing the glaring abuses which exist at the Veterinary College.

We also should be glad to receive the opinions of Veterinarians on Quittor; but the mode of cure we prefer, and practise with good success, is that of excising the *diseased* portion of cartilage. It requires a much shorter period, and is every way preferable to the unscientific plan of *coreing*, which frequently fails.

The barbarous practice of drawing the sole ought never to be resorted to.—ED. F.]

ACCOUNT

OF A

FIGHT BETWEEN A TIGER AND AN ELEPHANT.

BY GEORGE FINLAYSON, ESQ.

In the midst of a grassy plain, about half a mile long, and nearly as much in breadth, about sixty or seventy fine elephants were drawn up in several ranks, each animal being provided with a mahawat and a hauda, which was empty. On one side were placed convenient seats; the Governor, mandarins, and a numerous train of soldiers being also present at the spectacle. A crowd of spectators occupied the side opposite. The tiger was bound to a stake placed in the centre of the plain, by means of a stout rope fastened round his loins. We soon perceived how unequal was the combat. The claws of the poor animal had been torn out, and a strong stitch bound the lips together, and prevented him from opening his mouth. On being turned loose from the cage he attempted to bound over the plain; but, finding all attempts to extricate himself useless, he threw himself at length upon the grass, till, seeing a large elephant with long tusks approach, he got up and faced the coming danger. The elephant was, by this attitude and the horrid growl of the tiger, too much intimidated, and turned aside, while the tiger pursued him heavily, and struck him with his fore paw upon the hind quarter, quickening his pace not a little.

The mahawat succeeded in bringing the elephant to the charge again before he had gone far; and this time he rushed on furiously, driving his tusks into the earth under the tiger, and, lifting him up fairly, gave him a clear cast to the distance of about thirty feet. This was an interesting point in the combat. The tiger lay along on the ground, as if he were dead; yet it appeared that he had sustained no material injury, for, on the next attack, he threw himself into an attitude of defence; and, as the elephant was again about to take him up, he sprung upon his forehead, fixing his hind feet upon the trunk of the former.

The elephant was wounded in this attack, and so much frightened, that nothing could prevent him from breaking through every obstacle, and fairly running off. The mahawat was considered to have failed in his duty, and soon after was brought up to the Governor with his

hands bound behind his back, and on the spot received a hundred lashes of the rattan.

Another elephant was now brought, but the tiger made less resistance on each successive attack. It was evident that the tosses he received must soon occasion his death.

All the elephants were furnished with tusks, and the mode of attack, in every instance,—for several others were called forwards,—was that of rushing upon the tiger, thrusting their tusks under him, raising him, and throwing him to a distance. Of their trunks they evidently were very careful, rolling them cautiously up under the chin. When the tiger was perfectly dead, an elephant was brought up, who, instead of raising the tiger on his tusks, seized him with his trunk, and, in general, cast him to the distance of thirty feet.—*Mission to Siam and Hue.*

DISEASE OF SILK-WORMS AND ITS CURE.

In the southern parts of France, where silk-worms are raised, it is very common to observe the insects attacked by a disease called the jaundice, in consequence of the colour acquired by them. Very careful examination is continually made for the discovery of such worms as may be attacked by it, that they may be removed, lest the disease, being contagious, should spread to the others.

The Abbé Eysseric, of Carpentras, has recourse to a remedy in these cases, which, though apparently dangerous, has been warranted by the success of twenty years. He used to powder his worms over with quicklime by means of a silk sieve; he then gave them mulberry leaves moistened with a few drops of wine, and the insects instantly set about devouring the leaves with an eagerness which they did not usually show. Not one of the hurdles upon which he raised his worms appeared infected with the jaundice. It was at first supposed, that the cocoons of silk were injured by this process: this, however, is not the case; and his method of practice is now adopted generally in the department of Vaucluse.—*Bull. Univ.*

ON DISLOCATION OF THE PATELLA.

BY MR. F. CHERRY.

Mr. C. Percivall has lately published some cases of dislocation of the patella, and he refers to a book by Mr. W. Percivall, as the only one that takes any notice of this kind of accident. It is there stated, "Only one case of the kind has come within our (Mr. W. Percivall's) observation; but Mr. Charles Percivall has met with two instances of it." This statement was published in 1823; and as Mr. C. Percivall now gives a description of five cases occurring in 1824, 25, and 26, that gentleman must, altogether, have witnessed seven cases. One of these cases had been for a week under the eye of a regimental Veterinary surgeon, who had, of course, undergone the ordeal of a non-veterinary examination, and had, moreover, it is to be presumed, attended the lectures of the St. Pancras tutors; yet he is stated to have called it "a very extraordinary case, and one that he could not at all *make out;* but looked upon it as a case of lameness arising from exposure to cold, having had several similarly affected."

Here, then, are seven cases occurring to one Veterinary surgeon, and several occurring to another, who, however, could not make them out; which is tolerable good proof that the accident is of frequent occurrence; yet our College tutors are entirely silent respecting it. I must, therefore, ask, Does this arise from their little practical experience? It may be said, that these cases occurred in India, of which they know nothing; but the occurrence of this accident, though unnoticed at this fountain of Veterinary knowledge, as we often hear it called, is common in England also; six cases having occurred in my own practice, five of these being dislocations outward, as all Mr. C. Percivall's were, and one of them a dislocation inwards.

In all cases of dislocation outwards, the limb is stiffly extended backwards; a position which every one acquainted with the anatomy of the limb will see must necessarily be the case. Without requiring very accurate anatomical knowledge, a comparison alone between the two joints will point out the displacement; and on pressure being made, the Patella jerks into its place, when the limb becomes flexed, and the horse uses it without any difficulty.

In dislocation inwards, the limb is drawn up; and in the only case I have seen, the pain was very considerable. In this variety of dis-

location, pressure must be made outwards, and, in this case, I found reduction extremely difficult.

In both varieties of dislocation, the contiguous retaining parts are considerably relaxed; a recurrence of the dislocation may therefore be expected; and I have found, that it frequently takes place. In one case, after having reduced the dislocation, I immediately applied a blister over the joint, and it did not recur. By exciting inflammation, a tightness is given to the parts, which allows time for the ligaments to regain their natural tone.

F. C. CHERRY.

July, 1828.

RED RAIN SUPPOSED TO ARISE FROM BUTTERFLIES.

THE following narrative seems curious and important, in connexion with the various accounts of red rain. It is extracted from *Gassendi's Life of Peiresc*, p. 110-113:—

"Through the whole of this year (1608) nothing gave M. Peiresc greater pleasure than his observations upon the *bloody rain*, said to have fallen about the beginning of July. Large drops were seen, both (in Paris itself) upon the walls of the cemetery of the greater church, which is near the walls of the city, upon the walls of the city, and likewise upon the walls of villas, hamlets, and towns, for some miles round the city. In the first place, M. Peiresc went to examine the drops themselves, with which the stones were reddened, and spared no pains to obtain the means of conversing with some husbandmen beyond Lambese, who were reported to have been so astonished at the shower, as to leave their labour and fly for safety into the neighbouring houses. This story he ascertained to be without foundation.

"To the explanation offered by the philosophers, who said that the rain might have come from vapours, which had been raised out of *red* earth, he objected that evaporated fluids do not retain their former hues, as is plainly exemplified in the colourless water distilled from red roses. Nor was he better satisfied with the opinion of the vulgar, countenanced by some of the theologians, who maintained that the appearance was produced by demons, or witches, shedding the blood of innocent babes. This, he thought, was a mere conjecture, scarcely reconcileable with the goodness and providence of God. In the meantime an accident happened which discovered to him, as he thought,

the true cause of the phenomenon. He had found, some months before, a chrysalis of a remarkable size and form, which he had enclosed in a box. He thought no more of it, until, hearing a buz within the box, he opened it, and perceiving that the chrysalis had been changed into a most beautiful butterfly, which immediately flew away, leaving at the bottom of the box a red drop of the size of a shilling.

"As this happened about the time when the shower was supposed to have fallen, and when a vast multitude of those insects was observed fluttering through the air in every direction, he concluded that the drops in question were some kind of excrementitious matter emitted by them, when they alighted upon the walls. He therefore examined the drops again, and remarked, that they were not upon the upper surfaces of stones and buildings, as they would have been, if a shower of blood had fallen from the sky, but rather in cavities and holes where insects might nestle. Besides this, he took notice that they were to be seen upon the walls of those houses only which were near the fields; and not upon the more elevated parts of them, but only up to the same moderate height at which the butterflies were accustomed to flutter. In this way he explained the story, told by Gregory of Tours, of a bloody shower seen at Paris, in the time of Childebert, at different places, and upon a house in the vicinity of Senlis; and another said to have fallen in the time of King Robert, about the end of June, the drops of which could not be washed out by means of water, when they had fallen upon flesh, garments, or stones; but might be washed out from wood: for the time there stated was the season for the butterflies; and he showed that no water could wash out these red marks from stones. After discussing these and similar arguments, in the presence of much company, at the house of his friend Varius, they determined to inspect the appearance together; and, as they wandered through the fields, they saw many drops upon the stones and rocks, but only in hollows, or upon sloping surfaces, and not upon those which were presented to the sky."

The butterfly observed by Peiresc, was probably the *Papilio C. Album*, or common butterfly. It has been observed to deposit the same red fluid in England.

TURF NEWS.

The pedigree of these horses is more strictly regarded, and carefully looked into, than that of a Knight of Malta. They must have no blemished quarter in the family on either side for many generations; their blood must have run pure, and untainted from the great five times great grandsire and grandam; to be attested in the most authentic and solemn manner by the hand of the breeder. It is this care of the breed, and particularly with an eye to their strength, that makes all the world so fond of our horses. Many thousands are carried out of England every year; so that it is become a trade of great consequence, and brings a vast balance of money to this country.—*The World*, vol. i. No. 17, written by the Earl of Bath, in 1753.

RECENT SALES.

Mr. Pettit's *Bobadilla*, by Bobadil, out of Pythoness, to Ld. Sefton.

Mr. Richardson's *Brownlock*, by Blacklock, to Mr. Mills.

Sir George Pigot's *Chester Billy*, by Whisker, out of Sunflower, to his Majesty.

Mr. Greville's *Dandelion*, by Merlin, out of Dahlia's dam, to Mr. Bacon.

Dicky Walkington, by Revenue, to Mr. Lamb.

Mr. Stonehewer's *Goshawk*, by Merlin, out of Coquette, to Lord Wilton.

Mr. Theakston's *Grampian*, by Walton, out of Eliza, by Rubens, to Lord Southampton.

Mr. Ridsdale's *Sharpset*, by Cervantes, dam by Comus, out of Marciana, to Lord Tavistock; and by his Lordship to Lord Southampton; now called *Lepanto*.

Mr. Mills's *Lunacy*, by Blacklock, to Mr. Darnell, for the Stud.

Mr. Dilly's *Othello*, by Blacklock, out of Scancataldi, to Mr. Giffard.

Lord Wharncliffe's *Pastime*, by Partisan, out of Quadrille, to Lord Sefton.

Paul Jones, by Partisan, out of Niobe, to Mr. Bacon.

Lord Grosvenor's *Rosetta*, to Lord Tavistock.

Lord Mountcharles's bay filly, by Tramp, dam by Smolensko, to Mr. Dilly, and now called *Trample*.

Mr. G. Edwards's *Upas*, by Abjer, out of Laurel Leaf, by Stamford, to Mr. Molony.

Marquis of Exeter's *Zinganee*, by Tramp, out of Folly, by Young Drone, to Mr. W. Chifney.

Zoffani, by Woful; *Segar*, by Skim, dam by Rubens; and *Archer*, by Skim, out of Zeal; to go to the East Indies.

Sir Thomas Stanley's *General Mina*, by Camillus, dam by Williamson's Ditto; Mr. Payne's *Helenus*, by Soothsayer, out of Zuleika, by Gohanna; and Mr. Hunter's *Lutzen*, by Gustavus, out of Shrimp; to go to France.

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AN ANCIENT CHARIOT RACE

THE

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EXTERIOR OF THE HORSE.

THERE are few of our readers, it is *to be hoped*, who do not feel pleasure in contemplating the beautiful proportions and graceful symmetry of a finely-formed horse, and who have not their own particular opinions as to the arrangement of parts, or, in other words, the points which are most material to produce that grace and beauty. But it is generally admitted, that the true English hunter, represented in the annexed plate, is superior to all other horses in figure, as much as in utility: he unites the most valuable qualities of them all; we shall, therefore, consider him as the standard, and as affording a proper accompaniment to the following remarks on make and shape, and defects to be avoided on purchase.

As this subject has been so often handled by various writers, it cannot be expected that we should produce much new matter, without copying from the writings of others who have gone before us; and as we shall have occasion, hereafter, to advance our own views in conclusion, we have thought it best to present our readers with the plain and straight-forward remarks of William Gibson, a writer who, though laid upon the shelf, possesses considerable merit in this department of horse-knowledge. He appears to have been a good judge and an admirer of the animal; and some, even in authority, have not disdained to borrow from his works. More minute than any later writer on this subject, he is not, therefore, to be condemned: his remarks are practical and original, and there are few better guides to those who wish to know or buy a horse.

THE PROPER NAMES OF THE EXTERNAL PARTS OF A HORSE.

As my intention, in this short treatise, is to render the knowledge of Horses, with the accidents and diseases to which they are liable, as plain and easy as possible; therefore, that I may not deviate too far from the common method, I have begun with the names of the external parts of a Horse; for, though many of his parts have their names in common with all other animals, yet he has others that custom has rendered peculiar to him only: and without some acquaintance with these terms and distinctions, we can neither know much of a Horse nor of his Diseases.

The first thing that comes to be described in a Horse is his Head, consisting of several parts, as the Ears, the Nose, the Mouth, the Forehead, the Eyes, and Temples, &c. The two hollows above the Eyes, so remarkable, especially in old Horses, are called the Eye-pits. The Forehead is often called his Brow; and that part of the Head which is the most backward, where it joins to the Neck, is called the Poll, or Noll; and the juncture of the Head and Neck, the Onset, or Setting-on, of the Head. The Upper and Under Lips, including the Tip of the Nose, form the Muzzle; and the Hairs that are scattered on a Horse's Under Lip, to the place where the curb of the bridle rests, is called his Beard. The inside of the Mouth, between the Lower Jaw-bones, where the Tongue lies, is called the Channel. The fleshy rows that run across the upper part of the Mouth, and are so distinguishable in young Horses, are called the Bars, which reach almost to the Palate.

The Neck reaches from the Head to the Shoulders. The Hair which grows along the upper part, is called the Mane; and the part that is the most arched, the Crest, which, in a fine Horse, full of vigour, rises semi-circular; but when a Horse has been diseased or starved, so that his Neck sinks, he is said to be Crest-fallen.

The Withers is the part that rises upon the top of the Shoulders, and is composed of the highest Spines. It is from the top of the Withers that a Horse is measured, to know his height.

From the Withers to the hind part of the Back, are the Reins, which generally reach the length of the saddle to the highest Spine; and in some long-backed Horses, a little beyond the length of a common saddle. Next the Reins are the Loins, which reach to the Croup; and where the Crupper lies, is termed the Channel. The Croup

reaches from the Reins to the Dock, and includes all that Declivity or Descent which goes to the Tail, and in men, and some other animals, is called the Rump.

The body of a Horse is usually called his Carcass; so that a large-bodied Horse is said to have a large Carcass, and a slender one to have a small Carcass; and when the body is compact and well made, he is said to be well Carcassed, or to have a good Carcass.

The Flanks are sufficiently known, being the parts on both sides, below the Reins, which reach from the short Ribs to the Haunches; and the Belly is that which reaches from the Brisket to the Sheath.

The Shoulders inclose the whole Breast on both sides, beginning from the Withers, and reaching downwards to the Fore Legs, or Arms.

The Arms begin from the Shoulders, and the hind part which points towards the Brisket is called the Elbow; the Fore Leg, or Arm, reaches to the Knee; on the inside runs the Plat Vein, which is often opened for lameness of the Shoulders or disorders of the Lungs. The part which reaches from the Knee to the Pastern is called the Shank; behind the Shank is inserted into the Heel that strong tendon called the Back Sinew, which is so often subject to be strained or hurt.

The Pastern reaches from the lower part of the Shank to the Foot: where it joins the Shank is called the Pastern Joint, or the Fetlock Joint, as some term it, from the tuft of hair that grows on the lower part of the Leg behind, above the Heel, which is called the Fetlock. The lower part of the Pastern, just above, and encircling, the Foot, is properly called the Coronet; and the bone within, the Coronet Bone; and where it joins the Foot, it is called the Coffin Joint.

The Hoof is often called the Coffin, and the bone of the Foot the Coffin Bone, because the Hoof incloses that bone, as in a coffin. The hair that circles round the upper part of the Hoof is called the Crown, or Coronet.

The Foot consists of the Quarters, Sides, and Toe. The Quarters inclose the Heel, composing the inner and outer quarter, and end with the extremity of the Heel. The Sides and Toe need no description. The under part of the Foot is made up of the Frush, or Frog, and the Sole. The Frog rises from the middle of the Sole, and terminates at the Heel: it is more soft and elevated than the Sole, and is that part which the Farriers shape like the point of a spear when they pare a Horse's Foot in order to his being shod. The Sole is that plate of horn which covers the bottom of the whole Foot, and adheres to the verge of the Hoof, where the nails are driven in shoeing.

In the hind parts of a Horse are his Haunches, which begin at the

two bones on each side which inclose the Loins, and descend to the Ham, or Hock.

The Stifle is that part which juts out from the edge of the Thigh towards a Horse's Belly, when he is in any action that bends his Leg: it is the Knee-pan of a Horse, situated on the middle joint of the Thigh, between the Thigh-bone and the Leg. The Whirl-bone is the upper end of the Thigh-bone, towards the Hip; and when that happens to be much sprained, a Horse is said to be Hipped.

The Thigh, or Gascoin, begins at the Stifle, and reaches to the Ply, or Bending of the Ham, or Hock. When a Horse is round and plump in the Thighs, he is said to be well Gascoined.

The Ham, or Hough, is the Ply, or Bending of the Hind Leg. The round knob behind is called the Heel of the Hock, or Cappelette, according to some writers, and where the great Master-sinew is inserted.

The Shank, Pasterns, and Feet, having the same names and uses behind, as before, need no further description.

These being the usual names and appellations by which horsemen distinguish the several parts of a Horse, it remains only to take notice that the Right Side of a Horse is always called his Off Side, and his Left the Near Side, being that to which we always approach when we go to mount or handle a Horse. Upon this we also distinguish a Horse's several parts; for instance, we say the Off Leg and the Near Leg, the Off Foot and Near Foot, the Off Eye and Near Eye, and so of others.

Of the Shape and Make of a Horse, and how his Parts should be framed in order to appear comely and beautiful.

Though the most experienced Horsemen are not always agreed in some points relating to the Shape, Make, and Goings of a Horse, yet they almost always accord in this,—that there ought to be a just proportion in all his Parts. That even when he is taken to pieces, and examined singly in his particular Members, though some defects may appear, yet when they all bear a just correspondence one to another, and concur in such manner as to render his action easy, just, and regular, such a Horse cannot be greatly disagreeable, but will, for the most part, move well, and with a tolerably good grace. On the other hand, suppose a Horse has some parts exquisitely fine, and others

indifferent, which frequently happens, it will mar his beauty, and cause him to look disagreeable, and, for the most part, affect his Gait and Action.

In order to have a Horse beautiful and finely made, it has been agreed on all hands, that his Head should not be long, nor too large; rather lean than fleshy;—his Ears thin and narrow, and of a becoming length, well set on, pointing inwards;—his Brow, or Forehead, not too broad and flat;—his Nose somewhat rising, and of a good turn;—his Nostrils wide and thin;—his Muzzle small;—his Mouth neither deep, nor too shallow; with a Star or Snip down his Forehead, or a Blaze,—which is no ways unbecoming, unless it be too large and disproportioned. Horses that are thus marked, have generally one or more of their Feet white; which is also very beautiful, and looks lively. His Jaws should be thin, and sufficiently wide,—not approaching too near together, nor too high upwards towards the onset, that he may have sufficient room to carry his Head easy and in good place;—his Eyes well-formed, sprightly, and of a middling size;—his Neck should be arched towards the middle, arising by a beautiful gradation out of his Breast and Shoulders; the Muscles thereof distinct, but nowhere overcharged with Flesh, growing smaller and thinner as it approaches towards his Head;—his Shoulders should be thin from the Withers, with a gradual enlargement downwards, that his Bosom, or Breast, be not too narrow nor too gross;—his Fore Legs straight and well placed;—his Joints lean and bony;—his Knees not bending, and his Pasterns not too long;—his Feet round and smooth, and his Sinews firm and well braced;—his Carcass rather round than flat;—his Back not too low, and, for strength and durableness, pretty even and straight;—his Ribs rather home than open, as they approach towards his Haunches;—his Breech round, and the Muscles not too fleshy, but distinct;—his Hocks, or Gambrels, neither standing too wide, nor too near together;—his Hocks should be lean, and no ways puffed or fleshy;—his Pasterns short;—his Legs flat and thin;—and his Tail set on in a good place, rather high than low, rising upon every motion of his body. The more these properties concur in any Horse, the more beautiful he must be, especially when they correspond and agree in due proportion one to another; and the more a Horse is wanting in these, the more plain and ordinary he will appear.

[*To be continued.*]

MR. COLEMAN *versus* THE PROFESSION.

In our last Number we pointed out a variety of measures Mr. Coleman had taken for his own benefit, that were directly injurious to the profession; and we promised more fully to expose one part of his conduct in particular, which seems hitherto to have escaped observation, or at least scrutiny. This is the sale of horse and cattle medicines at the College, at a price, as their advertisement states, "so much below the ordinary charges of druggists, that a subscriber may, upon a large stable establishment, soon save the amount of subscription;" and in the Table of medicines which accompanies this declaration, we do indeed find, that the College dispenses at one fifth of the price the regular practitioner must charge to obtain a livelihood! What is the consequence? Why, that a great number of the largest horse-keepers, in London and its vicinity, resort to this tempting shop, become subscribers by paying two guineas, and procure their drugs so much cheaper than elsewhere. What is the effect upon the Veterinarian? Not only does he lose directly a large share of business, but, in that which his skill or merit may retain, his fair profits are curtailed, and at every turn he is met by this objection—"Your charges are higher than those of the College." The influence of this depreciating system extends everywhere, and prevents our science from being studied, or carried on, as a liberal profession; because the man of education and establishment can be no better remunerated than the cow-leech, who inherits or assumes his knowledge, and dispenses his mixtures from a hole in the wall, or a shelf in some forsaken fire-place.

As to the public, instead of profiting by this cheap shop, they are always losers in the end, and for the following reasons:—Suppose the horse of a College subscriber is taken ill; instead of sending to the Veterinarian for good advice, which is, in most cases, far more needful and important than physic, he has immediate recourse to the universal panacea,—the Ball he has bought at the College. Acting on his own judgment,* or rather his own *head*, it is ten to one that he administers the wrong, or gives too much, too little, or too late: thus time is lost; and complaints, which might have yielded to prompt treatment, become serious; till, mistrusting himself, the owner looks abroad for

* It is surprising how men, without any previous study to qualify them for the task, will presume to pronounce on the maladies of dumb animals. Those most experienced, will admit that there is no subject more obscure, or requiring greater attention and experience.

assistance. And where does he apply? Not to the Veterinarian, but to the smith, probably, who, from shoeing his horses, must know all about them. This gentleman is sure to do *something*, by which the owner's pocket usually suffers as well as the animal; and (we are supposing a bad but a common case) he is carried on another step in the wrong road. When the disease becomes desperate, and not before, the Veterinarian is called in, who has the credit of performing the last offices to the unfortunate horse, generally too far gone, unless his skill be super-human, to admit of restoration. On the next occasion, the owner, having exhausted the physic and his judgment as aforesaid, determines to send the horse to the College; where he arrives, if the complaint be inflammatory, with aggravated symptoms, and that Institution becomes, for this time, his final resting place.

It is thus that the Profession suffers, by having its weapons placed in improper hands. We speak from experience, and the knowledge of many cases where these results have occurred, injurious alike to the College and the practitioner; but most so to the latter. The public are decidedly losers, also, by being induced to act for themselves in ignorance; in short, this cheap drug system is a *general nuisance* of a kind which has no parallel.

Such a scheme was no part of the original rules, which had public utility for their basis; it is a measure of Mr. Coleman's administration, and forms the climax of all that he has done for us in his fatherly affection, and for which some would tell us he deserves our filial gratitude. After carefully imbuing us with the principles of frog pressure, and granting us (with the assistance of his medical friends) a certificate for that purpose, we go forth into practice, to deal in articles which he has monopolized, and sells four times cheaper than we can. If this is paternal kindness, it is that of the Grand Turk, who strangles his children, it is said, as soon as they can run alone. But to whose benefit does this unjust measure tend? No one can blame Mr. Coleman, merely as the manager of a Joint Stock Company, for taking every advantage in his power; but does he deserve the thanks and plaudits of the profession for so doing? Certainly not.

Once more let our professional readers consider this subject, and they will become convinced that this shameful monopoly is a chief means of debasing our practice, and a gross injustice, on the part of the College, towards those whom it has educated.

VETERINARY PUPILS AND CERTIFICATES.

THE "March of Mind" is a term that well indicates the preservation of established order, for, however rapid may be the advance, in a march every individual keeps the relative place in which he set out. But at the place called the Veterinary College, the march, it would appear, has become a race, in which the pupils have outstripped their Professor; they have beaten, if they have not, indeed, distanced him.

It used to be the case, and, perhaps, the practice is still a wholesome one, for the teachers to certify as to the good or bad conduct and the ability of the pupil; but, at the Veterinary College, they manage these matters better,—at any rate, they manage them differently,—for there the pupils sit in judgment on their Professor, and issue, with official form, their testimonials of his ability. Take, for example, the following extracts:—

"At a meeting of pupils held on the 6th of February, it was moved by Mr. Hughes, seconded by Mr. Scott, and carried unanimously,

"That not only is Professor Coleman's attendance, when health permits, most regular; but the PRACTICAL observations he then and there makes are of so much importance, that they constitute a valuable branch of their instruction.

(Signed) GEORGE GRIFFITHS, Chairman.
GEORGE JOHNSTON, Sec. pro temp."

Vide "Lancet," Feb. 23, 1828, *page* 768.

But, Sir, to show you the real feelings of the pupils of the Veterinary College, they addressed a letter to Professor Coleman, on the 29th of January, APPROVING OF HIS CONDUCT, and "*requesting he would not leave his room* till he should be sufficiently recovered to attend his official duties in the College.

(Signed) GEORGE GRIFFITHS.
GEORGE JOHNSTON.
R. O. HUGHES."

Vide "Lancet," April 19, 1828, *page* 77.

Now, be it remembered that each pupil must receive a certificate, with the signature, among others, of Professor Coleman, before he can receive the appointment of Veterinary surgeon to any of his Majesty's regiments of cavalry, or to those of the Hon. East India Company, and the gift of these is supposed to rest principally with the said Professor: and although these individuals, who have given their names,

come forward merely as pupils of Mr. Coleman, they may, in reality, be well educated and experienced practitioners; in which case, I presume, they can have no objection to state the grounds on which they found their pretensions to sit in judgment on the abilities of the principal Veterinary surgeon to his Majesty's cavalry, and on the mode in which he discharges his duty of Professor of the Veterinary College: but if, on the other hand, they are pupils now imbibing their first rudiments of Veterinary knowledge from Mr. Coleman, their opinions can be of little value, and the motives for giving them must, at any rate, be questionable, notwithstanding their names have the imposing addition of "Chairman" and "Sec. pro temp."

F. C. CHERRY.

May, 1828.

If we take into consideration the present mode of examining candidates for certificates, erroneously called Diplomas, and compare it with the original plan and rule laid down by the early founders of the College, we need no longer wonder at anything that pupils do or attempt, in order to gain the favour of their teacher, who has the last boon they require at his sole disposal.

At the establishing of the College, the best, and then only, course to ensure the pupils' competency to practice was, that after a course of study of three years they should undergo a PUBLIC examination, in the theory and practice of every branch of the Veterinary art; and those who were considered as perfectly instructed therein, should receive a CERTIFICATE, signed by the Professor, and confirmed by the Council.

In course of time, these medical gentlemen, at first merely invited for want of practical Veterinarians, became a regularly organized body, and instead of the three years' study, which was first intended to be the mark of competence, their certificate given after a few months' attendance became the desired object of the pupils.

At the head of this medical junta is Mr. Coleman; and, as he possesses almost unlimited power to award this certificate, we can easily divine the cause why all such pupils as wish to obtain regiments, are so eager to obtain favour in his sight: and in proof of this, the Chairman Griffiths is commissioned, and bound for India; the exertions of the others have been rewarded by diplomas; and the President occasionally compliments such pupils as have been most active in opposing truth and science.

REGIMENTAL VETERINARY CASES.

MR. PERCIVAL lately published a Case, wherein it was stated by him that a brother Veterinary surgeon could not at all make out the nature of an accident, so very evident, that Mr. P. decided on it, without the slightest hesitation, the instant he saw the case.

He has since given a case of two excrescences, which his Editor announces under the imposing title of "Horns in the Horse." To these excrescences Mr. P.'s attention was several times called; but it was not till a year and a half afterwards that he took the trouble to look at the horse, though one of his own regiment, and then this wonderful phenomenon was pointed out to him by the dragoon!

Another case of Mr. P.'s, respecting a wounded parotid duct, evinces an equal degree of careless apathy with the foregoing one.

These specimens of want of ability, and of inattention in regimental Veterinary surgeons, it is to be hoped, are instances that stand alone; and, as far as my knowledge extends, they certainly are not applicable to the body of Veterinary surgeons in the army, who are as able and efficient as the nature of their establishment will allow them to be.

However, such instances as these show that some revision of the superintendence under which this body is placed, has become necessary, that the diligent and meritorious may be clearly distinguished from those who are otherwise.

F. C. CHERRY.

July, 1828.

THE VETERINARY SOCIETY.

At the meeting of this Society, on the 5th of August, several highly respectable men were elected as members.

The Laws and Regulations were submitted to a Committee for alterations and improvements, which we have subjoined.

A paper on the operation of Neurotomy, and cases to which it was applicable, was read by Mr. Rogers, of Chelsea; and, after much discussion on the subject, it was proposed to be resumed at the next meeting.

On the 19th, some new members were also elected, and the subject of Neurotomy resumed; when, from the general opinion of the members, it might be gathered, that it was an operation only to be resorted

to in chronic cases of contraction which produce lameness, and sometimes in order to relieve violent pain, in cases of Quittor, Canker, &c.

It was particularly regretted, by several members, that since this operation had been held forward as so valuable an improvement in the Veterinary art as to be deemed, by the Governors of the College, worthy remuneration to its supposed discoverer, Mr. Sewell, that gentleman had not, after a period of several years, given to the profession and the public the particular cases to which the operation was applicable, and also a comparative view of the successful and unsuccessful cases.*

The President, Mr. F. Cherry, presented the Society with a preparation of a section of the bones of the neck, showing a displacement between the second and third cervical vertebræ, whereby the foramen vertebrale was considerably diminished in size. The symptoms and consequence of the pressure on the medulla spinalis form an interesting case, which will be given more at length hereafter.

The importance of bringing the Members of a neglected Art into frequent and friendly intercourse must be obvious; and it being evident that, from the free discussion of subjects connected with practice and principles, the advancement of Veterinary Science must be essentially promoted, a Society, entitled "THE VETERINARY SOCIETY," has therefore been formed.

The objects of this Society are to induce free discussion on all matters connected with Veterinary Science, and the practice of the Art.

The Horse, in all states, will, of course, be a leading subject.

The Breeding and Rearing of Live Stock, and their treatment, both in health and when labouring under disease, will also be subjects for discussion.

Written communications on all these subjects will receive candid consideration.

It is intended to form a library of books relating to these subjects: donations of books and manuscripts, or descriptions of scarce books, will therefore be acceptable.

Anatomical preparations of parts in health, and specimens of morbid anatomy, with the history of such specimens, are also acceptable.

It must be evident, that a Museum and Library, thus formed, will concentrate a body of practical knowledge which would be sought for in vain while diffused throughout the profession.

* This operation, we are happy to state, is everywhere losing ground in public estimation.—ED.

It is intended that books, manuscripts, and preparations, unless made donations, shall remain at the disposal of the original contributors.

With these views and intentions, the Veterinary Society call upon the Profession and the Public for their cordial and powerful support; they wish for Members and Visitors of all parties, that truth may be elicited.

LAWS AND REGULATIONS.

1. All persons engaged in the practice or study of Veterinary Medicine are eligible to be ordinary Members.
2. Candidates for admission must be recommended by two Members, and in the following form:—

(Date)

"We, the undersigned, recommend Mr.
, residing at ,
as an ordinary Member of the Veterinary Society."

3. This letter, being presented at any ordinary meeting, shall be read by the Secretary, and the ballot for his admission shall take place at the second subsequent meeting: the recommendation shall remain on the table at the intermediate meeting of the Society.
4. If, on the ballot, two-thirds of the votes shall be in the Candidate's favour, he shall be considered as duly elected.
5. The Member, thus elected, shall receive notice of his admission from the Secretary; and on the third night of meeting, at the latest, after his election, shall attend and pay to the Secretary the admission fee of One Sovereign; he shall then be introduced to the President by one of the Members who signed the recommendation, and, by the President, formally to the Society; he shall then sign his name in the book containing the Laws and Regulations.
6. If he neglect to attend within the time specified, the election shall be void, unless a satisfactory reason be given to the Society.
7. A rejected Candidate shall not be proposed again within Six Months.
8. Gentlemen who, from residing at a distance, or from other causes, may not be likely to attend as ordinary Members, may be admitted as corresponding ones. They must be recommended by at least one Member, and in other respects be elected as ordinary Members. They must pay the same subscription, and they are expected to furnish cases and subjects to be discussed by the Society.

9. Medical gentlemen, whose theatres are gratuitously open to the Veterinary Profession, the Members of the Examining Committee, and those who have distinguished themselves by researches in Comparative Anatomy, or in the Breeding and Treatment of Live Stock, and foreign Veterinarians, are eligible as honorary Members. They must be elected in the same manner as ordinary Members.
10. The Officers of the Society shall consist of a President, four Vice-Presidents, a Treasurer, and a Secretary, to be elected annually, who shall, collectively, form a Committee.
11 Ballotting Lists for these Officers shall be prepared at the first meeting of the Society after the 10th of June.
12. The President shall be elected by ballot at the following meeting, and shall be exempt from fine.
13. The other Officers shall also be elected on the same evening.
14. The Vice-Presidents, in the absence of the President, shall take the Chair in rotation; and if the gentleman whose turn it may be shall be absent at seven o'clock, he shall forfeit the sum of Half a Sovereign, unless a reason for absence, satisfactory to the Society, be given.
15. The Committee shall assemble as often as they may deem necessary.
16. A special meeting may be called by six Members. The Secretary shall issue the summonses, giving at least six days' notice.
17. Any proposition offered to the Society, as matter of new law and regulation, or which shall contain in it an alteration or amendment of any established law and regulation, shall be read to the Society at two meetings previous to that on which it is to be taken into consideration. At that meeting, the Secretary shall, immediately after reading the minutes of the preceding meeting, read all such propositions once over, according to the order they have been delivered in; which propositions shall be read a second time, with a proper pause after each: and if any of those propositions be moved and seconded, they shall then be taken into consideration.
18. The Treasurer shall receive all monies paid on account of the Society, and shall defray any expense incurred; but he shall not pay any sum to the amount of more than One Sovereign, without the previous order of the Committee.
19. The accounts having been previously audited by the Committee, a full statement of them shall be laid before the Society on the first meeting in every alternate month.

20. The Secretary shall attend, personally, or by deputy, at every meeting of the Society and of the Committee; take minutes of their proceedings, and conform to their directions.
21. The ordinary meetings of the Society shall be held on the first and third Tuesday in every month, at seven o'clock in the evening; and on no occasion be prolonged after ten o'clock.
22. The Chair shall be taken at seven o'clock precisely, and the business shall be conducted in the following order:—

    The minutes of the preceding meeting shall be read, and, being confirmed, shall be signed by the President.

    Recommendations for new Members shall be received.

    Members proposed at the meeting before the last shall be ballotted for.

    New subjects for discussion shall be received, announced, and entered in the book.

    The subject for the evening's discussion shall then be brought forward.

23. The subject shall be treated by the proposer in the form of a written essay, which shall be read by himself or the Secretary; and this essay shall be deposited with the Society.
24. On the 10th of June, annually, the Committee shall assemble and consider whether it may be advisable to publish a volume or pamphlet of such essays as they may select, under the title of "Transactions of the Veterinary Society," at the expense of the Society; the authors of such papers shall likewise be at liberty to publish them in their original form.
25. Every Member who is absent when his subject ought to be discussed, shall forfeit the sum of Five Shillings; and his subject shall be placed at the bottom of the list, unless a satisfactory reason be furnished to the Society.
26. No new paper shall be read after nine o'clock; but cases of practice may be discussed.
27. Each member may introduce a visitor at every meeting: the name and address of the visitor, and the name of the Member introducing him, shall be entered in a book for that purpose.
28. Every Member shall be liable to be called on for his proportion of any expenses that may be incurred exceeding the amount provided by subscriptions and fines.
29. Any Member shall be at liberty to withdraw from the Society, upon giving two months' notice of his intention to do so, and paying his proportion of any expenses that may be incurred to that period.

The meetings of the Society will be continued on the first and third Tuesdays in every month, at seven o'clock, at Mr. Dermott's Theatre, Little Windmill-street.

Books, preparations, and all communications to be addressed (post and carriage paid) to the care of the Demonstrator, at Mr. Dermott's Anatomical Theatre, Little Windmill-street.

ON MR. B. CLARK'S ESSAYS.

In the present Number will be found the conclusion of an article on the Condition of Horses, written by Mr. Bracy Clark, for Rees's Cyclopædia. In the columns of that voluminous work, this valuable Essay, with several others equally interesting, has been buried for many years; and we claim the thanks of the profession for having placed so much useful information in a situation where it is more readily attained; and there are none concerned in the study or treatment of horses, who ought to be ignorant, though we believe many have been so, of the remarks which they contain. But it was to speak of Mr. Clark's merit, not of our own, that we have taken the pen, and to thank him for his past exertions, which have contributed so much to the interest of our Journal. Want of space has prevented us from commenting on the articles of Bleeding, Blistering, and Broken Wind, in former Numbers; but, we doubt not, the name of the writer has secured them the attention of our readers. In the last, he gives a clear account of the discovery of the pathology of that disease, which had escaped the observation of former writers, and has since been variously represented to the credit of others, though it is clear that the emphysæmatous state of the lungs, which accounts satisfactorily for every symptom, and unravels the whole mystery of the complaint, had never been observed before. His accompanying remarks on the injurious consequences of withholding water from horses at work, under a false notion of preserving their wind, and also on the proper rule to be observed in bathing or washing them in warm weather, particularly deserve the notice of stable-keepers and post-masters, who lose a prodigious number of horses for want of understanding and applying this valuable information, which, conveyed in concise and unassuming language, might easily be passed over unheeded, without this notice, which may possibly induce some of our readers to recur to read the papers in question with increased attention.

On Bleeding, in No. 3, is an essay replete with good observation; and it is ever to be remembered, that a single useful hint in the performance of so common a Veterinary operation, becomes of great real benefit to us, from the frequency of its recurrence in daily practice.

Mr. Clark objects to the lancet for bleeding in the neck, because, in the best hands, it may occasionally go too far. In another part of this Number will be found a curious trial, where, if the plaintiff had gained his cause, it would have been adjudged an unlawful instrument for this purpose. Puncturing the coronary artery, or bleeding at the coronet, is mentioned by Mr. C. It is not a common but a very good mode of local blood-letting, and applicable in a great number of cases where it is inconvenient, or not sufficient, to bleed from the toe; nay, sometimes it is preferable to that method. His suggestion of a double spring fleam, to return the blade after making the incision, in order to prevent laceration of the neck, by a sudden start of the horse, has lately been adopted; but we fear the instrument is too complicated, and, after all, too imperfect.

On the article Condition we need only remark, that it contains the chief part of all that can be said on the subject. Such as have waded with us through the unintelligible and mystified matter that is often found in books under this head, or been obliged to listen, as we are occasionally, to the milk and water, or jargon, of pretenders to knowledge, will rejoice to meet with something that a reasonable man may pin his faith to.

What he has said of physic, and the proper construction of stables, we must advert to in future, at greater length, and contrast his opinions on the latter subject with those of other high authorities. We must conclude with a general acknowledgment for the liberty we have taken with this gentleman's labours, and a wish that his leisure hours, having retired from practice, if not from this country, were devoted to the re-publication of some of his valuable works on *Veterinary* subjects.

ON CONDITION IN HORSES.

BY MR. B. CLARK.

(In Rees's Cyclopædia.)

[Continued from page 358.]

In the "Museum Rusticum," is a proposition, founded apparently on actual experiment, of feeding horses on carrots (vol. i. p. 333). The following remarks we think worth recording from that communication: —"I have a couple of hunters which I value as being very good horses; and these I feed in the season with very little else besides carrots well cleaned from the dirt, and loaves made of the meal of barley and oats, and mixed sometimes with a small admixture of coarse but good wheat meal; and if they require to be loosened in their bodies, I now and then give them some bran. As to hay, they eat, at this season, but little of it, of oats none at all; yet they go through their work to admiration." Furze or whinus has been found useful food in sustaining horses, after it has been been bruised, and the opines, or prickles, crushed; this some horses will naturally do with their feet.

Dr. Darwin relates, that on one particular common, all the horses do it; and that the fresh comers starve, till by imitation they learn this practice; as the common, in other respects, is very barren. In Wales, mills, we understand, have been used for crushing the furze for cattle.

Saintfoin is a food that horses are very fond of; but, as they eat it very greedily, too much should not be allowed at once, for fear of indigestion; and it serves better for horses of a slow draught, being a coarse, heavy food.

Salt is imagined an useful addition to the food of horses.* Salt marshes have often a preference given them over other ground for horses and cattle: whether it is the salt that in itself operates beneficially, or whether the herbage itself is altered by it, and is rendered more salutary to the cattle, is not known. The same correspondent, in the "Museum Rusticum," says that salt, in substance, is abundantly distributed in the mountains by the Swiss, for the use of their cattle and horses, who become excessively fond of it, and more healthy in consequence: it is conceived to be an antidote to worms and other forma-

* The use of salt for horses is becoming general in some parts of the South of France. It is given to riding horses to the extent of three ounces per day, and for horses used for agricultural purposes to the extent of six ounces: with this condiment mixed with their corn, they become fat, and are kept healthy.—Ed.

tions in the body; and the long continued use of it to cure them when formed.—(Vol. i. p. 99.) Horses, he observes, are fond of it with their oats.

Horses, when at liberty, are almost ever feeding; therefore long fasting must be injurious to the stomach, and should be as much as possible avoided: they would also naturally, there is reason to believe, feed principally during the night, and sleep during the day; their sleep, however, is hardly ever, in health, profound and fast, but in a state of watchful dozing. Horses are naturally gregarious, and though they will do very well alone, company, where there is an opportunity, for it, is preferable for health. The stable should be lofty, so as not to confine an atmosphere about them loaded with exhalations from their own bodies and their dung: the loftiness alone of the stable is the best airing; all partial drafts from doors, windows, or holes in the loft, as far as they affect them, are injurious; for we have often remarked that though they bear the coldest weather of our seasons, when turned out, yet they easily take cold from partial drafts in stables,—insomuch that persons not attentive to these effects, would hardly believe their facility.

In cleaning the skin, the curry-comb is considered as a necessary implement. In warmer climates, where the scurf comes away more freely, this instrument is not so much used; and here it is often used to horses whose skins are particularly thin and sensible, yet no difference is made; and though the animal expresses, in every way he can, the excessive torture it occasions, yet it is persisted in, and violence is often had recourse to to enforce it, and horses are thus rendered vicious and untractable. Where this is found to be the case, it would save much trouble and inconvenience to use a milder kind of comb, or to lay it aside altogether, and use a stiff brush made for the purpose. It is more easy, by violence and punishment, to create vice, than to overcome a natural dislike by it.

Warm clothing, on account of its keeping up a free perspiration, tends to render the skin cleaner, makes the coat lie better, and have a more glossy appearance, and saves trouble. It is too often, however, carried to an excess, and two or three hot rugs keep the horse in a perpetual fever; and as they are all taken off when he is most exposed, in going out, the sudden check given to the perspiration by the element without lays the foundation of disease, and occasions inflammations of the lungs, catarrhs, and coughs, that might as well be avoided by more moderate and judicious proceedings, besides the weakening effects of such violent perspirations. There is a principle in feeding

them that ought not to be overlooked; which is, that good food may be carried too far, till, instead of condition, it produces fever and disease, and destroys the condition it is meant to promote. Green vegetable food fills out the body; and, from its weight and watery nature, weighs down the abdomen—giving an unsightly appearance. Some horses, however, can work with this, that more stimulating food does not suit so well. The dry diet braces the system and draws up the abdomen. The food is longer retained in the large intestines, which occasions the flanks to appear full and rounded, and greatly adds to the beauty of the horse's make in these parts.

Some horses, we have noticed, have voracious appetites, and devour great abundance of corn and whatever is set before them; yet always look meagre and out of condition. When this has been the case, we have been led to believe that, by too much food, and by too heating a quality, the stomach and intestines have been paralysed, and lost their powers of forming chyle or absorbing it. Turning out to the green pasture will often bring them into condition, and they fall off again in the stable. Horses of small make and fiery temper are, we have thought, more particularly subject to this disease. Water, like the food, should be given often, and not in too large quantities. Stinting horses is a dangerous custom; it induces them, where there is an opportunity, to take enough at once to break their wind, or otherwise injure themselves (See No. 5, p. 209, *Broken Wind*). The skin, to look well and healthy, should be smooth, supple, and easy upon the muscles, free from knots, and by no means light about the ribs. The hair clean, bright, and glossy, lying to the skin, and not distorted or turning away from it, or twisted, dry, or thready.

The effects of cold air on the skin of the horse, in setting up the hair, is well known to the grooms, who cautiously avoid it.

Exercise to animals by nature born to be fleet, is particularly necessary; besides the good it does, in moving and forwarding all the secretions and excretions. This should be gentle or vigorous, proportioned to the strength and state of the horse, without distressing or too much fatiguing him. A gentle perspiration loosens the scurf, and makes him clean better. The hide soon gets foul; and a groom that has much pride in the appearance of his horse is almost incessantly currying, brushing, and hard rubbing the coat.

It is a customary thing with the dealers in horses, in forming a judgment of the actual state of the horse, and whether his condition will admit of farther advancement, to handle the crest, or upper part of the neck which carries the mane; if this be lax in the hand, and

easily pliant, it is presumed the condition may be carried farther; if, on the contrary, this part has a stiff, tense feel, it is considered that farther improvement is not to be expected.

Among the acknowledged indications, also, of poverty and good condition, is the poor mark in the buttock; that is, the channel or depression running down the buttock at its posterior part—being a depression formed between the sacro tibialis externus and sacro tibialis posticus muscles. If this channel is very visible and deep, the horse is out of condition; if obliterated, so as to be hardly visible, he is considered in condition. Blood horses are more easily cleaned than the common kind of horses; their coat is not so thick, it does not retain the perspiration so much, and the hair takes a better polish,—which makes an experienced groom always prefer them.

Too great excitement from the food, and undue fever, may be known by the heat of the mouth, the fulness of the vessels of the eyes, the strength of the pulse, and diminished appetite; the skin also, and extremities, are found too hot or too cold: languor and weakness follow. The remedies are before stated.

AN INQUIRY INTO THE ROT IN SHEEP.

[Concluded from page 364.]

HISTORY OF THE ROT IN SHEEP.

When in warm, sultry, and rainy weather, sheep that are grazing on low and moist lands, feed rapidly, and some of them die suddenly, there is reason to fear that they have contracted the Rot. This suspicion will be further increased, if, a few weeks afterwards, the sheep begin to shrink, and become flaccid in their loins. By pressure about the hips at this time, a crackling is sometimes perceptible. Now, or soon afterwards, the countenance looks pale, and upon parting the fleece, the skin is found to have exchanged its vermilion tint for a pale red; and the wool is easily separated from the pelt. As the disorder advances, the skin becomes dappled with yellow, or black spots. About this time, the eyes lose their lustre, and become white and pearly, from the red vessels of the tunica adnata, and eye-lids, being contracted or entirely obliterated. To this succeeds debility and emaciation, which increase continually till the sheep die; or else ascites, and perhaps general dropsy, supervene, before the fatal termination. These

symptoms are rendered more severe, by an obstinate purging, which comes on at an uncertain period of the disorder. In the progress of the complaint, sheep become what the graziers call chockered, *i. e.* affected with a swelling under the chin, which proceeds from a fluid contained in the cellular membrane under the throat.*

In five or six days after contracting the Rot, the thin edge of the small lobe of the liver becomes of a transparent white or bluish colour, and this spreads along the upper and lower sides, according to the severity of the complaint. Sometimes it does not extend more than an inch from the margin. In severe cases, the whole peritoneum investing the liver is diseased; and then it commonly assumes an opaque colour, interspersed with dark red lines or patches. The upper part of the liver is sometimes speckled like the body of a toad, to which it is said to bear a striking resemblance: round the ductus communis choledochus, and hepatic vessels, a jelly-like matter is deposited, which varies according to the severity of the attack, from a table-spoonful or less, to five or six times that quantity. Upon boiling, the liver loses its firmness, and separates into small pieces in the water, or remains soft and flaccid.

Several graziers and butchers, with whom I have conversed at different times, having observed that sheep are much disposed to feed during the first three or four weeks after being tainted, omit no opportunity of producing it to increase their profits. When the first stage is over, flukes begin to appear in the pori biliarii, the ductus communis choledochus, and in the gall-bladder. At first, the quantity of these creatures is small; but, as the disease advances, they increase, and before death are often very numerous. In the last part of the com-

* When the shepherd determines to examine the eyes of a sheep, which ought to be done frequently, he should place it between his thighs, and hold the head with both hands. He then proceeds to raise the upper and depress the under eyelid; by which means, the blood-vessels of the tunica albuginea are brought into view. When they are red, and in great numbers, the sheep is supposed to be in good health. The caruncula lacrymalis, and inner surface of the eyelids, should be as red as the vessels on the eye-ball. If they are pale, and the veins are in small quantities, and faint-coloured, or livid, the sheep is in a debilitated state, or afflicted with the Rot. In all cases, where the blood-vessels have entirely disappeared, the mutton is bad. By frequently examining the eyes in dangerous seasons, I conceive shepherds might always discover the Rot before their sheep began to shrink, and, consequently, in time to prevent any material injury to their profits. Where the demand is considerable, and the market is not far distant, the grazier may always turn the Rot to his advantage, by keeping the tainted sheep while they continue to feed, and taking care to kill them immediately after they cease to thrive.

plaint, they are sometimes to be found in the stomach, as well as in the intestines and liver. This, like the visceral disorders of the human body, may terminate in resolution, effusion, suppuration, or schirrus.

1st, The complaint is said to terminate in resolution, when the inflammatory action goes off, without destroying the state and texture of the parts. However, I am strongly inclined to believe, that every considerable inflammation in the human body, and in other animals, although it ends in resolution, leaves behind it some remains, which may be discovered by an experienced anatomist. When the vessels are thrown into inflammatory action for a few days only, effusion commonly takes place, and the coats become thicker, and assume a buffy colour. These changes in the sanguinary system often continue through life, and lay the foundation of many chronic and incurable disorders. Sheep that recover from the Rot exhibit very different appearances after death, according to the severity of the attack; but the taint is seldom or never entirely removed. I was desired, within these few days, to look at the liver of an old ewe, that died fat, and contained fourteen pounds of suet in her body. The back part of the small lobe was dappled with whitish spots; the coats of the ductus communis and pori biliarii were considerably thickened, and more solid than usual. In colour, they resembled the human aorta in old people, and were full of flukes: in other respects the liver appeared to be sound and natural. The butcher asserted, that the variegated appearance and alteration in the ducts, were occasioned by a slight taint of long standing, which had not been considerable enough to disorder the economy, or impair the health of the animal, sufficiently to prevent its feeding.

2dly, When sheep die suddenly in the first stage of the disorder, an effusion of serum, or of wheyish-coloured fluid, may be commonly discovered in the cavity of the abdomen, and then the peritoneum surrounding the liver is generally covered with a membrane or coat of coagulable lymph. This form of the Rot has been frequently confounded with the resp or red water, though it differs from the latter disorder, in the colour of the effused liquid, in being much less disposed to putrefaction, and in several other particulars.

3dly, Abscesses in the liver exhibit another termination of this malady. They are seldom considerable enough to kill immediately; but, in consequence of the absorption of purulent matter from them, the sheep frequently waste away, and die hectical or dropsical. When the collections are small, sheep will recover sufficiently to bear lambs for three or four seasons, and afterwards become tolerable mutton.

4thly, The most common termination is in schirri, or what the shepherds call knots in the liver. I have seen the whole substance of this important viscus so full of small roundish lumps, or schirrous bodies, that it was difficult to find any sound part in it. The first attack is unfortunately so very insidious, that the disorder is scarcely observable, before the animal begins to waste and lose flesh. In this advanced state, it is said to labour under the Rot or pourriture,* from overlooking the commencement of the disorder.

Hydatides are observed to affect schirrous and purulent livers more frequently than others. When livers are much diseased, the butchers carefully conceal them from the public eye. To me it is always matter of surprise, to find the mutton saleable in these severe cases. It shows, in an extraordinary manner, the accommodating power of living matter, which is able to maintain life, and increase corpulence, under such unfavourable circumstances. Shepherds and breeders, who make it a general rule to kill every sheep that becomes indisposed, from an opinion that very few of them ever recover from any illness, would do well to examine the livers and other viscera of slaughtered sheep. By such a practice, they will soon be convinced that sheep are able to endure a great deal. I am persuaded that the uniform mortality among them proceeds more from ignorance, or erroneous treatment, than the inevitable tendency of their disorders. This inquiry would point out in a forcible manner the necessity of encouraging some medical person of good reputation and considerable experience, to turn his attention to the numerous maladies of these useful animals. The diseases of horses have, of late years, been regularly studied in most parts of Europe; but to Britons, surely no Veterinary object is more deserving of encouragement than the management and health of sheep, with which our unrivalled commerce and national glory are so inseparably connected. "Les plus grands medecins doivent rechercher avec soin la cause et le remède d'un mal, qui menace de détruire des animaux utiles à toutes les nations; et principalement à celles qui savent employer la laine pour les plus beaux ouvrages."—*Daubenton.*

* See Obs. et Inst. sur les Malad. des Animaux Domestiques.

OF SHOEING HORSES WHICH STRIKE OR CUT.

BY THE LATE MR. MOORCROFT.

[THE practice here recommended by the late Mr. Moorcroft, is entitled to more consideration than it has yet received from the profession. The theory of his plan for avoiding cutting, is founded on simple and satisfactory reasoning; but it has attracted less attention and gained fewer admirers than any one of the specious *frog-squeezing schemes* of his junior colleague, Mr. Coleman, thereby evincing how great a superiority a plausible humbug has, for a time, over a really useful proposition. The loss which science sustained by the resignation of this talented Veterinarian, is greatly to be regretted. Repeated successful trials of the following plan, as a remedy for the frequent inconvenience of cutting, induces us to recommend it, more particularly for the hind feet.]

To prevent a horse from striking the foot or shoe against the opposite leg, by which it is often bruised or wounded, is an important point, inasmuch as this accident occurs very frequently, and as it not only blemishes and disfigures the leg, but also endangers the safety of the rider.

The parts struck in the hind leg, are the inside of the fetlock joint, and the coronet: in the fore leg, the inside of the fetlock joint, and immediately under the knee; which latter is called the speedy cut, from its happening only when a horse goes fast.

Young horses, when first backed, generally cut their fore legs, although naturally they may be good goers. This arises from their placing the foot on the ground too much under the middle of the breast, in order the better to support the burthen to which they are unaccustomed; but, by degrees, they acquire the method of balancing the weight, with the foot in the same direction it would naturally have were they without it. It may therefore be laid down as a general rule, with such horses, that till they regain their natural method of going, the edge of the inner quarter of the shoe should follow exactly the outline of the crust, but should not be set within the crust, nor should the crust itself be reduced in thickness; as both these practices tend to weaken the inner quarter, and to deform the hoof. And here it must be observed, that the outer edge of the shoe should, in all cases of sound feet, follow exactly the outer edge of the crust, except just at the heel, where it should project a little beyond the line of the hoof.

Horses with narrow chests have their legs near together, and are apt to cut when they begin to tire; and with these, the practice just mentioned should always be employed. Horses that turn their toes much outwards are, of all others, most subject to cut. It has been asserted that this defect also happens to such as turn them much inwards; however, the author does not recollect to have met with a single instance of this kind in the course of his practice. In horses of the first description, it has been long observed, that the inner quarters of the hoof were lower than the outer, and that the fetlock joints were nearer each other than in horses whose feet pointed straight forwards. These two facts probably led to a conclusion, that if the inner quarters were raised to a level with the outer, and so much the more as they were made proportionably higher, that the fetlock joints would be thrown farther apart, so as to admit of the foot passing by the supporting leg without striking the joint. Accordingly, for the two last centuries, at least, it has been usual to make the inner quarter of the shoe higher than the outer; and not only has this been the general practice, but it has been regularly recommended by almost every writer from that time to the present. And notwithstanding this method has very frequently failed of success, yet repeated disappointment appears never to have led to the circumstance of questioning the truth of the principle. Nay, indeed, the reliance placed upon it has been so strong, probably from the simplicity of the reasoning on which it was founded, that in the cases where it most particularly disappointed expectation, its failure was generally attributed to the practice not being carried sufficiently far; and, accordingly, the shoe has been still more raised on the inner quarter, and the edges of the crust and shoe have been filed away. When with these expedients it likewise failed, the last resource has been a circular piece of leather placed round the joint to receive the blow of the foot.

It is now about four years since that a shoe, with the outer quarter thick, and the inner one thin, was, for the first time—in the practice of the author, at least—employed in a case which had baffled many attempts on the old plan.

On the first trial the horse ceased to cut, nor has he ever done it since; which can only be attributed to his having constantly worn the same kind of shoe. This circumstance did not then excite in the mind of the author any doubt as to the propriety of a practice which had so long and so generally been acknowledged, but was rather considered as an extraordinary exception. However, other bad cases, which occurred occasionally since that period, were treated in the same way,

and with the same success. These facts, at length, led the author to conclude that a practice which was so uniformly followed by success, in cases where the established one as uniformly failed, must necessarily repose on a better principle; although, for a long time, he was completely at a loss how to explain it. For if the action of cutting did principally depend upon the faulty position of the fetlock joints, and the feet, with respect to each other; and it appeared to be generally agreed that such was the fact, it should seem, that a means which, by raising the outer quarters, must throw the fetlock joints still nearer to each other, would necessarily increase the defect in question; but as the reverse of this actually takes place, it might induce a suspicion, that there exists some other cause of cutting, which has been hitherto overlooked.

A minute examination of this point would far exceed the limits allotted to this division of the work; and therefore, at present, the author will confine himself to that part of the subject alone which is absolutely necessary to be understood. For horses, therefore, which cut their hind legs, the shoe, at the outer heel, should be from half an inch to an inch in thickness, according to the kind of horse, and to the degree in which he may cut. The web of the shoe should gradually become thinner till it reaches the toe, which should be of the ordinary thickness, and from which it should slope off, and end like a tip in the middle of the inner quarter.* This shoe, in point of effect, would be equally proper for the fore feet, were it not that in such horses as are used for the saddle, the fore feet being more charged with weight than the hind feet, are more particularly subject to be injured, and a horse thus shod on the fore feet, might go unsafe; therefore it is expedient to let the inner quarter of the shoe be thin, and reach to the heel, but the outer edge should be bevelled off so as to slope inwards. The same kind of shoe is equally well calculated to prevent the speedy cut; observing to bevel off still more strongly the part which strikes, and not to put in any nails thereabouts. And here it may be proper to remark, that in sound feet, the heel of the shoe should reach as far on the heel of the hoof as to admit of the angle formed by the crust and the bar resting fully upon it, but it should not be carried quite as far as the end of the heel of the hoof.

In order to ascertain what would happen to a horse shod with different kinds of shoes, the following trials were made:—

* For horses which cut only in a slight degree, a shoe of the same thickness throughout, but reaching on the inner quarter only as far as the middle of the foot, will, in most instances, be found sufficient.

EXPERIMENT I.

A horse with a narrow chest, who had never cut, and having parallel shoes on his fore feet, was trotted at about the rate of eight miles an hour in a straight line, over ground sufficiently soft to retain slightly the impressions of the shoes, but not to admit the feet to sink into it.

Two parallel lines were drawn along the track, including between them the prints of the shoes. By these it was found, that there was regularly a distance of nine inches and a half between the outer edge of the near fore shoe, and that of the off fore shoe.

EXPERIMENT II.

Shoes thick in their inner quarter, and, like a tip, reaching only half way on the outer quarter, were then used; and it appeared that the distance between the outer edges of the prints of the shoes, taken as before, was regularly reduced to eight inches and a half.

EXPERIMENT III.

The same shoes were afterwards placed on the opposite feet, so that the thick heel was on the outer quarter; and the result, under circumstances exactly the same as in the foregoing experiments, was, that the distance between the outer edges of the prints of the shoes was regularly increased to eleven inches.

To account for these results, it is necessary to attend closely to the different effects produced by the weight of the fore part of the body acting upon the two fore feet, when raised on the inner or outer quarters, during the opposite states of rest and action. And first, with regard to shoes raised on the inner quarter: whilst a horse so shod, is standing still, the fetlock joints are certainly thrown farther apart than when any other kind of shoe is used. Hence it was concluded, that the limb which supported the body would have its fetlock joint thrown so much outwards, as to keep it completely out of the way of the foot in motion. But it appears that the impressions made on the ground by such shoes, are an inch nearer together than those made by parallel shoes, and two inches nearer together than those made by shoes raised on the outer quarter. And this may be thus explained: when the horse is at rest, the weight is supported equally by the two fore feet, but the instant one foot quits the ground, the weight is suddenly transferred to the other; and by the outer quarter being lower than the opposite one, the fore part of the horse has a tendency to fall over to the outside. To prevent this, the moving foot is suddenly brought close to the fet-

lock of the supporting foot, in order to relieve it by catching the weight, and the foot itself is placed on the ground, too much under the middle of the breast. The same circumstance occurs to both feet in their turn; and the horse being thus in constant danger of falling to one side or to the other, is constrained to bring his feet near together to preserve his balance, and in doing this, strikes the foot against the opposite fetlock.

It frequently happens that the more the toes are turned outwards, the nearer the fetlock joints are brought together, and the more the horse is disposed to cut. However, this is true only to a certain extent; for if this faulty position of the lower part of the leg be carried artificially beyond a given point, instead of producing an increased degree of cutting, in most instances it remedies the defect altogether. The reason of this is just the reverse of what takes place when the inner quarter is raised; that is to say, when the weight of the fore part of the body rests only upon one leg, it bears too much upon the inner quarter, from its being lower than the outer quarter; and thus the horse has a tendency to fall over to the inside of the supporting leg.

To prevent this, the moving foot is thrown farther from the supporting leg, in order to maintain the balance; and thus the foot misses the fetlock joint.

NATURAL HISTORY OF THE EARWIG.

Insects.—Class 5.—Order 1. *Coleoptera.*—Wings 2, covered by two shells, divided by a longitudinal suture.

Genus *Forficula.*—Antennæ tapering; shells abbreviated; wings folded and covered; tail forked, resembling a forceps; in each foot three joints.

Species *Auricularia.*—Earwig.—Antennæ of fourteen joints; brown; body depressed; shells tipped with white; length, when full grown, eight lines.

The Earwig is common and well known; it is rather an ugly and hostile-looking insect: its very name has given it a character of dread, and, consequently, is an object of destruction whenever or wherever met with.

This insect changes from its chrysalis state in the spring and early summer months. From heaps of garden or field rubbish, dunghills, or hotbeds, they may be seen on fine warm *evenings* issuing forth in great numbers, immediately taking flight, rising to a considerable height in the air, where they disport themselves on wing till darkness

sets in, when they descend, and retire to hiding-places till the next evening.

At this stage of their life they are of a pale yellow colour, about four lines in length, and remarkably active and quick in their motions. Their appearance at this time, in size and colour, as well as in quickness of movement, both on wing and on foot, has induced some naturalists to consider them as a distinct species, under the designation of *forficula minor;* and though further distinguished by two joints less of the antennæ, yet it is probable they are only different semblances of the same insect.

It cannot be observed how often the same individuals take their evening's flight; but as they congregate apparently from the instinctive impulse of sexual association, it is likely they only continue their flight till that important act of their being is consummated.

Throughout the summer and beginning of autumn, they are usually seen lurking in holes of walls, joints, and in crevices of wood-work, or among any dry materials. As they are the natural prey of many kinds of birds, particularly the Picæ, Gallinæ, and several of the Passeres tribes, they shun the light, pass the day,—if not disturbed,—in their retreats, and issue forth to assemble together or feed during the night.

They are one of the greatest plagues of the gardener; for as soon as the earliest (and which are also the choicest) fruits begin to be scented, the earwigs begin their depredations; generally eating a hole either close to the stalk of pomeous, or at the apex of drupeous fruits, disfiguring, if not destroying them. Apricots are their favourite repast, and from which the spoiler abstracts almost all their value. Many guests at the dessert, and particularly ladies, have hardly courage to take a Moor Park apricot on their plate, lest they should be disgusted with the sight of earwigs having possession of the cavity round the stone. Hence the gardener is ever at war with them, and especially in defending his wall fruit, for there the insects have not only safe retreats, but also "the first fruits" to invite their voracity; and as they are midnight plunderers, he can only place reeds and hollow stalks of plants to allure their entrance, and where they may be daily caught and destroyed.

Though the richest fruits seem to be preferred by them, there are many other vegetable substances which serve them for food. The florist often has to regret the loss or laceration of some of his favourites: they eat the epidermis of stalks and leaves, sometimes the petals and stamina of the flower, and occasionally devour young plants, as those of the French marigold *(tagetus patula)*, and others.

Throughout the summer and autumn they continue to increase in

size; and in the latter season become unwieldy, and cease rising their wings. The abdomen becomes much enlarged, from which circumstance they all appear to be females; this cannot, however, be ascertained, as there are no visible sexual marks in any stage of their existence; but from the habitudes of other genera in this class of insects, it is probable the males die soon after the purposes of their life is completed; and as we see the full grown ones skulking about the places where the young ones are resuscitated in the spring, it is likely the eggs are laid in the course of the autumn, and pass the maggot and chrysalis states during the winter.

From the weapon-like appendices at the end of the abdomen, they appear to be intended for offence; and though used for the purpose of defence, this is not the sole use of those threatening instruments, but they are the organs, without which they could neither fold nor unfold their wings. When these are unfolded for flight, they are at least half an inch in length, and when folded lie under the protection of a shell not one-fifth of this length! The membranous and transparent wing has no tendinous or muscular motion in itself, but, by the assistance and form of the forceps, they are quickly folded, like a large map in an octavo volume, with the greatest adroitness. Such provision has nature made for the disposal of appendages so necessary to the animal at one time, and for the defence of the same at another, when the pioneering habits of the insect endangers the safety of those delicate organs. Another circumstance in the structure of this loathed insect deserves remark; its safety depends on its power of secreting itself from its natural enemies, by creeping into *sinuous* holes and cavities; but this it could not do without such flexuosity of body, as its *short* shells allow; for if it had shells, or elytra, covering the whole length of the abdomen, like the greater number of the tribe, it could not enter with facility into winding holes necessary for its safety.

The name of this insect, in almost all European languages, has given it a character which causes a feeling of alarm, even at the sight of it. Whether or not they ever did enter the human ear is doubtful; —that they might endeavour to do so, under the influence of fear, is more than probable; and this, perhaps, has been the origin of their name, and the universal prejudice against them. As it is said that anatomists deny the possibility of their deep or dangerous entrance into the ear, it is a pity that this is not generally known, as it might defend the constitutionally timid from unnecessary alarm, and give a more favourable idea of a part of animal creation, which forms a most necessary link in the chain of being.

While the naturalist contemplates the economy of the earwig, he

cannot avoid noticing the wonderful power of instinct with which this despicable animal is endowed. In starting into active life from its dreary abode in the earth, and fitted at once to become a temporary inhabitant of the air, what but instinct opposes its not venturing forth until the evening, when the swallow and martin, and other muscivorous birds have fled the sky and retired to rest. The same unerring substitute for want of reason directs them to shun the light of day, lest they should be exposed to the view of their enemies; and they always prefer the most secret recesses of quiet and darkness, for the preservation of their existence, till the important work of securing a succession of their species is accomplished.—*Quart. Jour., April.*

ACCOUNT

OF AN

EXTRAORDINARY MARINE ANIMAL, OR SEA-SERPENT.

BY I. HARWOOD, M. D. F. R. S.*

In the autumn of 1826, whilst Captain Sawyer, of the ship *Harmony*, of Hull, was in pursuit of the Bottled-nosed Porpoise in Davis's Straits, north latitude 62, and west longitude 57, he observed a body floating on the surface of the water, which was at first mistaken, by himself and his seamen, for an inflated seal's skin, such as the Esquimaux employ in the destruction of large aquatic animals, by attaching it to the harpoon by which they are speared, and thus tiring them out by its floating property. On a nearer approach, however, the object which had excited attention proved to be a living marine animal. The creature is still in the possession of Captain Sawyer, who preserved it in rum soon after being taken. Its capture was occasioned by its being, when first observed, almost worn out by unavailing efforts to gorge a species of perch of about seven inches in circumference, with which it appeared to have been long contending, as it exhibited very feeble signs of life. The organs of motion being extremely small, and its body greatly elongated, this creature would, on a cursory view, be by all considered as an extraordinary kind of sea serpent, and this idea is supported by a more close examination.

* This paper is a popular abridgment of Dr. Harwood's paper in the *Phil. Trans.* 1827, p. 49.—*From Edin. Journal of Science.*

Its body is one uniform purplish black, except the filamentous extremity of the tail, which is much lighter. The total length is four feet six inches. The enlarged, and extremely elastic pharynx, communicates with an enormous sac or air-vessel, extending in length, from the extremity of the snout, about twenty inches. When partially filled with air, this sac measured about nine inches in circumference below its union with the tail, and its greatest diameter, including the slender body to which it pertained, was four inches. The use of this enormous pouch Dr. Harwood is not able to discover.

The skin, all over the body of the Ophiognathus, is particularly soft and slimy, yet it has a slight granular appearance. The spiracles, which are five and a half inches from the snout, are large, and of an irregular oval form. All the fins are extremely small, the pectorals being composed of an adipose disc, which is terminated, and nearly surrounded by a narrow radiated membrane. The dorsal fin, which, like the rest, is very narrow, and provided with simple rays, commences at about eighteen inches from the snout, and terminates insensibly upon that slender, tape-like filament into which the tail becomes converted, and which is continued twenty and a half inches in length beyond the posterior extremity of the dorsal fin. About this part of the dorsal fin, a few other minute filaments take their growth from it. The anal fin commences at the posterior union of the sac with the body, and ends at about fourteen inches from the extremity of the caudal filament. The body exhibits no apparent lateral line; but, perhaps, the most curious structures which the creature presents to our notice, are connected with head and jaws. The almost entire absence of a tongue might, perhaps, prove one of its most characteristic distinctions, were we as yet sufficiently acquainted with the condition of this organ in those nearest allied to it. The teeth are disposed in a single row above and below; above they exist only along the margins of the intermaxillary bones; below they extend almost the whole length of the maxilla; but the ossa palati are entirely destitute of teeth. Lastly, the jaw-bones are so long, and their articulation is such, that their capability of expansion exceeds what I have seen in any other animal, the rattlesnake not excepted; and, as in snakes, when fully distended, the edges of the jaws describe a large circle, and then appear but as the hemming of an ample sac, the pharynx, which usually occupies so small a space, being an equal participant in this extensile property. When the jaws were gently opened, they measured two and a half inches across, and three and a half from the front teeth to those below; but while they possess this power of extension, their contractile power is no less remarkable.

THE LION OF SOUTH AFRICA.

COMMUNICATED BY A FRIEND.

Two varieties of the lion are found in South Africa, namely, the yellow and the brown; or (as the Dutch colonists often term the latter) the blue or black lion. The dark-coloured species is commonly esteemed the strongest and fiercest. I doubt, however, whether there is any real or specific distinction; for the mere difference of colour may be either altogether accidental, or the consequence of a variation of food and climate in different districts.

The lions in the Bushmen's country, beyond the limits of the colony, are accounted peculiarly fierce and dangerous. This is, doubtless, owing to their unacquaintance with civilized man,—the possessor of the formidable *roer*, or rifle,—and still more, perhaps, to their natural awe of mankind having been extinguished by successful rencounters with the miserable Bushmen. These poor savages, though they possess the assagay or Caffer javelin, are deficient in address or courage to use it, as the Caffers do, with effect, upon this powerful beast of prey; and their light arrows of slender reed, though often effectual in ultimately destroying the largest and fiercest animals, by the infusion of a deadly poison through the slightest puncture, yet afford no available defence against the direct attack of this ferocious and headlong antagonist.

It is said, that when the lion has once tasted human flesh he thenceforth entirely loses his natural awe of human superiority. It is, at least, too certain, that when he has once succeeded in snatching some unhappy wretch from a Bushman kraal, he never fails to return regularly every night in search of another meal; and often harasses them so dreadfully as to force the horde to desert their station; and will even follow them like a vampire throughout their wanderings, till they either succeed in destroying him, or till he has finally devoured the whole band.

From apprehensions of such nocturnal attacks from the lions, these wretched hordes are said to be in the habit of placing their aged and infirm nearest the entrance of the cave or covert where they usually sleep, in order that the least valuable may first fall a prey, and serve as a ransom for the rest.

The prodigious strength of this animal does not appear to have been overrated. It is certain, that he can drag the heaviest ox with ease a

considerable way; and a horse, heifer, hartebeest, or lesser prey, he finds no difficulty in throwing upon his shoulder and carrying off to any distance he may find convenient. I have, myself, witnessed an instance of a very young lion conveying a horse about a mile from the spot where he had killed it; and a more extraordinary case, which occurred in the Sneuwberg, has been mentioned to me on good authority, where a lion, having carried off a heifer of two years old, was followed on the *spoor*, or track, for full five hours (above thirty English miles), by a party on horseback, and, throughout the whole distance, the carcass of the heifer was only twice discovered to have touched the ground. Many examples, not less remarkable, might easily be added, which would fully prove the lion to be by far the strongest and most active animal, in proportion to his size, that is known to exist.

Mr. Barrow has represented the lion of South Africa as a cowardly and treacherous animal, always lurking in covert for his prey, and scampering off in shame and fear if he misses his first spring. I apprehend, that that intelligent traveller has, in this, as in some other instances, been led to draw an erroneous conclusion, by reasoning too hastily from limited experience or inaccurate information. The lion, it is true, not less now than in ancient times, usually "lurketh privily in secret places," and "lieth in wait" to spring suddenly and without warning upon his prey. This is the general characteristic of every variety of the feline tribe to which he belongs; and for this mode of hunting alone has Nature fitted them. The wolf and hound are furnished with a keener scent and untiring swiftness of foot to run down their game. The lion and leopard are only capable of extraordinary speed for a short space; and if they fail to seize their prey at the first spring, or after a few ardent and amazing bounds, they naturally abandon the pursuit, from the consciousness of being unequal to continue it successfully. The lion springs from nine to twelve yards at a single leap; and for a brief space can repeat these bounds with such activity and speed, as to outstrip the swiftest horse in a short chase; but he cannot hold out at this rate in a long pursuit, and seldom attempts it. The monarch of the forest is, in fact, merely a large cat, and he must live by using the arts of a cat. He would have but a poor chance with the antelopes, were he always magnanimously to begin a roaring whenever a herd approached his lair. He knows his business better, and, in fact, generally couches among the rank grass, or reeds, that grow around the pools and fountains, or in the narrow ravines, through which the larger game descend to drink at the rivers;

and, in such places, one may most commonly find the horns and bones of the animals which have been thus surprised and devoured by him.

Even in such places, it is said, he will generally retreat before the awe-inspiring presence of man—but not precipitately, nor without first calmly surveying his demeanour, and, apparently, measuring his prowess. He appears to have the impression, that man is not his natural prey; and though he does not always give place to him, he will yet, in almost every case, abstain from attacking him, if he observes in his deportment neither terror nor hostility. But this habitual deference is not to be counted upon under other circumstances, nor even under such as now described, with entire security. If he is hungry, or angry,—(and the latter mood of mind is supposed to be the unfailing accompaniment of a craving stomach with most lions, as well as with many men),—or if he be watching the game he has killed, or is otherwise perturbed by rage or jealousy, it is no jest to encounter him. If he *does* approach, the traveller must elevate his gun and take aim at the animal's forehead, before he comes close up and couches to survey or spring upon him; for, in that position, though he may possibly give way to calmness and self-possession, he will tolerate no offensive movement, and will anticipate, by an instant and overwhelming bound, any attempt *then* to take aim at him. These observations are advanced, not in the confidence of my own slight experience, but upon the uniform testimony of many of the back-country Boors and Hottentots, with whom I have often conversed on such subjects, to dissipate the *ennui* of a dreary journey or an evening *outspann* in the interior.

The Bechuana Chief, old Teysho (now in Cape Town), conversing with me a few days ago about the wild animals of Africa, made some remarks on the lion which perfectly correspond with the accounts I have obtained from the Boors and Hottentots. The lion, he said, very seldom attacks man, if unprovoked; but he will frequently approach within a few paces, and survey him steadily; and sometimes he will attempt to get behind him, as if he could not stand his look, but was yet desirous of springing upon him unawares. If a person, in such circumstances, attempts either to fight or fly, he incurs the most imminent peril; but if he has sufficient presence of mind, coolly to confront him, without appearance of either terror or aggression, the animal will, in almost every instance, after a little space, retire. But, he added, that when a lion has once conquered man, he becomes tenfold more fierce and villanous than he was before, and will even come into the kraals in search of him, in preference to other prey. This epicure

partiality to human flesh in these too knowing lions, does not, in Teysho's opinion, spring either from necessity or appetite, so much as from the "native wickedness of their hearts."

The overmastering effect of the human eye upon the lion has been frequently mentioned, though much doubted by travellers. But from my own inquiries among lion-hunters, I am perfectly satisfied of the fact: and an anecdote which was related to me a few days ago, by Major Macintosh (late of the East India Company's Service), proves that this fascinating effect is not restricted exclusively to the lion. An officer in India (whose name I have forgot, but who was well known to my informant), having chanced to ramble into a jungle adjoining the British encampment, suddenly encountered a royal tiger. The rencounter appeared equally unexpected on both sides, and both parties made a dead halt, earnestly gazing on each other. The gentleman had no fire-arms, and was aware that a sword would be no effective defence in a struggle for life with such an antagonist. But he had heard, that even the Bengal tiger might be sometimes checked, by looking him firmly in the face. He did so. In a few minutes, the tiger, which appeared preparing to make his fatal spring, grew disturbed—slunk aside—and attempted to creep round upon him behind. The officer turned constantly upon the tiger, which still continued to shrink from his glance; but, darting into the thicket, and again issuing forth at a different quarter, it persevered for above an hour in this attempt to catch him by surprize; till, at last, it fairly yielded the contest, and left the gentleman to pursue his *pleasure walk*. The direction he now took, as may be easily believed, was straight to the tents at double quick time!

(To be continued.)

To the Editor of the FARRIER *and* NATURALIST.

SIR,

MEN who are educated for the higher but more sedentary professions, name Alma Mater the College where they receive or confirm that knowledge which enables them to play their parts honourably and successfully in life;—they feel towards it a filial attachment, and to their order an *esprit du corps*, creditable to themselves individually, and tending to raise, in public estimation, the class to which they belong. A father is surely the fitter parent to guide the horseman: in

this sense I named the Veterinary College—*not the Professor.* You call it a livery-stable. There is no law to prevent your calling Guy's Hospital a boarding-house; but is it not as well to allow it to retain its proper title? Some of your expressions appear dictated more by private pique than by views to public utility. Union is strength; and the Veterinary, to rank as a liberal profession, requires to be supported, as well by the good conduct and skill of all its members in their private practice, as by observance of the forms of common decency, when speaking of the institution to which they owe the high rank they now hold, than the practitioner of forty years ago.

And here, Sir, I must take leave of you, with good wishes for the continued success of your work, with such alterations in the tone of its politics as may make it a fund of information and rallying point to Veterinarians—not a mere engine of party.

I am, Sir,

18 *Aug.* 1828. Your most obedient Servant,

A FARRIER. [1]

We have inserted this second letter of "A Farrier," not on account of its particular merit, but because it contains something like the sentiments of a number of Veterinarians who have been students at the College. They imagine it must be injurious to their interests to expose its most glaring errors, or those of their preceptor; and there is something very natural and not altogether blameable in this. But it would be extremely improper in us to indulge in this kind of *esprit du corps.* We have a duty to perform to the profession at large, from which we must not be deterred by any such representations as those of our correspondent, who seems to be of opinion that the reputation of every individual depends so much on that of the school from which he sprung, that we do right to maintain its infallibility "through all manner of report," and in spite of evidence and conviction to support the powers that be, and all existing abuses. We, on the contrary, believe that everything connected with science ought to be open to remark. Union is strength, but a combination to stifle improvement and knowledge shall never receive our sanction.

As to "private pique" and "common decency," the one has never influenced us—the other we have never offended. The Veterinary College is a livery-stable, and will bear no comparison with Guy's Hospital; as in the former the horses are taken in for the sake of profit —in the latter patients are received out of pure charity.

HORSE CAUSE.

Bristol, Thursday, Aug. 21, 1828.

NESBITT *v.* KENT.

THE defendant in this case is a Veterinary surgeon residing in this city, and the action was brought to recover 60*l.*, the alleged value of a horse which was the property of the plaintiff, and which had died, as was said, in consequence of the negligent and unskilful manner in which it had been bled by the defendant.

Mr. Follett having opened the pleadings,

Mr. C. F. Williams stated the plaintiff's case. The learned gentleman observed, that it had been for a long time the established custom, amongst farriers and Veterinary surgeons, in bleeding horses, to use an instrument well known and called a fleam. The defendant had, however, on the occasion which had given rise to the present inquiry, had recourse to a lancet; and the consequence of this innovation in practice was, as he (Mr. Williams) would show to the Jury, that the horse, immediately after the bleeding, exhibited symptoms of inflammation and extreme debility, and had, whilst proceeding from the defendant's to the plaintiff's house, dropped down dead. The complaint against the defendant was, that, deviating from the ancient and safe method of bleeding, he had recourse to a new one, which had caused such an effusion of blood as led to the death of the animal. When the horse was dead, the plaintiff sent to the defendant to request that he would come and examine him, with a view to ascertain the cause of the death. This the defendant refused to do; upon which another Veterinary surgeon was called in, who ascertained, on examining the horse, that the vein had been cut through, and the artery punctured. This was the circumstance which had, by causing an extreme effusion of blood, produced the death of the horse. These facts, Mr. Williams said, he should establish by evidence; after which he should expect, with confidence, the verdict of the Jury in favour of his client.

Robert Nesbitt deposed, that he took the horse to the defendant's on the 20th of June. The horse was bled by the defendant with a lancet, in the right side of the neck, and about a gallon of blood taken away. After the bleeding, Mr. Kent remarked that there was a large swelling at the place which had been opened with the lancet. The

swelling also had extended up both sides of the neck. The defendant ordered his man to chafe it with cold water, which was done for fifteen minutes. The defendant then desired witness to take home the horse gently, and chafe the neck with cold salt and water. He said witness might ride the horse if he pleased. Witness having led the horse a short way, rode it for half a mile, after which he dismounted, as the animal was very weak and bled at both nostrils. Witness went a short way for a farrier, leaving the horse with a man. Witness soon after returned, and before he got up to the horse the animal fell down, and died in two minutes after.

Cross-examined.—Witness took the horse home the nearest way. The animal was well-bred, and had a very fine skin.

Mr. Davis, who had been in the habit of attending upon horses for twenty years, deposed that he examined the horse in question after death. He found that a great quantity of blood had escaped from the orifice, which he believed to be the cause of the horse's death. The vein was punctured through, and he thought the artery had been divided. There was a quantity of arterial blood in the throat. In the judgment of the witness, a lancet was not a proper instrument to bleed a horse with. It ought to be done with a fleam.

Cross-examined.—Witness took from six to seven pints of blood out of the horse's neck. Witness attributes the death of the horse to the great loss of blood, and to no other cause. Witness did not examine the artery. The immediate cause of the death of the horse was suffocation, in consequence of the blood which had escaped after the neck had been tied up.

Mr. N. P. Lee, a Veterinary surgeon, said, that a fleam was safer to bleed with than a lancet, as the former had a guard. The witness was of opinion that the death had been occasioned by cutting through the vein and puncturing the artery.

Cross-examined.—Witness was educated at the Veterinary College in London, under Mr. Sewell. That gentleman usually bled horses with a lancet.

Another Veterinary surgeon gave similar evidence.

Mr. Serjeant Wilde, for the defence, said that he should prove that the death of the horse had been occasioned by the plaintiff's not complying with the defendant's directions, and that the defendant had not been guilty of any negligence whatever in the manner in which he had treated the animal. The learned Serjeant then called

Thomas Higgins, who deposed—I am the defendant's apprentice; I recollect the defendant bleeding the plaintiff's horse. The animal

was bled and bound up in the usual way. I have always seen the defendant bleed horses with a lancet. The defendant told the young man who had brought the horse to be bled, that in going home he must lead the animal quietly, and not ride it. A considerable time after he had taken the horse away, I met him in the street. He told me the horse was very ill; and on coming up to the place, I found it was dead; the young man had a whip in his hand, and spurs on.

Mr. Williams, a Veterinary surgeon at Bath, deposed, that he had always bled horses with a lancet. He never saw Mr. Sewell use any other instrument. A swelling in the neck, after bleeding, was no proof of want of skill in the operator.

A person, who said that he had bled some thousands of horses, deposed that the use of the lancet for that purpose was quite common.

A horse-dealer said, that the animal, before the bleeding, was not worth 20*l*.

Mr. Justice Park said that there was not the slightest ground for imputing negligence or want of skill to Mr. Kent; and the Jury found a verdict for the defendant.

[Mr. Coleman, though *a medical man*, is averse to LANCET bleeding; he recommends the use of the fleam.]

LITHOCOLLI, OR STONE GLUE,

FOR

PRESERVING WET SPECIMENS OF NATURAL HISTORY, ANATOMICAL PREPARATIONS, &c.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

A FRIEND to whom I was known to have fondness for Natural History contrived, some years since, to enlist me in his service to assist him in forming a collection of fishes and molusca; but whenever the passage home was long, or we happened to experience bad weather, my collection suffered, more or less, until I happened to meet, at Underwood's, in Fleet-street, with "*Instructions for Collecting, Preserving, and Transporting Specimens of Natural History.* By JOHN CHICHESTER, M. D., of Cheltenham."

According to the advice contained therein, I have employed spirit of 915 of our hydrometer; and, previously to placing the animals

therein, I have removed, by means of a soft brush, the mucus and other impurities adhering to the surface; then taking care to place the animal in the jar in such a manner that it might float without touching the bottom, so as to guard against its being crushed in that part by the superincumbent weight. When the animal has been of extreme delicacy, I have placed it in a bag of linen of very open texture, or in a net, either of which is easily attached to the cork and the contents made to float at any convenient depth. For the perfect preservation of any animal, the spirit must be changed after a few days; and it is more essentially necessary in respect to those which run most readily into a state of decomposition. Until this treatise fell in my way, I never could obtain a lute by which I was able, properly, to secure the mouths of my vessels;—one that could be easily prepared, which dries and acquires complete solidity as soon as applied, on which spirit has little or no action, which does not fall off in scales, which penetrates the pores of the cork, and adheres perfectly, at the same time, to the glass.

For a knowledge of this valuable composition, the Doctor tells us he is indebted to M. Péron, a celebrated French naturalist: it is composed of the following ingredients:—

Stone Pitch,
Red Ochre (well powdered),
Yellow Wax,
Spirit of Turpentine.

More or less of the pitch and oxide of iron, or, on the other hand, of oil of turpentine and wax, are made use of, according to our desire to have it more or less hard; and this would, of course, depend upon the climate to which it is to be exposed. A single experiment is sufficient to determine the proportions. Melt the pitch and wax together; then add the ochre in small quantities at a time, and on each addition, stir the mixture well: when it shall have boiled for the space of seven or eight minutes, pour in the oil of turpentine, mix well, and continue the boiling.

All necessary precautions must be observed to prevent the mixture taking fire; and it will be but prudent, in the event of such an accident, to have close at hand a cover with a long handle to immediately shut up the vessel and thereby extinguish the flame. The vessel itself should also have a handle, and should not receive of the different ingredients, at any one time, more than would be sufficient to fill, when melted, one-third part of its capacity.

In order to ascertain the quality of this lute, it is only necessary to put, from time to time, a small quantity of it upon a cold plate, and its degree of tenacity will be ascertained in an instant. One of its great advantages is, that it can be prepared on ship-board, and employed immediately on taking a fish or molusca that one would wish to preserve in spirit.

The Manner of using the Lithocolli, or Stone Glue.

After having adjusted the corks upon the mouths of the jars, and wiped them with a piece of dry linen so as to remove all moisture, the cement is to be heated to the point of ebullition. It must be well stirred up from the bottom; and then, with a stick having an old piece of linen rag attached to one end, a certain quantity is taken up, and with this coarse kind of brush a layer of the lithocolli is to be spread over the whole surface of the cork. Sometimes this substance penetrates the cork and occasions the evaporation of a small quantity of the spirit, which, on escaping at the surface, leaves small openings, but which are completely stopped by laying on a second coat after the first has become dry.

When the jars are small it will be sufficient merely to plunge the neck into the melted mixture. By repeating the immersion two or three times, this covering will acquire the thickness desired.

It is still useful to cover the jars so stopped with a piece of linen, which is to be well tied down with packthread, and then tarred over. If very large they should be still further supported by a strong string passed over them in such a manner as to form a cross upon the cover.

I am convinced that jars prepared in this manner may, without any injury, be turned upside down, and exposed to all the tossings of the most violent tempest, as well as to the most intense heat, without any part of the alcohol being lost.

By making this known through your useful publication, you may serve the cause of science, and oblige

A SAILOR AND BIT OF A NATURALIST.

Liverpool, 2d July, 1828.

AN ACCOUNT

OF THE

SERVICES WHICH THE LITTLE BIRD CALLED TROCHILOS RENDERS TO THE CROCODILE.

BY M. GEOFFROY ST. HILAIRE.

On the 28th January, 1828, M. Geoffroy St. Hilaire communicated to the Academy of Sciences of Paris, a paper upon two species of animals called Trochilos and Bdella, by Herodotus.

The author began by announcing that his memoir was, properly speaking, only a commentary on a short passage from Herodotus.

"When the crocodile," says this great historian, "feeds in the Nile, the inside of his mouth is always covered with bdella (a term which the translators have rendered by that of *Leech*).

"All birds *except one* fly from the crocodile, but this one bird, the Trochilos, on the contrary, flies towards him with the greatest eagerness, and renders him a very great service; for every time that the crocodile comes to the land to sleep, and when he lies stretched out with his jaws open, the Trochilos enters and establishes itself in his mouth, and frees him from the bdella which he finds there.

"The crocodile is grateful, and never does any harm to the little bird who performs for him this good office."

This passage is one of those which has most exercised the sagacity of commentators. Some have looked upon it merely as a pleasant story, while others, in order to justify Herodotus, have pushed their zeal so far as to create an animal which could impose upon the crocodile, and be capable of all the actions attributed to the Trochilos.

M. Geoffroy St. Hilaire proposes to show that Herodotus has been defended as awkwardly as he has been attacked unjustly.

During his long residence in Egypt, M. Geoffroy had repeated occasion to ascertain that the story of Herodotus, though correct in substance, was inexact only in some particular details. It is perfectly true that a little bird does exist, which flies incessantly from place to place, searching every where, even in the crocodile's mouth, for the insects which form the principal part of its nourishment. This bird is seen everywhere on the banks of the Nile; and Geoffroy having succeeded in procuring one, recognized it as belonging to a species already

described by Hasselquist, under the name of *Charadrius Ægyptius*. There is, in France, a bird very like it, if not precisely the same, namely, the *small ringed plover*.

With his slender beak this bird can take nothing but the smallest insects, the spawn of fish, or those molecular debris, those fragments of animal *detritus*, which the action of the waters throws incessantly upon the banks.

If the Trochilos is, in reality, the little plover, the animals described by Herodotus under the name of bdella, cannot be *leeches* (besides, leeches do not exist in the running waters of the Nile), but a very small insect of that species which swarm in those damp and warm regions, known by the name of *gnats* in Europe, and of *maringouins* in America.

Myriads of these insects dance upon the borders of the Nile, and when the crocodile reposes on the land he is attacked by their innumerable swarms. His mouth is not so hermetically sealed to prevent them from introducing themselves; and they penetrate in such vast numbers, that the inner surface of his palate, which is naturally of a bright yellow, appears to be covered with a brownish-black crust. All these sucking insects drive their stings into the orifice of the glands, which are numerous in the mouth of the crocodile. It is then that the little plover, who follows him every where, comes to his succour, and delivers him from these troublesome enemies; and that without any danger to himself, for the crocodile is always careful when he is going to shut his mouth to make some motion which warns the little bird to fly away.

At St. Domingo there is a crocodile which so nearly resembles those of Egypt, that M. Geoffroy could not distinguish them without great difficulty. This crocodile is also attacked by the *gnats*, from which he would have no other means of delivering himself (his tongue, like that of the crocodile of the Nile, being fixed) if a bird of a particular species did not give him the same assistance that the crocodile of the Nile receives from the little plover.

These facts explain the passage in Herodotus, and demonstrate that the animal which is there called *bdella* is not a *leech*, but a flying insect, similar to our *gnat*.

It is certain, indeed, that the word *bdella* signified, in Herodotus's time, a *sucker*, but lately this term has been restricted, and is now especially used to denote a *leech*. This consideration permits us, strictly speaking, to suppose that Herodotus was not mistaken in the facts he has related; but we can scarcely suppose that he knew posi-

tively what where the animals which tormented the crocodile. If he had known them, he would have called them by the particular name of *conops*, which he has given them in chapter 95, in which he mentions their numbers and their excessive inconvenience; and since, contrary to his usual precision, he has contented himself with employing the word *bdella* (vague in his time), we ought to conclude that he did not know which kind of sucker incommoded the crocodile; and this confirms M. Geoffroy in his idea, that Herodotus had drawn up what he has said of the crocodile from the information which he obtained from the priests of Memphis.

Herodotus is not the only ancient author who speaks of the services which the crocodile receives from the Trochilos. Aristotle also mentions it, only he mistakes the nature of the service which it performs. "When the crocodile," says he, "has his mouth open, the Trochilos flies in and *cleans his teeth*. The Trochilos finds there something that nourishes him. The crocodile feels the benefit he derives from him, and he never does any harm to the Trochilos. When he wishes him to fly away, he moves his neck, in order that he may not bite him."*

Pliny, speaking of the same fact, which he admits, like his predecessors, gives another explanation of the actions of the Trochilos. "The crocodile," he says, "opens his mouth as wide as he can, and it is deliciously affected by the pecking of the bird."† M. Geoffroy St. Hilaire enters upon discussions which we are not able to lay before our readers, respecting this sort of compact between the most dangerous of the lizards, and the very little bird which assists him; that is to say, upon the mutual harmony established between them,—a harmony so necessary, that the crocodile, incapable of sustaining alone the attacks of these dangerous enemies, would behold his race extinct if the Trochilos were to cease to give them his assistance.

It is proper to add, that the ties of good will which existed between the crocodile and the Trochilos were known to the remotest antiquity, and never, during succeeding ages, were they called in question. Herodotus, Aristotle, and, in later times, Pliny, Ælian, Philon, and many writers of the first ages of the Christian era, have described them without reserve, and without trying to modify them. Of late it has been otherwise. Modern authors have shrunk from the marvellous character of the phenomena. They either denied the fact itself, or they dis-

* Aristotle's Hist. Animal. lib. 9, cap. 6.

† Pliny, lib. 8, cap. 25.

figured it to render it explicable. They went so far as to make the Trochilos a bird of the size of the thrush, armed with scales and thorns upon its back, and upon the ends of its wings. Thus, in wishing to limit the power and the resources of nature, they were led even to ridicule a truth to which the immediate observation of facts has, in our own day, conducted us.

ROYAL VETERINARY COLLEGE CASES.

An aged Brown Stallion,

Belonging to B. Shedding, Esq., was admitted on the 22d of July, and the disease was stated to be Staggers.

The horse appeared very dull and drowsy, the head was kept hanging down low, and occasionally drawn to the off side.

Bleeding had been resorted to previous to his being brought to the College.

Three quarts of blood was directed to be taken from the palatine arteries, and six drachms of aloes, with two of calomel, to be given in a ball.

A seton was passed over the occipital bone, a rowel inserted in the belly, and a blister applied to the same part, with a mash diet.

23d. The head was directed to be kept constantly wetted with cold water, the rowel and seton to be dressed with turpentine ointment; three drachms of aloes, with six of turpentine, to be given in a ball.

24th. The application of the cold water was directed to be continued to the head, the rowel and seton dressed as before; three drachms of aloes, and four of turpentine, to be given in a ball.

No apparent amendment took place by the use of these remedies.

26th. The horse being nearly the same, the bleeding was directed to be repeated to the quantity of three quarts, half an ounce of aloes given in a ball, and the cold water to be continued.

27th. Three ounces of blistering ointment directed to be rubbed into the belly; three drachms of aloes, and four of turpentine, to be given in a ball.

28th. The cold water to be continued, and two drachms of tartarized antimony to be given in a ball.

29th. Tartarized antimony and aloes, of each three drachms, to be given in a ball.

30th. Aloes, six drachms, with three of tartarized antimony, directed

in a ball; and the bowels not being acted on, a clyster was given. The rowel and seton were still continued.

31st. A seton was passed over the *os frontis*, and the clysters repeated.

August 1st. A rowel was made in the chest and under the throat; clysters directed three times a day, and the following ball to be given twice in the day:—Aloes and turpentine, of each three drachms, calomel half a drachm.

2d. The rowels were directed to be dressed with turpentine ointment; and one ounce of turpentine, with six drachms of aloes, given in a ball. The clysters to be continued.

3d. One ounce of aloes was directed to be given in solution, two or three times a day, and the cold water to be continued.

4th. Six drachms of turpentine, with three of tartarized antimony, directed in a ball, and the clysters to be continued. Bowels very torpid.

5th. Three quarts of blood directed to be taken from the jugular vein, and an ounce of aloes given in a ball.

7th. Clysters directed to be repeated; six drachms of turpentine, with the same quantity of aloes, to be given in a ball, which operated freely the next day.

10th. Fifteen grains of croton, and half an ounce of ginger and turpentine, directed to be given in a ball.

11th. Twenty grains of croton, and one ounce of turpentine, ordered in a ball, and a clyster twice a day.

12th. A seton, about twelve inches in length, was passed down each cheek, and dressed with turpentine ointment.

The horse was obliged to be cast, in order to perform this operation.

Half a drachm of croton and calomel was ordered to be given in a ball.

13th. The same dose directed to be repeated.

14th. A drachm of croton was directed to be given in a ball, and half a pound of flour, made into balls, also to be given.

15th. The same quantity of flour ordered to be given, made into balls.

23d. The horse continued to get worse up to this time, when Mr. Coleman tied both the carotid arteries, having before *stated that there was too great determination of blood to the head;* and further, that the *cause*, in this instance, was not the *effect*.

After the operation, on the animal being got up, he fell down and rolled over; and in the course of the evening he died.

As the *post mortem* appearances of the brain and subjacent parts

in this case must necessarily be very considerably altered and deranged, from so desperate and barbarous an operation, as well as from the casting and second falling of the horse, it would be the height of folly to attempt to draw any conclusions from them; we have, therefore, to regret that we should, by these circumstances, be prevented from giving the sequel of the case. We consider it must have been a decided case of inflammation of the substance of the brain, and of the spinal chord. The constant stupor, heaviness, disinclination to move as well as eat, from the time of the animal's first admission; the frequent spasmodic drawing of the head on one side and upwards; the peculiar appearance of the eye, obstinate costiveness, and, ultimately, the great difficulty evinced in attempting to eat and swallow, when labouring under decreased action; and likewise the particular motion, as well as the difficulty, in moving the limbs;—all tend more fully to confirm and strengthen our opinion.

A Bay Gelding, aged 5,

Belonging to W. Fuller, Esq., was admitted on the 30th of July, with Farcy and Glanders.

Several farcy ulcers and buds were found about the neck and hind leg; a discharge from the near nostril, ulceration of the mucous membrane, and an enlargement of the sub-maxillary gland on the same side.

The animal showed no disposition to feed. Five drachms of sulphate of copper, and two of turpentine, were directed to be given in solution.

31st. A seton was passed in the face, and directed to be dressed daily with turpentine ointment.

August 1st. Five drachms of sulphate of copper to be given in solution.

2d. The dose to be repeated, and a rowel to be inserted in the off thigh.

8th. One ounce of powdered ginger, and half an ounce of turpentine, were directed to be given in a drench.

9th. Half an ounce of sulphate of copper, and one ounce of powdered ginger, to be given in a drink every day.

14th. One ounce of ginger directed to be given in a drench every day.

20th. The drench ordered to be omitted, and the seton removed.

On the 22d, the horse died, having got progressively worse from the time of admission.

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THE TERRIER.

Canis Terrarius.

THE name of this particular dog appears to be derived from entering the holes in the earth after its game, and from the minute description given of him in Oppian's* Poems, it is certain the breed has been long known in this island, and so far appears to be an original native of it.

Linnæus states, it was introduced upon the continent, so late as the reign of Frederic the First. And in all probability, this is the Vertagus or Tumbler of Raii, and some other writers. He says, it used stratagem in taking its prey; and some have gone so far as to say that he would tumble and play till it came near enough to seize; but however individual dogs may have been thus trained, nothing, it is certain, in any way exists, when untaught, to justify our considering it a natural quality, though some naturalists have erroneously concluded that a dog of such valuable and extraordinary properties was entirely lost.

The most distinct varieties are, the crooked-legged and strait-legged; their colours generally black, with tanned legs and muzzle, a spot of the same colour over each eye; though they are sometimes reddish fallow, or white and pied. The white kind have been in request of late years. The ears are short, some erect, others pendulous; these and part of the tail are usually cut off; some are rough and some smooth-haired: many sportsmen prefer the wire-haired, supposing them harder biters; but experience shows this is not always the case. Much variety in the terrier arises from his being a small dog, and often bred for mere fancy.

* Oppian lived in the days of Severus, A.D. 194.

' The terrier is querulous, fretful, and irascible—high-spirited and alert when brought into action; if he has not unsubdued perseverance like the bull-dog, he has rapidity of attack, managed with art, and sustained with spirit; it is not what he will bear, but what he will inflict; his action protects himself, and his bite carries death to his opponent; he dashes into the hole of the fox, drives him from its recesses, or tears him to pieces in his strong hold; and he forces the reluctant, stubborn badger into light. As his courage is great, so is his genius extensive: he will trace with the fox-hound, hunt with the beagle, find for the greyhound, or beat with the spaniel. Of wild cats, martens, polecats, weasels, and rats, he is the vigilant and determined enemy: he drives the otter from the rocky clefts on the banks of rivers, and declines not the combat in a new element.

In Scotland, the use of the terrier is to kill; and there they breed a fierce race: so great is their courage, they will attack and destroy the largest foxes, with which that country abounds; following them into the chasms in rocks, where they often perish together.

Although terriers are used for the barbarous and cruel purpose of baiting badgers, and fighting one with another, yet few will bear the severity of either: a cross of the bull-dog is often added to give them *stay*. The badger, though harmless in most respects, is a dreadful opponent to the terrier, nor could he be overcome but by the craftiness of the assailant, who attacks him under the breast and belly.

VETERINARY CERTIFICATES.

THE Certificate which is given to Veterinary students, after a few months' attendance at the College, is usually denominated a Diploma; but the public do not appear to be fully aware of the exact nature of this document, and, from some inquiries that have been made, we are called upon to explain it.

A Diploma is a document given under the sanction and authority of some chartered body, and conferring some privilege on the person who receives it. We shall, therefore, proceed to show in what way the Veterinary Certificate is obtained, and how far it corresponds with the above definition.

After three or four months' attendance at the Royal Veterinary College, where there is no Demonstrator or teacher of anatomy who does his duty, the students hear a few old musty and obsolete opinions

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read over by Mr. Coleman, learn a certain number of set answers to well-known questions, which they repeat a few times to Mr. C. in his parlour; when, after three or four months' attendance, if they answer well and truly, and behave humbly and condescendingly, they are mostly promised, or are certain to obtain, the certificate—as charity children at Easter receive a plum bun if they repeat their catechism well through Lent. This, then, may be considered as the drama; but now comes the after-piece, or farce: a secret meeting is held at *Cooper's Hotel*, in Conduit Street, or occasionally at Mr. Coleman's private house: formerly these farces were performed at the Freemasons' Tavern; but for some important reason, we presume, the pegs and wires were removed, as stated above, perhaps for the sake of putting a few shillings into "Old Charley's" pocket. Be this as it may, the practice is widely different from that laid down by the founders of the Institution, when a student was to undergo a PUBLIC examination after a three years' study, and receive an unassuming *certificate*, which, when so gained, would be really valuable, and a guarantee which the public might depend on. As it is, the worthless rag that a pupil now obtains, takes the imposing title of a *diploma;* though not gained by an open display of merit, as all diplomas ought to be; nor conferring a single privilege on its possessor, or placing him, in any respect, above the practical or self-taught Veterinarian. Not that we wish, by any means, to depreciate the merits of many who have studied at St. Pancras; far from it: but rather to compliment them, on owing to their own talents and exertions, that skill and knowledge which they very well know is not required to obtain a *certificate*.

ON THE

VENTILATION OF STABLES,

AND THE EFFECTS OF TEMPERATURE ON THE SKINS OF HORSES IN DIFFERENT STATES.

BY F. C. CHERRY, ESQ.,

Veterinary Surgeon in the Army.

THE breathing of a pure atmosphere is essential to the preservation of health in all animals.

With horses (the immediate object of this paper), so long as the means which nature has abundantly provided for resisting the effects

of heat and cold are not destroyed, great and sudden changes of temperature may take place without producing any injury.

But when these means are removed or destroyed, the skin is powerfully acted on by apparently slight causes; and, through the medium of the skin, the functions of health are frequently deranged to a considerable extent.

Among those means for equalizing the effects of temperature, which are considerably varied, the greasy scurf produced by the skin may be placed as the principal. The skin is continually producing this scurf; and as it approaches the surface of the coat, it becomes decomposed and is shaken off in the form of dust: the quantity retained depends on the length and state of the horse's coat or hair.

These will differ in degree in different horses, but all have coats in great measure proportioned in length to the degree of cold and wet to which the horse is exposed at the time of the coat being produced; and therefore horses that stand in stables have their new coat generally short and fine, in proportion to the warmth of the stable.

This fineness of coat is only preserved by avoiding long exposure to cold. Brightness is given to it by the currycomb, the brush, and the rubber; but these means, while they produce a bright, sleek, glossy coat, which, combined with other circumstances, indicate condition, necessarily render the horse so treated, obnoxious to a degree of cold that he might otherwise be exposed to with impunity. A due regulation of these means, according to circumstances, are essential towards constituting skill in stable management.

The stables in cavalry barracks have of late years been surrounded by holes of all sizes, for the alleged purpose of ventilating them; but there are no means provided for regulating the admission of air according to the state of the weather. They are, therefore, reduced to the condition of open sheds, and the horses standing in them are exposed to the great and sudden changes of temperature that are so frequent in this climate. The consequences are obvious to the eye of observation, in the miserable appearance of the horses thus confined in a situation so injuriously unnatural.

[To be continued.]

ON THE ANTIQUITY OF HUNTING.

THE origin of hunting may be traced to the earliest period of uncivilized society. Nature points out the tenants of the forest to the uncultivated savage as his prey, and necessity teaches him methods for their destruction; even when the arts of industry have provided man with other means of subsistence, and rendered him independent of the chase, the impulse which urged him to it remains, and it is then pursued as eagerly for pleasure as it was before for food. Thus we find it practised in every age and every clime; and, while other amusements yield to the innovations of luxury and the caprices of taste, the sports of the field alone remain unfettered by the laws of fashion, and maintain their empire as strongly over the polished generation of the nineteenth century, as over the rudest of their forefathers.

But, if the passion for the chase be universal, the modes in which it is indulged are various. At first, when it was followed for sustenance rather than for sport, little else was considered than the readiest manner of taking the largest quantity of game: for this purpose traps were contrived, and permanent enclosures were formed in the woods, through an opening into which the animals were driven when roused, and there caught. These led to the construction of gins and moveable snares; and it is not improbable that persons who resided on the banks of rivers attempted to catch fish in baskets, with the formation of which, it may be remarked that most savage nations are acquainted, and thus gradually discovered the method of making nets. Mention is, indeed, frequently made in the Scriptures of nets both for hunting and fishing:* but although it is clearly proved by some passages, that we are *there* to understand such as were knit, yet it is not improbable that gins, composed of cords, are often meant where the translators have introduced nets; and it, doubtless, is to them that we are to refer the metaphorical expressions in which "snares" are so often mentioned. They are, certainly, more ancient than nets; they were long used by barbarous nations, both in hunting and in war, and they are not even yet exploded. Without alluding to the minor engines con-

* "And I will make thee like the top of a rock. thou shalt be a place to spread nets upon."—*Ezekiel* xxvi. 14.

"And it shall come to pass, that the fishers shall stand upon it from Engedi even unto En-eglaim; they shall be a place to spread forth nets: their fish shall be according to their kinds, as the fish of the great sea, exceeding many."—*Ezekiel* lxvii. 10.

trived by poachers for the silent destruction of game, travellers who have visited South America tell us, that the Spaniard who ranges the plains of Buenos Ayres in pursuit of the wild cattle that feed there in immense droves, relies wholly for success upon the *lasso*,* which is merely a long cord with a noose at one end, the other being fastened to his saddle-bow, where the rope is coiled. Thus prepared, he chases the herd until he approaches sufficiently near to single one out, over the horns of which he throws the noose: his horse, trained for the purpose, instantly turns short round, and, making a full stand, thus opposes his entire strength to the captive; who, on his part, striving against the power by which he is held, draws in the opposite direction, and is thus, by his own efforts, confined to the spot until the hunter can despatch him.

Birds of prey were trained, at a very remote period, to assist in the destruction of game. But at what time the aid of the dog was first required for the same purpose, must be left to conjecture; we presume that the instinct of an animal that has ever lived in social habits with man, could neither have remained long undiscovered, nor, when discovered, unemployed. That they were used in a very early age, not merely singly, but in packs, in the modern manner, is evident from the splendid picture left by Virgil, of the hunting party of Dido and Æneas; and, indeed, the whole description approaches nearly to the present continental style, and, in some parts, bears a close resemblance to even an English stag hunt.

Many instances might be adduced to show the prevalence of hunting at a very distant era in the East; and the antiquity of the custom in Europe is sufficiently proved by an ancient legend, which is current among the villagers of Germany and the North of Italy, of an invisible hunter-sprite, who, from time immemorial, has been supposed unceasingly to chase some tyrannical Nimrod of old, whose cruelty occasioned his being transformed into a stag, and thus punished by the *lex talionis*. His halloo! and the baying of his hounds, are often imagined to resound among the mountains of Bohemia and the Tyrol; and many a peasant crosses himself, as he thinks he hears the echo of their din borne by the wind along the lonely recesses of those Alpine solitudes.

The subject of field sports being so extensive as to require separate illustrations of the various modes in which they are pursued in different countries, will furnish matter for future Numbers; but the following

* See No. 1, page 40.

items of the expenses of the royal fox hunt in the time of Edward I. will show something of the manner in which that diversion was practised in this country about five hundred years ago, and will afford matter of curious speculation to those accustomed to the numerously composed and splendidly attended packs of the present day:—

	£.	s.	d
"Paid to William de Foxhunte, the King's huntsman of foxes in divers forests and parks, for his own wages, and the wages of his two boys to take care of the dogs, from Nov. 20th, A. D. 1299, to Nov. 19th, A. D. 1300, for each, per day, twopence..	9	3	0
"Paid to the same, for the keep of twelve fox-dogs belonging to the King, for the same time; each dog, per day, one halfpenny	9	3	0
"Paid to the same, the expense of a horse to carry the nets, from Nov. 20th, to the last day of April, 163 days, at threepence per day..... ..	2	0	9
"Paid to the same, the expense of a horse, from September 1st, on which day the hunting began, *after the dead season*, to Nov. 19th, at threepence per day	1	0	0
"Paid to William de Blatherwyck, huntsman of the King's fox-dogs, for winter-shoes for himself and his two boys; to each of them two shillings and fourpence.....	0	7	0
"Paid to the same, for his habit during the present year	0	13	4
"Paid to the same, for habits for his two boys, ten shillings each	1	0	0
	£23	7	1

It will be seen from the above, that our ancestors enjoyed the amusement of fox-hunting on foot, for the charge for a horse is expressly to carry the nets; and, considering the vast disproportion between the value of money at that period and the present, we shall find that the expense was not so inconsiderable as it may at first appear. The account is translated from a document in the department of the Comptroller of the Wardrobe to King Edward I., and is dated in the twenty-eighth year of that monarch's reign. It would appear

that William de Blatherwyck and William de Foxhunte were synonymous, and the latter, we may presume to have been only a name derived from the office. In the original he is styled *Will o' de Foxhunte.*

THE VETERINARY SOCIETY.

At the Meeting of this Society, held on the 2d of September, a very interesting paper on the subject of "Grease in Horses" was discussed; the impropriety of washing the legs, the great importance of diuretics, and the difference between the effects of the various astringent local applications usually employed in this disease, were points particularly insisted on, and much good observation was elicited from different gentlemen.

The subject was handed over to the next evening, when it underwent further consideration.

The President, Mr. Cherry, at the last meeting, presented the cranium of a horse, of which we are favoured with the following account:—

"A diseased cranium, wherein exostosis has extended from the frontal suture over the frontal, temporal, and malar bones, to the articulatory surfaces of the temporal bone, the condyle and upper part of the lower jaw also partake of the disease.

The subject from which this specimen was taken, received a blow from some unknown cause; the integuments were wounded, and a small portion of bone considerably depressed; the attendant symptoms were, a pronation of the head, stupor, disinclination to motion, and loss of appetite. The trephine was applied to an uninjured part of the bone, and the depressed portion elevated. A remission of symptoms ensued, and for some time the case appeared to be doing well. A difficulty in masticating, however, commenced, and continued gradually to increase until the lower jaw nearly fixed. For some time prior to death, the only sustenance that could be taken was sloppy mashes."

ON MODERATE FIRING,

THROUGH THE MEDIUM OF BACON RIND, FOR THE TREATMENT OF OSSEOUS TUMOURS.

BY M. GELLE,

Assistant Professor at the School of Alfort.

M. DUTROSNE, Veterinarian at Liseux, published, in 1809 and 1810, in the "Dictionary of Agriculture," a mode of Firing in cases of windgalls, capped hocks, &c., and particularly in cases of exostosis, splents, curbs, spavins, &c.

This means, which consists in taking the rind of bacon with a small portion of the fat, and placing it upon the part to be fired, the grease touching the hair, and to draw over the rind a red hot iron, of which the application is continued several times, and at short intervals, until the bacon is nearly melted away, leaving no blemish; an incalculable advantage, as it sets aside the difficulty usually raised by owners of horses, when Veterinarians propose firing.

Many practitioners have employed this means with different success; some of them even with such unfortunate results, that they have renounced it for ever. It is, then, the object of these lines to settle the opinion respecting this powerful mode of treatment.

Struck with the advantage of such an operation, I proposed as soon as it became known to me to put it in use. I shall now only mention three facts, out of twelve or fourteen successful operations which I have performed in this manner, and which have always reassured me.

First Case.—The 13th of August, 1810, I was consulted respecting a mule five months old, that had a spavin on the near hind leg, in consequence of a kick. The swelling was hard, insensible, and about half the size of a large walnut. I shaved off the hair, and ordered frictions of strong mercurial ointment, which were continued until the 7th of the following October, without any useful effect. I then decided to employ moderate firing, after the manner of M. Dutrosne: I proposed it to the owner as a new measure, and a matter of experiment, and he consented to it; this was my first trial. The animal being cast, and conveniently fixed, I placed upon the exostosis a piece of bacon rind about five inches square, taken from the region of the sides where it is thickest, and covered with a layer of fat of the thickness of a line: this I fixed to my liking with packthread, and held it with my left hand. I had put two firing irons in the fire, large and almond-

shaped; I notice all these circumstances, because it it necessary that the hog's skin should be of a certain thickness for the fire to penetrate it easily and gradually, and that the melting of the grease, which is the vehicle of the heat, carried to the part, take place slowly. My cautery, scarcely a cherry red, was drawn lightly at intervals over the surface of the rind, until it was almost wholly gone and melted away, but not burnt through, to an extent at least twice that of the tumour. There supervened the day after the operation, which lasted at least an hour, a slight swelling of the part, and some days after, the epidermis rose and came away in scales, without any falling off of the hair. A month or six weeks after, the animal was sold perfectly sound.

This success decided me to employ this means whenever I had occasion. I have cited this operation to prove that I was one of the first who tried this proceeding. Passing over in silence the others, I arrive at two recent operations; the animals without doubt still exist, and Veterinarians who are upon those stations can verify them.

Second Case.—The 1st September, 1827, M. le Vicomte de Suleau, then préfet a Bourbon Vendée, and now préfet of Metz, showed me a very fine grey mare, of the Arabian race, lame in consequence of a tumour in the right shoulder.

There was exostosis on the middle of the spinous apophysis of the scapula, with a suppurating fistula. This tumour was of the size of a goose's egg, the animal very lame, pain intense, and heat extreme around the swelling. On probing the ulcer I found it four inches in depth, and running upwards, following the spine of the scapula. I proposed to open the fistula, and apply the cautery to the bottom. This measure alarmed M. de Suleau, and I suspended its execution. I ordered emollient lotions of warm decoction of mallows, followed by the application of unguentum populum. The lameness diminished considerably; on the 11th, the fistula was cicatrized, the exostosis still large, and rather painful. Frictions of mercurial ointment to the 19th, at which time the mare flinched a little only when trotting. On the 20th, after having thrown and secured her, I applied the mediate fire by means of a large piece of thick bacon rind, upon which I had left the thickness of a line of fat: the operation was long, and performed with care; it lasted two hours, for I always observed an interval between the application of each cautery. Two days after, I rubbed in equal parts of mercurial ointment and common ointment, and in twenty days the absorption of this exostosis was completed without leaving the least trace of fire.

Third Case.—In the month of October, 1827, a mare belonging

to M. B———, Curate of Petit Bourg, received a kick on the lateral external part of the right hock. There was considerable swelling, hard and very painful, which caused great lameness. Bleeding from the vena saphena, emollient lotions, and applications of common ointment. The inflammation disappeared, but there remained an osseous tumour, insensible, and not occasioning lameness: a month thus passed away. Frictions of mercurial ointment during five days, followed by the application of the mediate fire through the rind of bacon, performed with the above precautions. Three or four days after, we recommenced the rubbing in of mercurial mixed with common ointment, which was continued for eight days; and twenty-five or thirty days after the operation, all swelling had disappeared. There was in this case a slight degree of inflammation, and peeling off of the epidermis with the loss of some hair, the cauterization having been prolonged on account of the size of the tumour; but there remained no trace of the fire.

Since my arrival at the Veterinary School, I have explained this method to the pupils; and many of them having expressed to me a desire to see the operation performed, I made an experiment in the latter end of May, 1828, upon a horse destined for the instruction of the students. The firing was performed on the outside of the shank; the piece of bacon rind, taken from near the flank, was small and badly covered with fat; besides which, one of the cauterizing irons was too large, on which account the operation was too quickly performed: I used it only twenty minutes, which was sufficient completely to scorch up the rind. After this there was considerable heat of the part, although the hair did not appear scorched. However, I represented to the pupils that the fire had been too brisk, and that the skin was burnt; and in fact, two days after, the vesicles appeared with inflammation and discharge, and about twelve days after there was a considerable scar.

In order to repair this mistake, and satisfy the curiosity of the pupils, I tried it a second time, on the inside of the off hind leg of the same horse,—using this time a piece of thick rind, covered with fat about a line in thickness. I provided myself with an almond shaped flat cautery, and took all the customary precautions: the operation lasted an hour and half, after which there was a proper degree of heat about the part. The second day there appeared a slight swelling, on the fourth a serous discharge, and finally, the horse being killed eight days after, the part when dissected appeared as follows:—

The epidermis came away easily, and drew some hairs with it; a

serous discharge was exuded from the surface of the skin, and it had the appearance of a covering of pus. The skin was red, spread over with little ulcers, resulting from the removal of the epidermis; when cut and dissected, it possessed all its vitality: the true skin and the cellular membrane were tumified, and of a red colour, of which the swelling was mingled with that of the skin. These evidences of local excitement showed the action of the firing: it is proper to say, that the irritation, and particularly the ulceration, arose in consequence of the horse being left loose in his stable, where he had rubbed and bitten the cauterized part. But this last operation, performed with caution, had perfectly succeeded.

I have entered into these details, because I know that some Veterinarians have tried this means, and that accidents have occurred with them, like that detailed in the first experiment, which have thrown discredit on this manner of firing; but it was only on those occasions when they have employed the bacon rind too small, and too thinly covered with fat; also the cauteries have been too large, and too hot, and the operations hastily performed. It results, then, from that which I have stated, that in order for this operation to succeed, it is necessary that the ossification shall not have been of long standing, nor totally devoid of sensibility; that we excite the part, by means of mercurial frictions, some days before the operation; and that, to facilitate absorption, it is needful to continue the frictions afterwards. The rind ought to be thick, and covered with a layer of fat a line (an eighth of an inch) in thickness, so that the heat may penetrate gradually, in order that the operation may be longer; also that the firing irons should be warmed to less than a cherry red temperature. They should be small, and passed lightly by intervals, describing a circular turn, over a space larger than the part to be cauterized.

Finally, we ought to allow a short time between the application of each cautery, in such manner that the fat, gradually melted, may penetrate easily and insensibly with the heat which it conveys into the part.

The operation, however long, is only terminated when the rind and fat is almost entirely melted, without being destroyed or pierced; because, then, the cautery comes in contact with the naked skin, and scorches it.

After the operation, the part should be inflamed without being burnt; and the animal ought to be tied with two straps, to prevent his biting himself. With all these precautions, one is nearly always sure of succeeding, at least my experience has constantly proved it so. I think

we may have the same success with windgalls, capped hocks, &c.; but, then, it may be necessary to substitute the ointment of hydriodate of potash for the mercurial,—an ointment which, moreover, has alone succeeded with me in some cases of this sort.

THE VETERINARY ART IN FRANCE.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

IN addressing to you a letter on French Veterinary affairs, I cannot forbear expressing my admiration and approval of the bold style in which you have pointed out the defects, and exposed the misgovernment, of our own Veterinary College; which exposure and criticism, however unpleasant to a few official characters and their dependents, must ultimately prove, and has already proved, of infinite service to the profession at large. Such as myself in particular,—who, though owing nothing to that Institution, neither bowing to its power nor acknowledging its doctrines, have yet been led to consider it as a place for teaching and improvement, which, if all that remains uncontradicted in your Journal is true, it can scarcely be called,—are under especial obligations to you for enlightening their minds on this subject. The facts to which you have given publicity have, indeed, had such an effect upon my present opinion, that I am thankful I received not an education in such a school, or under such masters.

With so slight a respect for Colleges and Professors, perhaps the following remarks may be thought impertinent or presumptuous by some of your readers; if *you* think so, I must leave whatever information this letter may contain, to be expressed in your own better language.

I find the Veterinary art in this country is taught, practised, and estimated, on a footing totally different from what it holds in England. The ground of this difference, it appears to me, is to be found in the interference of the government,—producing effects which have not been sufficiently insisted on, that I am aware of, by any of our writers who have visited France.

The Institution at Alfort, which they modestly term the *Veterinary School*, is of such extent as to be an object of curiosity with many strangers who visit Paris. It is situated about four miles from the city, in an open, airy situation; and having been formerly a convent,

there is a large piece of ground attached. A high stone wall encloses the buildings; and that part which was, in former times, the garden, is now a spacious, overgrown thicket, intersected by silent walks, the resort of studious pupils, many of whom are to be seen with books in their hands, wandering along the avenues. The buildings are irregularly disposed over a considerable space of ground, and some part of them much dilapidated: the Museum has been lately repaired, and it is in contemplation to erect a new theatre and dissecting-room. There are apartments for a large number—(I know not how many)—of resident pupils, who are regularly sent from the various departments of the provinces, and are boarded, lodged, and clothed, at a sum, I understood, something under 40*l.* per annum. They wear a regular uniform, blue or grey, with flat caps, and have, in every respect, the appearance of a set of grown-up school-boys, being subject to a strict set of house rules.

Foreigners, at least English, are not admitted as residents, but only to attend the lectures and practice of the Institution. Three years is the regular period of study and probation, but many attend longer than that time, and none ever obtain a diploma in less. There are four or five Professors, besides Assistant-professors, each presiding over a separate branch of instruction; the advantages and necessity of which are too apparent to require comment.

On my second visit to Alfort, I was accompanied by my uncle, Mr. Bracy Clark, and we were received with distinguished politeness by M. Vatel, Professor of Clinical Medicine, who conducted us over the establishment. In every part of their arrangements, it is evident that their grand object is to *teach* the Veterinary art—to be a National School for *that* purpose,—and not to *practise* it with a view to emolument, as Messrs. Coleman and Sewell do. Here they are not anxious for subscribers, nor to vend cheap medicines; and I understand that they even receive no fees for examining horses previous to purchase. Such liberality might be expected to bring them a host of customers; but it must be recollected that an opinion given *gratis*, however good it may be, is seldom very highly valued. One disadvantage, and a very great one to the pupils, attends their system; it confines their opportunities of seeing practice, and combined with the inconvenient distance of four miles from Paris, is a chief cause of the scarcity of patients in the Infirmary: at this time there are very few, and none remarkably interesting. It struck me that an establishment near, or in the city, possessing the same facilities for study, with greater scope for practice, would be likely to succeed. At

present, it is certain that the Professors are not called upon for much exertion, although there is a considerable degree of emulation among them for professional reputation, which is honourable to them, and must be useful to the science.

There is a large forge, with six or seven well used fires; but I was quite surprized to learn that it was but seldom they shod a live horse, only when occasion required in the Infirmary, and never for the public—which is confirmed by the fact, that a *mareschal expért*, or common shoeing smith, flourishes almost under their walls.

They consume a large number of subjects in the course of their minute dissections, and the practice is to fix the dead foot, by means of a kind of cramp, to the edge of a manger divided into boxes, which contain all the tools, where the *élève* pares it and shoes it with perfect ease and safety. All the pupils are obliged to turn a shoe, and obtain proficiency in this operation, before they are trusted to a living horse, or can receive their diploma,—a rule which I take the liberty of suggesting might be adopted with advantage at the Royal College of St. Pancras. As a Veterinary surgeon, I have been in situations, and so must others in the course of practice, where, without this acquisition, not even Mr. Coleman's plenary certificate—if I had happened to possess it—would have saved me from the disgrace of being tutored by an ignorant smith, or the pain of finding my measures thwarted by his malevolence. To compensate for the want of horse practice, the "Chenil," or hospital for dogs, is nearly full; but I should imagine the kennels might be better arranged: they are all in one large apartment, where the howling and gnashing of teeth is such as might waken the dead, and cannot be very likely to accelerate their recovery. There is a flock of sheep kept for experiment: two of them were confined, having been inoculated with the rabid poison.

There are, usually, several blood stallions; but, at this time, only one, the others having been sent to the departments—I also saw some cattle, and believe there is no branch of Veterinary science in which the French schools are not accustomed practically to engage.

Lectures on Chemistry are regularly delivered; and for the study of Medical Botany, there is a neatly cultivated botanic garden, where we observed several pupils engaged. Even agriculture is not neglected, nor medical jurisprudence; but it is difficult to say what these professions amount to: the French are fond of high pretensions, and all they teach on such subjects may probably be summed up in a few words. There is one accompaniment so truly French, that it ought not, by any means, to be omitted;—this is, a large open space

in the midst of the shrubbery where the pupils, we were told, enjoy the recreation of dancing. The Museum I have heard highly spoken of, and regret that, being under repair, they would not permit us to see it, because it was in disorder, but apprehend there was some other reason for denying us. All the stables I saw were large and roomy, only ventilated by high windows. Of their practice it is impossible to speak from such slight observation; but there is one point certain,—that press of business cannot be pleaded as any excuse for want of attention. Galled withers appear to be rather common, and are occasioned, without doubt, by the practice of using such large awkward collars, which as if in order to be more oppressive, are often covered with a dyed sheepskin spreading all over the shoulders, forming a useless, uncouth mass, larger than the shaggy hump of a buffalo, to which animal their short-jointed Norman horses bear, when so accoutred, a considerable resemblance.

The policy of the French Professors, and the whole character and economy of their College, appears to me to be explained by a view of its constitution. Government, I am informed, make an annual grant to the united schools of Paris, Lyons, and Toulouse, of above 200,000 francs. Thus the Professors receive fixed salaries, and are expected, of course, to furnish proofs of their activity and of the progress of the science, to the nation: and if no great steps have been really made in knowledge, they must dish up a few old facts in a new dress, and present it as a "Traité sur la Morve," or a "Mémoire sur une Epizootie," and it is found to answer the purpose equally well.

The rage for publishing is incredible; and it is absolutely appalling to look at their Veterinary libraries and catalogues. But the length of this letter will preclude its insertion, if I do not speedily close.

If this is favourably received, there are other points on which I shall attempt to address you.

Your obedient servant,

Paris, Aug. 17. CHARLES CLARK.

[This letter was too late for the last Number; but we shall be happy to hear again from Mr. C. Clark.—ED.]

ON THE

TREATMENT OF HORSES' FEET.

BY F. C. CHERRY, ESQ.,

Veterinary Surgeon in the Army.

THE horse's foot, and the best methods of shoeing, though always important considerations, have become much more so of late years from the improved state of the roads of this country, which allows indulgence in the inclination felt by most Englishmen, whether following the avocations of business, or in the pursuit of pleasure, to travel with rapidity.

Nailing a piece of iron to a living substance, must at all times do violence to the functions of nature; for, although that substance, namely, the hoof, is insensible, yet it is elastic, and connected with parts highly sensible, which are changing their relative situation in regard to each other, at every step the horse makes. In bad roads, where the feet sink into the soil, and the motion is slow, the effect of this harsh treatment will scarcely be perceptible; while on the hard plane surface of good roads, where the shoe scarcely makes an impression, with its general concomitant, the battering of the feet by fast travelling, it is experienced in the greatest degree.

These are truisms, though perhaps not always remembered; but as shoes of some sort are indispensably necessary, we see them assume a variety of forms, some of them ridiculous enough; still the object in each case is, or ought to be, to protect the foot from wear with as little injury to its organization as possible.

Osmer, an author with a great fund of good sense, and whose works merit re-printing, has said, "No particular method of shoeing, whatsoever, can take place, and this will happen from the different nature, form, and texture of horses' feet." Agreeing with this opinion, and therefore believing that a rigid adherence to uniformity must often produce mischief, I shall not enlarge on the subjects of "Principles," "Systems," and "Methods;" which have all had their particular advocates, though but few of them have answered the purpose for which they were promulgated. Those who most assiduously attend to the "nature, form, and texture of a horse's feet," and also to his action, will invariably be the best shoers; for even the only undisputed principle, namely, that the shoe must be nailed to the hoof, admits

of modifications as to the particular parts into which the nails are to be driven.

There is, indeed, a point in practice, namely, that of leaving a space between the shoe and the sole, which has almost grown into a principle; and we every day hear, that "the sole will not bear to be pressed upon." This, as far as it is meant that the sole and shoe must not be in contact, is undoubtedly true; but then it is not the whole truth.

The present Professor of the Veterinary College has repeated, at page 33 of his book on Shoeing, the well-known fact that "no animal, or any part of an animal, can be preserved in health, where the natural functions are perverted;" but with the physiological fact, that every part of an animal, to continue healthy, must perform its functions, so strongly impressed on his mind, and so much insisted on by him on all occasions, he seems, in his zeal to enforce the necessity of pressure to the frog, to have totally overlooked the sole, notwithstanding it forms about two-thirds of the ground surface of the foot, and is naturally so much exposed.

His arguments in regard to the foot appear to be founded on the supposition, that the horse in a state of nature, moves on a plane and unyielding surface, in which case the whole weight would unquestionably be supported by the prominent parts of the foot, which, in general, are the hoof and frog; the sole being concave, would, in that case, certainly not press on the earth, that is, supposing the surface to be plane and unyielding.

But this supposition of a plane hard surface, is at variance with truth; and at every step made by the horse in a natural state, the sole is either pressed upon by the convexities of the earth's surface, when it is hard, or by the convex parts of the foot, entering into and passing that surface when it is soft, till the concave parts are pressed on, and prevent the further descent into the earth of the whole foot.

All the writers of any note, since Professor COLEMAN'S publication, already noticed, have followed his opinions, except Mr. GOODWIN, who differs with him in many respects; and certainly the very excellent state of the horse's feet at Carlton Palace, under his direction, tend more completely to show the goodness of his mode of treatment, than the most elaborately-written account could do, unsupported by such proof. In a book lately published by him, he refers directly to the particular point I wish to bring under consideration, in these words:—"When a horse is in a state of nature, and on a

yielding soil, the crust penetrates the earth, and a considerable portion of weight is consequently borne on the frog and sole, which shows that the crust and laminæ in this state have not so much to support as when the animal is shod. There is, consequently, when shod, a double task imposed upon the crust and laminæ." The truth of these remarks is evident; and if the ideas of the author of them were more fully developed, I am inclined to believe they would be completely in unison with mine; but as he has passed over this subject in so cursory a manner, I shall proceed to consider it more at length.

Adverting to the irregular and yielding surface of the earth in a natural state, and to the large proportion of the ground-surface of the foot, occupied by the sole, it is evident that the latter must be exposed to, and receive much pressure; therefore, any treatment which deprives it of pressure, must, according to true physiological principles, induce disease.

The ear is accustomed to the term "pressure," though *support* is equally, or perhaps more, correct. The sole contributes towards the support of the superincumbent parts, and the earth supports the sole, partly by immediate contact, and partly by supporting the hoof to which the sole is attached.

I do not mean to state that the sole sustains the whole weight of the limb, or even an equal weight with the hoof; still it sustains weight to a given extent, and to deprive it of the support it naturally receives from the earth, deranges greatly the mechanism of the whole foot.

That the sensible laminæ elongate, and the sole descends every time the foot sustains the weight of the animal, I believe to be true; if, therefore, the shoe and the sole are allowed to be in contact, the sole cannot descend, but is in reality exposed to pressure from the whole superincumbent weight: the horny sole below, being in contact with the shoe, becomes a fixed point, and the sensible sole is then liable to be crushed, or at any rate to be bruised and injured by the descending bone from above.

[To be continued.]

OBSERVATIONS ON THE COLOUR AND MARKS OF HORSES.

[Continued from page 389.]

I SHALL now proceed to say something concerning the marks and colours of horses, seeing so much of the beauty of a horse depends upon his being well marked and of a good colour; and also because his good or bad properties are sometimes denoted from his being of this or that colour, or his having such and such marks. Though indeed these signatures are not always to be depended on; for daily experience teaches us, that however true these observations may prove in the main, yet we often meet with good horses that are very ill-marked and of bad colours, and sometimes very bad horses, that have almost all the beauty that colour and marks can give them. However, it is necessary for those who have any concern among horses to be more or less acquainted with such things.

The chief and principal colours are the bay, the chesnut, the black, the brown, the dapple grey, and the sorrel. For the white is for the most part originally grey, and turns sooner or later into white, as his limbs happen to be lighter or darker; for the light grey colts that grow the soonest white, have generally little or no dark mixture about their joints.

The bays, perhaps so called from their resembling the colour of dry bay leaves, are of various degrees, from the lightest bay to the dark, that approaches the nearest to the brown, but always more shining and gay. The bright bay is an exceeding beautiful colour, because a bright bay horse has often a reddish dash with a gilded aspect, his mane and tail black, with a black or dark list down his back. Also the middle colours of bay have often the black list, with black mane and tail. And the dark bays have almost always their knees and pasterns black; and we meet with several sorts of bays, that have their whole limbs black, from their knees and hocks downwards. The bays that have no list down their backs are, for the most part, black over their reins, which goes off by an imperceptible gradation from dark to light towards the belly and flanks. Some of these incline to a brown, and are more or less dappled. The bay is one of the best colours; and horses of all the different kinds of bays are commonly good, unless when accidents happen to spoil them while they are colts.

The true chesnut is generally of one colour, without any shade or gradation: his hairs are often compounded of three colours, the root light, the middle dark, and the points of a pale brown, which makes

an agreeable mixture, and differ from the sorrel in this, that the mixture of the chesnut is not so distinct and apparent to the eye, especially at any distance, because the hairs of the sorrel are often of several colours intermixed, wherein the red or fox colour generally predominate. Many chesnut horses have their manes and tails very near the colour of their bodies; many of them have but little white about their legs, and frequently no mark, whereas the sorrel have generally a good deal of white about their legs and pasterns: many of the sorrels have a large blaze, and not a few are bald all over the face, while their manes and tails are sandy, or of a flaxen colour.

Both the chesnut and sorrel are of degrees darker and lighter, and I have seen some chesnut horses with manes and tails as light as the sorrel, and the hair all over their bodies approaching towards a fallow colour, only with a sort of the chesnut stain. There are many good and beautiful horses, both of the chesnut and sorrel; but the latter, when they have much white about their limbs, are apt to be more faulty in their feet than those that are more uniform in colour, and they are also apt to be more tender in constitution. When a chesnut horse happens to be bald or party coloured, or to have white legs, which may be owing to some extraordinary affection in the dam, or some improper mixture in the breed, such horses are not very agreeable, for chesnuts are the least tainted in their colour of any other, and most people prefer chesnut to the sorrel, both in point of beauty and goodness.

The brown is a colour not altogether so beautiful as the bay or chesnut: horses have also their degrees, some being light and some very dark. They have almost all black manes and tails, and often their joints are black, though not so shining as the bays, but rusty. Almost all brown horses grow gradually lighter towards their bellies and flanks, and many are light about their muzzles.

The most beautiful are those that happen to be finely dappled, for the plain brown are esteemed more ordinary. Many of them are coarse, but strong and serviceable, fit for draught, for burden, or for the wars.

Black horses are very beautiful, especially when they are of a jet shining black and well marked, and have not too much white. For as a great deal of white, especially when it spreads round their eyes, and a great way up their legs, adds nothing to their beauty, so neither does it add any thing to their goodness. The English black horses have more white than the black horses of any other country. I have known many fine Spanish horses, some Arabs, and one Egyptian (the only one I ever saw of that country), all without any white, and the

Dutch and Danish horses seldom have much; though a star or blaze, and sometimes a white muzzle, and one or more of the feet tipped with white, always looks beautiful and lively, and is no diminution to the goodness of a horse, but most think an addition, from an opinion that horses without mark are generally stubborn and ill-conditioned. Some black horses have brown muzzles, and brownish on their flanks and between their hips. These are often called black browns, as they are not a perfect black, but approach near to the colour of a tawney black hound; some are of a lighter colour about their muzzles, and are called mealy-mouthed horses; and of this sort are the pigeon-eyed horses, which have a white circle round their eye-lids, and their fundaments often white. But after all, I have found many of the English black horses, especially of the largest breed, not so hardy as the bays and chesnuts, &c. Those that partake most of the brown are generally the strongest in constitution.

The greys are so diversified in colour, and so common and well known, that it would be a needless curiosity to describe them particularly. The dappled grey are reckoned the best, and are to be found in most parts of the world. The silver-grey is extremely beautiful, and many of them very good. The iron-grey, with light mane and tail, have also a gay appearance, but are not accounted the most hardy. The light plain grey and the pigeon coloured grey, soon change and turn white, as all other greys do in process of time. The dappled grey keeps his first colour the longest, which is a sign of strength and durableness. Some of them I have known pretty old before they have changed, and never so perfectly as not to retain some vestiges of their native colour. The nutmeg-grey, where the dapples and other mixture participates of the bay or chesnut, is not only exceedingly beautiful, but most of the nutmeg-coloured horses turn out very hardy and good.

The roans are a mixture of various colours, wherein the white predominates. Many of them turn out much better than they appear to be. Some are exceeding good, and those that have a mixture of the bay or nutmeg colour, are sometimes tolerably handsome and beautiful. The roans have a general resemblance to each other, and yet a very great diversity. Some are so strewed over with white, as if they were powdered or dusted with flour, and some as if milk had been spilt all over their buttocks: others as if they were powdered with soot or lamp-black, and some as if their faces had been dipped in a bag of soot. Many of them are good road horses and hardy, which has encouraged this breed more of late than usual; and I have seen some roans from abroad that have looked very well in furniture.

The strawberry approaches pretty near the roan in some things, but in most resembles the sorrel, being often marked with white on his face and legs, which we seldom observe perfect without mixture, on the roan. The bay mixture in the strawberry is also of the highest colour, and makes him look as if he was tinctured with claret; some of this sort are both handsome and good, but are not very common.

The fallow colour, the dun, and the cream colour, have all one common resemblance, and most of them have a list down their backs, with their manes and tails black. The mouse-dun and lead colour are the most ordinary; and because the list down their backs goes off with a soft imperceptible shade like what we observe on the back of an eel, are from thence called eel-backed; few people choose dun horses, though I have known horses of this colour prove useful in the hands of country people. The fallow and cream coloured horses are many of them both good and beautiful. Those are generally the best that, besides their manes and tales, have muzzles and their joints black or chesnut, and their colour a little inclined to chesnut; though I have known some with manes and tails of a silver colour, not only extremely beautiful, but very good and useful. The fallow and tawny duns are often shaded with a darker colour, and sometimes faintly dappled, and look very fine in a set, when they happen to be well matched.

There are many other colours of horses produced out of the great diversity that are to be met with everywhere, which would be endless and of no great use to describe, as the peach colour, starling, and flea-bitten, &c., and all these participate more or less of some of the colours already mentioned. I shall only further take notice, that sometimes horses turn out very finely spotted, some like leopards or tigers, some like deer, with black, red, yellow, or other gay colours; and when these happen also to be comely in shape and appearance, they are generally reserved as presents for princes, or other great men; though perhaps more for their singularity than any superior excellency in them. Others again are so disagreeably diversified in their colours, and in such a remarkable manner, that no gentleman would care to be seen upon their backs, or even suffer his servants to make use of them; wherefore such are usually condemned to the meanest drudgery, and no properties they can have will be sufficient to recommend them to any other use.

ON THE MARKS.

As for marks, I need say but little concerning them, after what I have already hinted, in describing the colours. Some have reckoned

horses to be lucky or unlucky, as they happen to be this or that way marked; but I believe few persons in our times are so superstitious as to regard such things. Others have been so curious as to lay much stress upon them, and to denote all the good or ill qualities of a horse from his marks; but as I can say little of this from experience, I shall, therefore, only take notice, that a horse without marks has always a deadness in his aspect. A star is the most common of all marks, and where that is wanting, it is often supplied with an artificial one. When the white descends pretty broad towards the nose, it is called a blaze; when it descends into a smaller line, it is called snip; and when most of a horse's face is white, he is then said to be bald. All these marks are beautiful when they are not to extremes; for a very large star is not reckoned so beautiful as one that is of a moderate size; neither is that baldness that spreads over a horse's whole face and cheeks any ways becoming, as it gives him the looks of an ox, and such horses are often plain headed. When the white of a horse's face is divided in the middle, or any other part, or when a blaze or snip runs away to one side it looks somewhat disagreeable; though, perhaps, it may be no diminution to a horse's goodness. Some black horses have their stars, or blazes, fringed round with a mixture of black hairs, which looks very well, only such horses (as I have observed already) are apt soon to grow grey-faced and look old, as are some of the browns. But when the bays and sorrels have their stars or blazes fringed, it is generally with their own colour, or lighter, and seldom has that effect.

Now as to the marks upon the feet and legs of horses, they usually correspond with the marks on their faces. Bald horses have generally a good deal of white about their legs, and often all four are white, which in them is not unbecoming. Horses with large blazes have often all their four feet white also.

But a horse that has no mark on his face, or but a small one, never looks well with white legs, especially when the white rises above the fetlock. On the other hand, a bald horse, or one that has a blaze without any of his feet white, is but ill marked; and therefore a horse always looks best, when there is this correspondence and agreement in the marks. A horse that has his near feet both before and behind white, and his off feet without any white, is but indifferently marked. The same where the marks are only on the off feet, without any white on the near feet. Some dislike horses for being traversed or cross marked, *viz.* the near foot before, and the off foot behind white, or on the contrary, when the off foot before, and the near foot behind are only

white. These are usually judged to be the best marked, that have only the near foot behind white, or both feet behind white, or when the near foot before, and both the hind feet are white, especially when at the same time a horse has a large radiated star, or a small blaze, on his face. When the white about the feet are indented with black, or any other colour towards the coronet, these feet are thought to be generally good, and when the coronet is spotted like ermine, the mark is so much the better. But where a horse's pasterns, hoofs, and all his four legs are white, especially when the white rises above the knees or hocks, it looks ugly, and a horse thus marked has too much of pye-bald, which are seldom fit for gentlemen's use.

The feather is another kind of distinction which we often observe, especially on stone horses, and such geldings have short hair, and are finely coated. Some are of a round figure, and some long and narrow, in the true penniform shape, or like an ear of barley. The round are often on the forehead, sometimes on the brisket and shoulders, and look like embroidery. Those on the neck lie immediately under the mane, and run down towards the withers. When the feather happens on both sides the neck, the mark is reckoned exceedingly good and beautiful. Sometimes feathers run down the fore arms, and sometimes on the thigh, and run towards the dock; and they may be observed on several other parts of a horse. But whenever they happen to be, they are almost always signs of goodness, and some of them are exceedingly beautiful.

[To be continued.]

THE LION OF SOUTH AFRICA.

[Continued from page 420.]

Poor Gert Schepers, a Vee Boor of the Cradock District, was less fortunate in an encounter with a South African lion. Gert was out hunting in company with a neighbour,—whose name, as he is yet alive, and has, perhaps, been sufficiently punished, I shall not make more notorious. Coming to a fountain, surrounded, as is common, with tall reeds and rushes, Gert handed his gun to his comrade, and alighted to search for water. But he no sooner approached the fountain, than an enormous lion started up close at his side, and seized him by the left arm. The man, though taken by surprise, stood stock still without struggling,—aware that the least attempt to escape would ensure his

instant destruction. The animal also remained motionless, holding fast the boor's arm in his fangs, but without biting it severely,—and shutting his eyes at the same time, as if he could not withstand the countenance of his victim. As they stood in this position, Gert, collecting his presence of mind, began to beckon to his comrade to advance and shoot the lion in the forehead. This might have been easily effected, as the animal not only continued still with closed eyes, but Gert's body concealed from his notice any object advancing in front of him. But the fellow was a vile poltroon, and in place of complying with his friend's directions, or making any other attempt to save him, he began cautiously to retreat to the top of a neighbouring rock. Gert continued earnestly to beckon for assistance for a long time,—the lion continuing perfectly quiet. And the lion-hunters affirm, that if he had but persevered a little longer, the animal would have at length relaxed his hold and left him uninjured. Such cases, at least, they maintain have occasionally occurred. But Gert, indignant at the pusillanimity of his comrade, and losing patience with the lion, at last drew his knife (a weapon which every back-country colonist wears sheathed at his side), and with the utmost force of his right arm, plunged it into the animal's breast. The thrust was a deadly one, for Gert was a bold and powerful man; but it did not prove effectual in time to save his own life; for the enraged savage, striving to grapple with him, and held at arm's-length by the utmost efforts of Gert's strength and desperation, so dreadfully lacerated the breast and arms of the unfortunate man with his talons, that in a few minutes the veins and muscles were torn to shreds, and his bare bones laid open. The lion fell at last from loss of blood, and Gert fell along with him. The cowardly companion, who had witnessed this fearful struggle from the rock, now, however, took courage to advance, and succeeded in carrying his mangled friend to the nearest house; where such surgical aid as the neighbours could give was immediately but vainly applied. Poor Gert expired on the third day after, of a locked jaw.—The particulars of this story were related to me by my late neighbour, old Wentzel Koetzer, of the Tarka, and by other respectable farmers in that vicinity, to whom both Schepers and his friend were well known.

The circumstances of the following anecdote, which was related to me in the Landdrost's house, at Beaufort in the Nieuwveld, are very similar to the preceding, though not equally tragical. A boor of that district, of the name of De Clerque, one day riding over his farm, had alighted in a difficult pass, and was leading his horse through the long grass, when a lion suddenly rose up before him at a few yard's distance.

He had in his hand only a light fowling piece, loaded with slugs; and hoping that the beast would give way, he stood still and confronted him (the plan universally recommended in such emergencies); but the lion, on the contrary, advancing and crouching to spring, he found himself under the necessity of firing. He took a hurried aim at the forehead, but the slugs lodged in the breast, and did not prove instantly mortal. The furious animal sprung forward, and seizing De Clerque on either side with his talons, bit at the same time his arm almost in two, as he mechanically thrust it forward to save his face. In this position he held him a few seconds, till his strength failing from loss of blood, the lion tumbled over, dragging the boor along with him in a dying embrace. De Clerque, however, escaped without any fatal injury, and had recovered, and visited Beaufort a few days before I was there, in 1822.

The hero of the following story is a Hottentot of the Agter Sneuwberg. I have forgot his name, but he was alive two years ago, when the story was related to me at Cradock, in that neighbourhood. This man was out hunting, and perceiving a buck (antelope) feeding among some bushes, he approached in a creeping posture, and had rested his gun over an ant-hill to take a steady aim, when observing that the creature's attention was suddenly and peculiarly excited by some object near him, he looked up, and perceived with horror that an enormous lion was at that instant creeping forward and ready to spring upon himself. Before he could change his posture, and direct his aim upon this antagonist, the savage beast bounded forward, seized him with his talons, and crushed his left hand, as he endeavoured to guard him off with it, between his monstrous jaws. In this extremity the Hottentot had the presence of mind to turn the muzzle of the gun, which he still held in his right hand, into the lion's mouth, and then drawing the trigger, shot him dead through the brain. He lost his hand, but happily escaped without further injury.

Other curious particulars respecting the habits of the lion, and illustrated by anecdotes of his ferocity or forbearance, equally interesting and well authenticated, may form the substance of a future article. For the present, the reader is probably as well pleased to quit the subject as the writer has sometimes been himself, after a three hour's palaver in broken Dutch—seated, perhaps, under a large mimosa, after night fall, in the midst of the Great Karroo—and looking round suspiciously now and then into the shade, to see that no shaggy monster, with flaming eyes, was prowling round and overhearing the unfriendly tales we were telling of his kinsfolks.—I shall close this paper with

an anecdote of Lucas van Vuuren, a Vee Boor, residing on the late Colonel Graham's farm of Lyndoch, and for two years my next neighbour at the Bavian's River. It shows that even our Colonial lions, when pressed for a breakfast, will sometimes forget their usual respect for "Christian men," and break through their general rule of "let-a-be for let-a-be."—Lucas was riding across the open plains, near the Little Fish River, one morning about day-break, and observing a lion at a distance, he endeavoured to avoid him by making a wide circuit. There were thousands of springboks scattered over the extensive flats; but the lion, from the open nature of the country, had probably been unsuccessful in hunting. Lucas soon perceived at least that he was not disposed to let *him* pass without further parlance, and that he was rapidly approaching to the encounter; and being without his *roer*, and otherwise little inclined to any closer acquaintance, he turned off at right angles—laid the sambok freely to his horse's flank—and galloped for life. But it was too late. The horse was fagged and bore a heavy man on his back; the lion was fresh and furious with hunger, and came down upon him like a thunderbolt. In a few seconds he overtook, and springing up behind Lucas, brought horse and man in an instant to the ground. Luckily the boor was unhurt, and the lion was too eager in worrying the horse, to pay any immediate attention to the rider. Hardly knowing himself how he escaped, he contrived to scramble out of the fray, and made a clean pair of heels of it till he reached the nearest house. Lucas, who gave me the details of this adventure himself, made no observations on it as being any way remarkable, except in the circumstance of the lion's audacity in pursuing a "Christian man," without provocation, in open day. But what chiefly vexed him in the affair was the loss of the *saddle*. He returned next day with a party of friends to search for it and take vengeance on his feline foe. But both the lion and saddle had disappeared, and nothing could be found but the horse's clean picked bones. Lucas said he could excuse the *schelm* for killing the horse, as he had allowed himself to get away, but the felonious abstraction of the saddle (for which, as Lucas gravely observed, he could have no possible use) raised his spleen mightily, and called down a shower of curses whenever he told the story of this hairbreadth escape.

[To be continued.]

ON THE CROCODILES OF THE GANGES.

BY C. ABEL, M. D., F. R. S.

On Tuesday, March 23d, 1824, I received at Barrackpore, through the kindnsss of my friend, Dr. Wallich, a large crocodile, measuring eighteen feet from the extremity of the nose to the end of the tail, which had been brought to him at the botanic garden by some fishermen, who had taken it in the river. It had been dead several days when it reached me, and had apparently been destroyed by a spear driven into its neck at the junction of its head with the cervical vertebræ, so as to separate the brain from the spinal marrow. This animal proved to be the Cummeer of the natives. In consequence of its very putrid state, I was unable to examine its internal structure, but made such observations on its external characters, as enabled me to compare it with its described congeners.

M. Cuvier divides the genus *Crocodilus* into three subgenera, which he names—1st, *Les Gavials*;—2d, *Les Crocodiles proprement dits*;—3d *Les Caimans* (Alligator). Of these the *gavial*, or *gurryal*, of the natives,—the *Lacerta Gangetica* of Gmelin,—has been long known as the inhabitant of the rivers of India, and is distinguished by its elongated head. Of the true crocodiles, the *Crocodilus biporcatus* is said by Cuvier to be the inhabitant of the islands and probably of the two peninsulas of India. The *caiman*, or alligator, has not, according to Cuvier, been found except in America. The *Crocodilus biporcatus* is described by Cuvier as having "eight ranges of oval plates along the back, and two prominent projections on the top of its muzzle." In the cummeer brought to Barrackpore, the arrangement of the principal plates were in four rows, or rather two double rows, occupying the middle of the back, with two other less prominent than these, one on each side; two more traces of rows were also visible, but only traceable, in small scattered prominences. Of the projections on the top of the nose or muzzle (deux aretes saillantes sur le haut du museau) there was no other appearance than two not very striking elevations, or knobs above the eyes, although between these and the end of the upper jaw the surface of the nose was rough with mammillated prominences. The slight differences which I have here pointed out would not of themselves, perhaps, suffice to make any specific distinction between the cummeer and *Crocodilus biporatus*, but I have also to mention a character which affects even the genus of the crocodile as characterized by Cuvier.

This naturalist states that the whole family of crocodiles have five toes before, and four behind, of which the three internal ones alone on each foot are armed with claws. Thus far the cummeer agrees with his description. But he further adds, that all the toes of crocodiles are more or less united by membranes, or webs, as has also been stated by Lacepede and others; and adds that the crocodile, properly so called, in this respect has the character of the *gavial*, in which, he says, the hind feet are palmated to the extremity of the toes. This character is wanting in the cummeer, in which the inner toe of the hind and two inner toes of the fore feet are perfectly free, not being connected by any membrane. If this peculiarity be of constant occurrence, it makes the cummeer not only a new and undescribed species, but it also vitiates the description of the family and of the genus of crocodiles heretofore given. It would be premature, however, to decide on this question, till other opportunities of examining the animal shall have occurred, and it will have been sufficient to have pointed out the peculiarity to observers in this country.

It should be observed of the cummeer, however, that his teeth correspond with those of the true crocodiles, in the mode in which those of the under are received into the upper jaw. "The teeth," says Cuvier, "of the crocodiles, properly so called, are unequal; the fourth tooth on each side passes into a fissure, and not into a hole of the upper jaw. In the gavials the teeth are nearly equal, although in other respects they agree with those of the crocodile. In the *caiman*, or alligator, on the contrary, the teeth are unequal, but the fourth tooth of the lower jaw on each side is received into a hole, and not into a fissure."

In the cummeer there are thirty-six teeth in the upper jaw, and thirty in the lower. These are all in the form of blunt cones, excepting the fourth in the lower jaw, which are rather more pointed, and might be compared to the canine teeth of large carnivorous animals. The two front teeth of the lower jaw pass into holes which perforate the upper jaw; the second and third are received into small holes, and the fourth into deep fissures visible on each side when the mouth is closed; all the other teeth of the lower jaw enter small holes. The upper teeth, on the contrary, are all received into fissures on the outside of the lower jaw, with the exception of the four hindmost, which are very small, and received into indentations of the lower jaw.

Although the putrescency of the body of the animal prevented any deliberate examination of its internal structure, the contents of its stomach were exposed, and found to consist of the remains of a woman,

of a whole cat, of the remains of a dog and sheep, of several rings, and of the separated parts of the common bangles worn by the native women.—*Edin. Jour. Science.*

ACCOUNT OF THE WHITE ELEPHANT OF SIAM.

BY GEORGE FINLAYSON, ESQ.

We were first conducted to the stables of the white elephants, which, being held in great veneration by the Siamese, are kept within the inner enclosure of the palace, and have habitations allotted to them quite close to those of the King himself.

Of white elephants there are at the present time no fewer than five in the possession of the King, whence we may infer that this variety is far less rare than we are accustomed to believe,—at least that is so in the farther Peninsula of India. It has, however, seldom happened that so many have been collected at one period, and the present is regarded as auspicious, in consequence of an event so unexpected, and so much desired. A white elephant is still reckoned as beyond all value. Every effort is made to take them, when they are by chance discovered; and the subjects of the King can perform no more gratifying service than that of securing them. They, and indeed all elephants, are the property of the King only.

The appellation white, as applied to the elephants, must be received with some degree of limitation. The animal is in fact an occasional variety, of less frequent occurrence indeed, but in every respect analogous to what occurs in other orders of animals, and, amongst the rest, in the human species. They are, correctly speaking, albinos, and are possessed of all the peculiarities of that abnormal production; but of these *white* elephants, it was remarkable that the organ of sight was to all appearance natural and sound, in no way intolerant of light, readily accommodating itself to the degrees of light and shade, and capable of being steadily directed to objects at the will of the animal. In short, similar in all respects to that of the common elephant, with the exception of the iris, which was of a pure white colour. In this respect they resembled all the quadrupedal albinos that I had hitherto seen, as those among horses, cows, rabbits. This circumstance I should scarcely have thought worth the noticing, were it not that I shall have occasion to mention in the sequel an instance of an animal of the albino

kind, possessed of the peculiar eye of the human albino. In one or two of the elephants, the colour was strictly white; and in all of them the iris was of that colour, as well as the margins of the eyelids. In the rest the colour had a cast of pink in it. The hairs upon the body were for the most part yellowish, but much more scanty, finer, and shorter, than in other elephants; the strong hairs of the tail were darker, but still of a yellowish colour. In none did the colour and texture of the skin appear entirely healthy. In some the cuticular texture of the legs was interspersed with glandular knots, which gave a deformed appearance to these members. In others the skin of the body was uncommonly dry, while the natural wrinkles were unusually large, secreted an acid-like fluid, and seemed ready to burst out into disease. These beasts were all of a small size, but in excellent condition, and one of them was even handsome. They were treated with the greatest attention, each having several keepers attached to him. Fresh cut grass was placed in abundance by their side. They stood on a large boarded platform, kept clean; a white cloth was spread before them; and while we were present, they were fed with sliced sugar-cane and branches of plantains.

In the same place we observed rather a fine-looking elephant, but a small one, which appeared to me to be a greater object of curiosity than any of the others. This animal was covered all over with black spots, about the size of a pea, upon a white base. It is not unusual to observe a partial degree of this spotted appearance in the elephant of Bengal, as on the forehead and trunk of the animal, but in this instance the skin was entirely covered with them.

The greatest regard is entertained in Siam for the white elephant. He who discovers one is regarded as the most fortunate of mortals. The event is of that importance, that it may be said to form an era in the annals of the nation. The fortunate discoverer is rewarded with a silver crown, and with a grant of land equal in extent to the space of country at which the elephant's cry can be heard. He and his family to the third generation are exempted from all sorts of servitude, and their land from taxation.—*Mission to Siam and Hue, &c.* 1821-2. London, 1826. pp. 151-154.

ON THE

COMPARATIVE INFLUENCE OF THE MALE AND FEMALE IN BREEDING.

BY M. GODINE, JUN.

[Continued from p. 377.]

An ordinary cow, and a bull without horns, will produce a calf resembling the male in appearance and character, without horns and that particular and unusual prominence of the transverse apophysis of the frontal bone. The milk of the female from this cross proves also the influence of the father: it has the peculiar qualities of the hornless breed, less abundant, containing less whey, but more cream and curd. They have banished the malady from the cow-shed of M. Deboullenois, at Valenton, by changing the bull, without altering their treatment.

In the sheep and goat, it is still more difficult to deny the all-powerful influence of the male. A he-goat of Thibet, and a common female, gives a produce bearing the particular mark of his breed: I have met with several instances.

In the Merino sheep this truth does not require demonstration. By the introduction of the Spanish ram into our common flock, divers breeds of sheep, more or less distinct, have become, throughout France, a single race, which has exactly the same appearance, and differ only in height. Climate, pasturage, or food, will modify the character of the animal: they would dwindle, the peculiarities of the race would even be lost, if they were not preserved by repeated crosses with males of select breeds. I will give some remarkable examples:—

All intelligent men who have observed flocks of Merinos, especially those of Rambouillet, where the purity of the breed cannot be doubted, have remarked, that at the end of fifteen or eighteen years the pure sheep have lost the primitive beauty of their wool.

Gilbert, whom science and the schools yet mourn, was devoted, during the Revolution, to save the flocks of Merinos of Rambouillet and of Croissy. It is this learned professor who has chiefly contributed to spread the desire for breeding Merinos in France: he first observed this tendency to degeneration produced by the climate, and he had the noble candour to relate his motives in his course, at Alfort: he felt the necessity of going to Spain to choose there a new stock, in order to

renew, in the flock at Rambouillet, those original qualities which the climate had already sensibly weakened: it is to this useful journey, undertaken with this noble intention, to which we owe his premature death. The new colony Gilbert conducted to Rambouillet and to Perpignan, has effaced that remarkable tendency to degenerate in the primitive flock, which, before this last introduction, had lost that fineness and elasticity which distinguished the Merinos in Spain.

The old flock at Rambouillet were of a larger size, the wool was become longer, and these advantages had been acquired by the loss of an essential quality—its strength and fineness; but the introduction of the Gilbert colony into the original flock quickly destroyed, in the succeeding breeds, this tendency to degeneration. If we still find some remains of it, it is among those got by rams of the first extraction in the flock: by their long fleece, and by their higher and longer carcass, the small and smooth face, we easily recognise the individuals which are degenerated by the influence of the soil and climate.

I found, in 1810, 1811, and 1812, the same tendency at Rambouillet; and, at this moment, this tendency is very evident: the connoisseurs who visit this royal establishment, and enlightened purchasers who come there to procure rams, are aware of this notable change. It is, then, time to return a second time to the measures of Gilbert, and carefully to select a new and pure stock from Spain, if they wish to preserve, in France, this valuable establishment; and as Spain has lost an immense number of this breed, it is necessary that the selection should be confided to a good judge.

I have many other facts to establish this influence of food and climate; but I shall only advance two, which appear to me to be decisive.

Monsieur de Beyens, late under Prefect of Oudnard, took advantage, in 1806, of a journey to Paris, to visit Rambouillet and Alfort. He wished to establish a colony of Merinos upon his vast domains, situated in that part of Holland which is near the coast, and where the pastures are very wet and strong,—two conditions opposed to the preservation of the health of sheep, and particularly of Merinos. I preserved him from a great deal of loss which would have followed: I advised him to make a trial, and to buy only twelve ewes and six rams of the pure breed; of which half were to be got at Rambouillet, and the remainder at Alfort. I caused him to put round the neck of each of them a collar, with his name and number. I took from the left shoulder a lock of wool, which was classed and marked, indicating the age and quality of each animal. Every year, at the shearing, M

Beyens sent me,—up to 1812,—a sample of wool, with a precise statement of the animal to which it belonged. These samples, classed yearly, showed proof of degeneration of the fleece to such a degree, that it would have been believed that I had reversed the order of a scale of improvement in a half-bred flock in the second year: the wool had lost its fineness and elasticity—it was long—it had none of its natural undulations—each bit was straight, and grown one half larger; and those spiral turns which were observed in the sample chosen previous to the departure of the flock from France, were no longer to be seen. In fine, if I had not known the integrity and, above all, the honesty of M. Beyens, I should have thought he had deceived me.

But at the end of three or four years, these Merinos and their produce had lost, in the marshes in Holland, a great part of the beauty and character of the Merino fleece; they had acquired new properties, that is to say, an extraordinary size and a colossal height: a four year old ram, which, on leaving Alfort, weighed 160 pounds, had acquired, in Holland, the second year of his removal, the exact weight of three hundred and twelve pounds.

I was deceived in my expectation in respect to the following point—namely, the diseases common to sheep which feed on marshes; the rot did not show itself in this colony; and I believe this fact should be explained, by the properties which the sea water gives to pastures situated on these shores.

This explanation has appeared to me more satisfactory, inasmuch as the rot has not attacked any flock on the borders of the sea. The Abbé Carlier, who has made long and good observations upon different flocks, has recorded this remark in his treatise upon Sheep.

Proprietor of a large flock of Merinos, I have very often experienced the effects of pasturage and of climate upon the fleece: a number of Merinos, removed only to a little distance, but quitting a low soil, abandoned and humid, for a dry pasture and on a chalky bottom, sensibly improves the wool in respect to fineness; at the same time that it loses in length and weight, and *vice versâ*. I have had a flock at Valenton, from which I have sent detachments to Picardy, to Brie, to Ville-Parisis, to Coupvrai, and Berri, and in the Gatinais country, where, after remaining a year, the same animals presented very sensible and apparent gradations, either to the naked eye, or through a microscope, in the quality and quantity of their fleeces.

I draw, then, from these demonstrable facts, the following consequences:—the soil, or, if you will, the food and climate, tend, without ceasing, to neutralize the properties of exotic breeds—to impress

upon them, more or less, the properties inherent in that soil. In fine, to overcome this tendency of climate and food, it is necessary, then, to renew, without ceasing, from the original flock, and select the most robust males, in order to overpower these effects.

Behold the whole secret of the English; it is to these well-combined introductions of original blood, drawn always from the most pure sources, that they owe the superiority of all the races of domestic animals which exist in their country. We have no other means; let us imitate them;—let us have their perseverance, their sagacity, and we shall arrive at the same results.

What is, then, the part of the female in the great act of reproduction of the species? I say, that when the male predominates, by his vigour, his constitution, and his health, she is limited, in some measure, to perform the same office that the earth does for vegetables; she is commonly nothing more than a receptacle, in which are deposited the seeds of generation, where the evolution of form is in accordance to the quality and abundance of fluid; but the germs bear not less the special and proper characters of the male who has imprinted his stamp upon them. Such is, at least, the opinion which has arisen from my researches and experiments on this subject.

If I am correct in the other kinds of domestic animals, this same influence of the male over the produce is not less clearly shown.

A bitch, lined by several dogs of different kinds, brings forth puppies which resemble each, singly, the father that begot them. These facts are so numerous, that I shall dispense with citing them. I have seen, very often, the same litter of a hound bitch with smooth hair, consisting of individuals wholly different from each other—some curs, some barbets, some bull-dogs, &c.

It is in this place, however, that I ought to mention an opposite fact,—that of a bitch lined by a dog weakened by disease, gave a litter in all respects resembling the mother, and none of them the father. The cross of a Gatineise sow, long and slender, with an English boar, has constantly produced pigs like the father, but higher.

I have made the same observation with crossings of pigs of Siam and Surinam with a French sow,—the product constantly taking the character and appearance of the boar.

The cat tribe is not less included in these observations. The cat of Chartreux, and that of Angola, matched with a common cat, produces young like the male.

When we descend to another order of animals—the oviperous tribe, —the veil which hides the operations of Nature appears to rise before

us, in order to expose her mysterious works. How are we to deny the all-powerful influence of the male in the species of domestic birds, when we consider that a pullet which has not been impregnated by the cock has not the power to procreate, although she produces eggs which contain the liquid rudiments of an individual species of his kind? This pullet, which is ready to lay, is, for a second, in contact with the cock;—all the preparatory operations of nature is changed. If the male is of the same sort, the incubated egg reproduces the same species; but if the cock is of a different kind, the instant this egg is ready to emerge, and by the effect alone of a little drop of liquid, a real metamorphosis is effected—a true transformation. A Russian cock with a French hen gives Russian chickens. The little English bantam cock has the same effect with the common hen; it suffices to bring a new kind of cock upon a farm, entirely to change the chicken yard. These facts are so common, that they need to be only simply set forth.

The same influence of the male extends from one species to another, when conformity of organization permits reproduction which gives birth to mules: we know what varieties of birds are given by the canary pairing with the cock linnet, and the bullfinch with the yellow-hammer. I will finish with a less common cross of two kinds of birds—the pheasant with our common hen: a white hen paired with a cock pheasant gives a product like the mule which is called, in Pheasantry, the Coucard.

I shall terminate this picture of the influence of the male by a last fact, drawn from the flock of experiment at Alfort, which I have had under my direction during five following years, and which have furnished me with very important observations. The voyage of Captain Baudin to Africa furnished me with four rams and four ewes from the Cape of Good Hope. We may say that this is quite a distinct species; they no more resemble the common sheep than the goat:—his harsh voice, instead of bleating; a true mane of long hair; red curls form his fleece, instead of wool; his tail large, dragging, and of great length and thickness. The fleece in the male has a scent approaching to that of the he goat. This fleece is floating, as in that of the goat of Angola, felted and steeped with a liquid excretion, which is not like the usual oiliness of sheep's wool. His gait is languid and very peculiar. Such are the distinctive characters of this race.

An African ram was put to twelve ewes,—the most unlike him of all the flock at Alfort, by the fineness and beauty of their fleeces. At

the lambing I obtained twelve lambs so resembling the ram that I was obliged to brand them with an indelible mark, in order to know them from the lambs of pure African blood. Two African ewes, crossed by a Merino ram, gave two lambs which, in form, voice, and fineness of wool, bore no resemblance hardly to their mothers.

I have repeated this experiment for six years, and always with the same results, at least that with an African ram. I should have transformed the flock into sheep of the Cape of Good Hope, if I had bred only from their half-bred produce.

After such facts, known to the Professors and the pupils of Alfort at this period, it is thought proper obstinately to refuse to open their eyes to the light, and to deny that the male exercises an all-powerful influence over his productions; that the female here takes a weak part, less evident, and much more obscure than the male with which she is coupled. From which I conclude, secondarily, that the choice of the male is of the highest importance for the preservation, improvement, and renewal of species; that in the same manner as he impresses upon his produce the stamp of his perfections, he transmits to them also his vices, his constitutional habits, and diseases; from which it follows, that his choice ought to be made with particular care and discernment.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

MAY I beg to trespass for advice under the following circumstances? But I shall first give you a short history of myself, to assist you in the better understanding the matter, and thereby enable you to give a more correct opinion.

On one of those delightfully clear frosty mornings, which one occasionally meets with in the month of December, and in a charming valley watered—but I fear, if I continue in this style, that you will commit me and my history to the shades of the Minerva Press; so I shall merely say, that I have never been brought up to any business, or worked at any trade, but have from my boyhood been occupied in snaring hares, fishing, hunting, and increasing,—without having the fear either of Malthus or the parish officers before my eyes,—the population of his Majesty's dominions. I also served some years as an ensign in a regiment of militia, in which situation I very much distinguished

myself by my success amongst that portion of the fair sex usually employed as domestics.

I have heard that there is at present a vacancy at the East India House for an Inspector of Chronometers, and I wish to know from you if I am likely to succeed in an application for such situation. I am able, if a chronometer and a common watch are exhibited to me, to distinguish which is which, and therefore I cannot be altogether ignorant of the subject: you will, perhaps, object that this is not sufficient knowledge to enable me to distinguish the comparative merits of different chronometers; and you will, perhaps, add that the Honourable East India Company's Directors are extremely particular in ascertaining the qualifications of candidates for situations in their service. To the first portion of your reply, I beg to say that I should invariably, and without hesitation, give the preference to *one* of them, as being in every way far superior, and (as I have always had considerable skill in gambling) I know, that if there were but *two*, it would be equal main and chance, but that I should be as correct as Broad or Webster would have been, provided always that one was superior to the other; I trust I have now satisfied *you*, as I have no doubt I shall the Directors, of my fitness. Now, for the latter part of your reply, look to the numbers that have been lately appointed Veterinary surgeons to the regiments of cavalry in their service, nine tenths of whom know as much about a horse as a horse knows about them; and some of whom have admitted to myself that they were never on the back of a horse in their lives: but, Sir, I have another fact, and an astounding, nay a damning, fact it is, and, as Professor Coleman most happily expresses it, what is a physiological fact now, was a physiological fact ten thousand years ago, and will be a physiological fact ten thousand years to come. Some caviller may, perhaps, say, when they hear my fact, that my fact is not a physiological fact:—let them say so; but what is much worse, I think I hear you say that I am taking up rather too much of your paper, so here is my fact for you,—"The Directors of the Honourable Company of Merchants trading to the East Indies, have appointed Mr. William Sewell (not Swel) inspector," of what?—why, what? "inspector of MEDICINES!"

Now, Sir, I have been told by those who know Mr. Sewell perfectly well, that he can without much hesitation, distinguish aloes from blue vitriol; but that, beyond this, his knowledge of medicines is precisely on a par with my knowledge of chronometers. Taking this circumstance as a precedent, I have ventured thus boldly to address you.

I now, Sir, take leave of you, *ad eternum;* only adding, that should your opinion be unfavourable to my hopes, I shall heartily despise it.

I am, Sir, your most obedient,

AN OLD SOLDIER.

10*th Sept.* 1828.

Since our opinion is so indifferent to this veteran, it shall be spoken with freedom. We think his qualifications not precisely of the right stamp to entitle him to the birth he aspires to; but with such an example as Mr. Sewell before his eyes, we bid him not despair of success. Our correspondent does not appear to be aware that inspectors, like Professors' assistants, are not always selected for their knowledge of what they *profess*, but for their littleness of mind, ignorance, and meanness.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

CAN you, or any of your readers, inform me whether or not there exists any remedy for the cure of wen in a dog's neck? I have now in my kennel four greyhound whelps, about two months old, three of which are affected with an enlargement of the thyroid glands. As they are very well bred dogs, I am particularly anxious to try some plan before I make use of the one generally adopted—namely, hanging. Should you notice this you will oblige

Your obedient Servant and constant Reader,

G. E.

Sept. 17*th*, 1828.

[We recommend G. E. to carefully try the effect of Iodine for the disease in his dogs.—ED.]

To the Editor of the FARRIER *and* NATURALIST.

SIR,

As you appear to be a bit of a knowing one, and well acquainted with the affairs of our College, and with the *whys* and *wherefores*, you will, perhaps, take the trouble to give me a little information on the following subject, and apprize me as to the correctness of such

proceedings; and whether consistent with the College Rules and Regulations: likewise as to the competency and fitness of the *Performer*.

Having now been here for a good many months, I may, I think, fairly consider myself as an old pupil, when compared with some who have lately passed; and as such, I have been long in the habit of hearing of our *clerk's** intention of giving lectures on Veterinary Materia Medica, Chemistry, &c.; when, lo! after the mountain's being in labour for many months, forth come the lectures, not publicly and open to all the students, but to a *select* few of the *sanctum sanctorum* and Morton society; and for the attendance at which, and for the supposed instruction in Pharmacy,—

> "By this sprig of a druggist so bold,
> Who came so late from the Boro' of old,—

they get a certificate with his *signature*, as under the authority and sanction of the Royal Veterinary College. Now, Sir, your opinion as to whether this young man be a fit and proper person to lecture on such important subjects, and whether such certificates be allowed to be given, and whether they are sanctioned by the Governors, will much oblige your constant Reader,

AN OLD PUPIL.

Royal Veterinary College,
Sept. 5th, 1828.

This is a subject to which our attention has been called through more than one or two channels, we shall, therefore, make a few further observations for the information of some other correspondent.

No person is authorized to lecture at the Veterinary College, and consequently not to give any certificate, but the person styled the Professor, and it is a part of his duty to instruct the pupils in Materia Medica, Chemistry, &c.; and so well aware of the fact is Mr. Coleman, that he absolutely made an arrangement,† admitting the necessity of a particular provision for that purpose, with Messrs. Cherry and Goodwin, when they were exerting themselves to improve and render the Veterinary profession more respectable; but from which, in his usual shuffling and evasive manner, he completely bolted.

It appeared at the late annual meeting of Governors, that this said clerk had applied, under the sanction of Mr. Coleman, for leave to lecture at the College; and these gentlemen taking it for granted, we

* Mr. W. J. T. Morton.

† See No. 8, page 355.

presume, that any person recommended by their immaculate Professor must be desirable, did not object to the clerk's lecturing (at five-guineas a course, the same as Mr. Sewell's, we suppose;) but clogged their consent with a condition that he should undergo an examination before the Medical Examining Committee. This Mr. Morton has not thought proper to comply with,—we shall not inquire why? and he is, therefore, prevented from lecturing publicly. But though shunning a regular examination, it seems "this sprig of a druggist so bold" is not to be put down; but *privately* lectures, and gives certificates of attendance in defiance of rule and order,—knowing, perhaps, that this assurance will be overlooked by the ruling powers in consideration of his secret services.

It should be mentioned, as an addition to the qualifications of this College *clerk* for a lecturer on Animal Medicine, that he is by virtue of his office prevented from being a Veterinary surgeon.

RARE INSECTS.

Furia Infernalis and Meggar.

THERE exists in Livonia, a very rare insect, which is not met with in more northern countries, and whose existence was for a long time considered doubtful. It is the *Furia Infernalis*, described by Linnæus in the *Noveaux Mémoires de l'Academie d' Upsal*, in Sweden.

This insect is so small that it is very difficult to distinguish it by the naked eye. In warm weather it descends from the atmosphere upon the inhabitants, and its sting produces a swelling, which, unless a proper remedy is applied, proves mortal.

During the hay harvest, other insects named *Meggar*, occasion great injury both to men and beasts. They are of the size of a grain of sand. At sun-set they appear in great numbers, descend in a perpendicular line, pierce the strongest linen, and cause an itching and pustules, which, if scratched, become dangerous. Cattle, which breathe these insects, are attacked with swellings in the throat, which destroy them, unless promptly relieved. They are cured by a fumigation from flax, which occasions a violent cough.

APHIDES.

THIS is a most, if not the most, numerous class of insects in this country. There are several species of them; but, as they receive their colour from the quality of the plant on which they feed, naturalists have made many more species than there really are. On beans and alder they are called blacks; on pease, shrimps; on hops they are called lice; and on roses, vines, and peach-trees, they are called "the green fly." In spring and summer they are viviparous; in autumn oviparous: are produced by animalcular generation, hence prodigiously prolific; the males, and some generations of females, winged, so that they spread over the face of the country in dry seasons with astonishing rapidity. Their food seems to be a saccharine extract from the plant, as their excrement is the honey-dew, of which, in some seasons, the greater part of the sweet store of our apiaries is composed:—hence may be identified the plants which yield or contain the greatest share of sugar, and which is indicated by the quantity of honey-dew on their leaves: from the lime and maple trees it sometimes even drops from the points of the leaves to the ground! The aphis are the natural prey of many other insects, particularly the beetle tribe, as well as of the soft-billed birds (Motacilla), and are constantly attended by ants, flies, and wasps, collecting their sweets. They injure and deform the leaves and tender shoots of plants, so as sometimes to kill them entirely. They are easily killed and extirpated by any acrid fumigation, particularly that of tobacco: water impregnated with lime, or soft soap, is also recommended as an aphidefuge.

INNOCUOUS NATURE OF PUTRID ANIMAL EXHALATIONS.

A COMMITTEE have been engaged in France in examining the circumstances relative to the knacker's operations. His business consists in killing old worn-out horses, and turning every part of their body to account. The most singular results which the committee have obtained relate to the innocuous nature of the exhalations arising from the putrifying matter; everybody examined, agreed that they were offensive and disgusting, but no one that they were unwholesome; on the contrary, they appeared to conduce to health. All the men, women, and children, concerned in the works of this kind, had unvarying health, and were

remarkably well in appearance, and strong in body. The workmen commonly attained old age, and were generally free from the usual infirmities which accompany it. Sixty, seventy, and even eighty, were common ages. Persons who live close to the places, or go there daily, share these advantages with the workmen. During the time that an epidemic fever was in full force at two neighbouring places, not one of the workmen in the establishment at Montfaucon was effected by it. It did not appear that it was only the men who were habituated to the works that were thus favoured; for when, from press of business, new workmen were taken on, they did not suffer in health from the exhalations.

In confirmation of the above observations similar cases are quoted: above 200 exhumations are made yearly at Paris, about three or four months after death; not a single case of injury to the workmen has been observed. M. Labarraque has observed, that the catgut makers, who live in a continually putrid atmosphere, arising from macerating intestines, enjoy remarkable health. Similar circumstances were remarked at the exhumations of the Cimetière des Innocens.

Whatever disease the horse may have died of, or been killed for, the workmen have no fear, adopt no precautions, and run no risk. Sometimes, when strangers are present, they pretend to be careful; but upon close inquiry, laugh at such notions. They handle diseased as well as healthy parts *always with impunity*. They frequently cut themselves, but the wounds heal with the greatest facility, and their best remedy is to put a slice of the flesh about the wound.

On making inquiry of those to whom the horse-skins were sent, and who, besides, having to handle them when very putrescent, were more exposed to effects from diseases in the skin, they learnt that these men, also, from experience, had no fear, and never suffered injury. Horse-skins never occasioned injury to those who worked them, but in this way they differed from the skins of oxen, cows, and especially sheep, which sometimes did occasion injury, though not so often as usually supposed.—*Recueil Industriel.*

ANIMALS OF NEW SOUTH WALES.

This is a very fine agreeable climate, and, with the exception of catarrh, there are no epidemic diseases known; and those complaints which are common to children in Britain, such as measles, hooping-cough, small-pox, &c. have no existence in this climate. In summer

the heat is very oppressive in the sun, particularly during the hot winds from the N. W., which do not occur above a few days in a season. They induce a sort of nervous or feverish excitement during the day, and a chilly feeling in the evening from the sea-breeze, which then always sets in. Nothing more disagreeable is the consequence. The native blacks are a wretched race of human beings, harmless and undesigning; have little or no ingenuity, much less than many of the lower animals. They lie and live among the bushes like the beasts of the field, and seldom inhabit the same spot above once. They erect no hut to repose in during the night; only collect a few branches of trees, which they fix in the ground, to shelter them on one side from the influence of the wind; on the other they kindle a fire. Mimosa gum, fern roots, fish, snakes, opossums, bandecoots, and kangaroos, some of which they spear only with difficulty, form their common food. The very limited means of subsistence which the country naturally affords, necessitates them to travel over a great extent of surface in quest of food, which almost precludes the possibility of a permanent abode. There are, I believe, few countries in the world where there is such luxuriant vegetation, and so little and so few of its products suited for the food of animals, than in this; although, with culture and the importation of useful plants, no part will excel it in the course of years in the fertility of the soil and the variety and usefulness of its productions. Insects are numerous, various and troublesome, as is the case in all warm climates. Domestic dogs are a great pest in the town. Every house keeps from two to six, which bask in the hot sun during the day, and prowl and yell about the streets at night. I mention this only to remark, that I have never heard of a case of hydrophobia. Snakes, I am informed, are all poisonous, of which there are a variety of kinds, varying also in the intensity of their venom; the largest being not above fourteen feet long. Some of the smaller kinds are the most deadly. Quadrupeds are not numerous. The kangaroo (of which there are two or three kinds), opossums, and bandecoots, are the most remarkable. There are native dogs, but few in number. They often destroy sheep, and resemble, in appearance and disposition, something between a fox and wolf. Birds are much more abundant, and vary in size from the emu (an animal about six feet high, being a sort of ostrich) to small chirping creatures, little larger than the humming-birds in the West Indies,—black swans, cranes of various colours, white hawks, black and white cockatoos, and thousands of parrots of the most splendid plumage which fancy could suggest. Ducks and quails are also very common. Besides, birds that resemble our pigeon, pheasant, and turkey, are also

got in numbers. There are also a number of birds peculiar to the country —one called laughing bird; another the coachman, from its whistle ending in a smack like a whip; another the bell-bird, from its voice being like the sound of a bell; and so on. Most of the small birds appear to me to live on insects. We have swallows all the season; they resemble exactly those in England; and bats too, measuring between the extremities of their outstretched wings from three to four feet. They are called here flying foxes. Fishes are all different from those in England. Between them, notwithstanding, the people here trace resemblances, and give many of them very improperly the same names. There are almost no shell-fish on the coast, with the exception of oysters, which grow and adhere to the rocks, and on such rocks only as are left uncovered by the water at low tide. Muscles also adhere to the stones that are always under water. Cockles are also plentiful in some places. Shells are so numerous that all the houses are built with the lime they produce. These shells are not just on the sea-beach, but lying in heaps and ridges ten and twenty feet above high water mark; and even at these places the sandy beach is without a shell.—*Extract from a Letter to the Editor of the Edin. Jour. Science.*

MIGRATION OF BUTTERFLIES.

MADAME de Meurin Wolff, being in the country with her family, in the district of Grandson in the Canton de Vaud, perceived, on the 8th or 10th of June, 1826, an enormous quantity of butterflies (*Papilio Cardui*, L.) traversing the garden with great rapidity: they all proceeded in the same direction from south to north, not deviating to the right or left, flying close to each other, and not being disturbed by human beings. This continued for at least two hours; the insects did not stop on the flowers; their flight was low and uniform; the width of the column was about ten or fifteen feet.

Borrelli, at Turin, observed a similar circumstance with the same butterfly, at the end of March in the same year. They also flew from south to north; the air was filled in the places where flowers abounded, and at night the plants were covered; their number diminished after the 29th of March, but some continued to appear until June. M. Huber, who describes these and similar appearances (which are not uncommon), supposes that the portion seen in Switzerland may have been a part of the column which passed over Turin.

The caterpillars of these butterflies do not live in society, and are isolated from the time they leave the eggs.—*Mém. de Genève.* iii. 247.

ROYAL VETERINARY COLLEGE CASES.

A Bay Gelding, Four years old,

Belonging to ——— Lowton, Esq., was admitted on August 24th, with Inflammation of the Lungs and Pharynx.

Considerable difficulty in swallowing was observed;—a weak, quick pulse;—laborious and difficult respiration;—cold extremities, ears, and muzzle, with the mouth hot and dry.

The horse had been treated for illness, by two or three bleedings, &c., prior to admission.

Was directed to be placed in an open shed; to have a mash diet, two setons passed across the pharynx, and one in front of the chest.

25th. In the morning, the animal appeared rather better; but purging coming on shortly after, four ounces of chalk was given in thick gruel; and in the course of an hour or two the animal fell down, and showed symptoms of being in great pain, and the pulse was very much quickened.

Fomentations of hot water were ordered to be constantly applied to the belly by means of rugs. The horse continued in nearly the same state till the middle of the day, without the pain or purging being lessened, when he died.

Post Mortem Appearances.

The pharynx was highly inflamed, but the lungs appeared to be only slightly so: the liver was of a pale ash colour, and considerably altered in its structure.

A Bay Gelding, aged 7,

Belonging to H. Garling, Esq., was admitted August 12th, with an *Abscess*, which had been of some time standing, in the off foot, and had been under treatment before admitted. The horse was very lame, and pus escaping at the coronet at the outer quarter of the foot.

Four quarts of blood were directed to be taken from the toe, and a poultice of bran applied, made with a solution of salt.

Six drachms of aloes to be given in a ball, and a mash diet.

13th. A large fungous mass was found, both at the opening in the sole and coronet: directed to be dressed with a saturated solution of zinc; pressure to be made on the part; the shoe to be taken off.

14th. Three drachms of aloes to be given a ball.

15th. The ball to be repeated, a bar-shoe applied, and the sore to be dressed with compound tincture of myrrh.

16th. Half an ounce of aloes to be given in a ball, and the tincture of myrrh applied daily.

18th. The aloes directed to be repeated.

20th. The sore to be dressed with a solution of zinc, instead of the tincture, and half a drachm of croton to be given.

22d. Compound tincture of myrrh to be applied, and common tar to the coronet.

24th. Half a drachm of croton directed to be given, and the sore dressed with a solution of sulphate of copper.

25th. The solution to be applied daily.

28th. Twenty grains of croton directed to be given in a ball.

29th. Common tar to be applied to the coronet, sole, and wall of the foot, and a solution of zinc to the sore.

On the 31st, the sore was nearly healed; directed to be dressed with tar daily; and on the 2d of September the horse was discharged, cured.

A Chesnut Gelding, aged,

Belonging to J. Salvador, Esq., was admitted on the 15th of August, and had been previously treated by bleeding, &c.

A slight discharge was observed from the nose; the legs cold; the pulse weak, but about the natural standard; and no inclination for food.

A mash diet was directed, and three drachms of aloes and turpentine given in a ball.

17th. Appeared much debilitated, had also a cough; but in other respects much the same. Four ounces of salt was ordered to be given in a drink twice a day.

18th. Three drachms of aloes to be given in a ball.

20th. The salt to be continued; to have potatoes to eat, with corn and hay; appeared rather more lively.

23d. A recurrence of inflammation came on; quick pulse and respiration; cold ears and extremities.

Directed to be placed in an open shed, and have mash diet.

Three drachms of aloes and two of turpentine given in a ball twice a day; clysters frequently, and three quarts of blood taken from the jugular vein; the legs to be well rubbed, and bandages applied.

24th. During the night he died.

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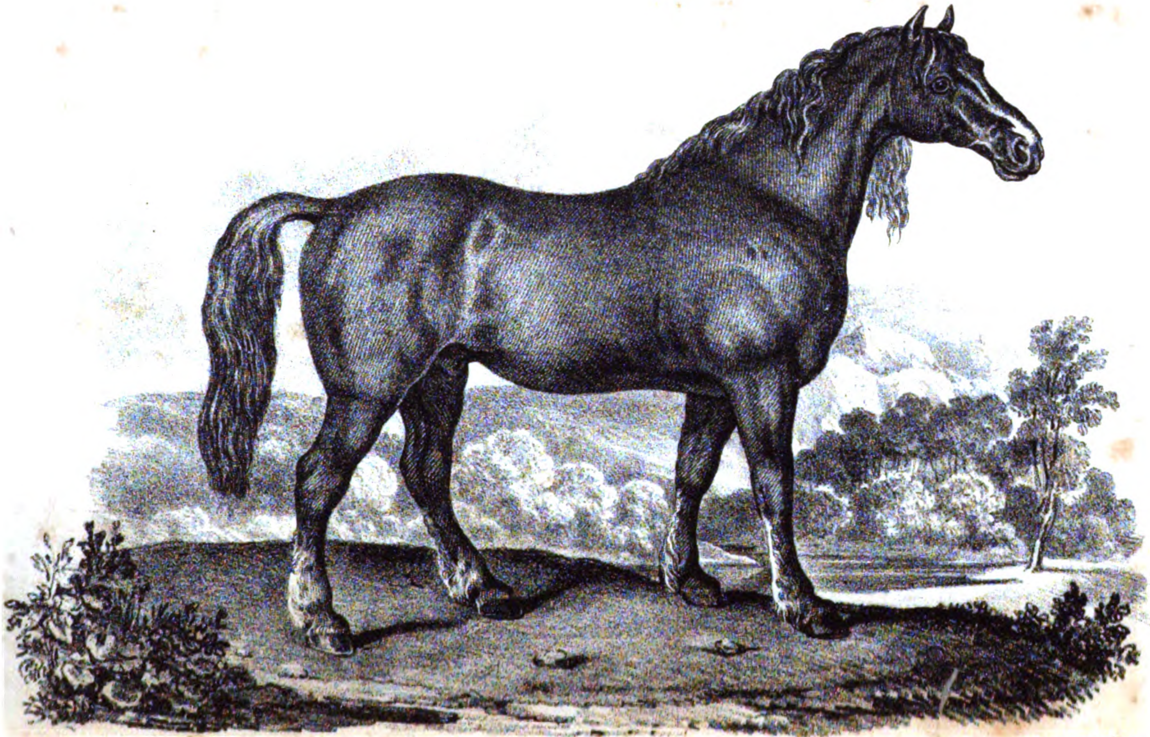

CART HORSE

THE

FARRIER AND NATURALIST.

No. 11.] NOVEMBER. [1828.

THE CART-HORSE.

THE heavy draught horse is undoubtedly the most highly domesticated of his kind; it is, therefore, by no means easy to determine on what variety to represent as possessing most of his decided peculiarities. The horse we have given may be objected to by some, on account of being too light and straight limbed; and so he may be for a dray horse: but it must be recollected that our description refers as much to the horse employed in agriculture, and of which he may be considered a fair specimen. If it be true, as many natural historians suppose, that the Arabian horse is the oldest or original breed from which all the various races have sprung, then how wonderfully do we see the influence of food and climate exhibited in the altered appearance of this domesticated monster. Without entering, however, into the merits of a question, on which, indeed, we have much to offer at a future period, it will be sufficient to slightly notice all that we know of the history of the draught horse—premising that there are but few of the cart kind which do not partake, in some degree, of the rough indigenous breed which appears to have been the earliest in use in this country.

Flanders was early celebrated for its large breed of horses; and it must be chiefly attributed to the climate, and the influence of low rich feeding, that they acquired in that country a greater bulk than any other.

Denmark and Holstein were also famous for the large black kind: it is rather difficult to know at what precise time the first importation took place in this country; but from them we derived the present English dray horse—superior to any breed in the world for size and strength, and those particular qualities which fit him for draught purposes.

The Flemish breeds, it appears, have undergone considerable change and improvement in England, perhaps chiefly from the circumstance of

change of food and climate; or it may be from a slight cross with the large bony Norman horse, which formerly was the favourite for war and parade. At any rate, our present draught horse differs from the Flemish, in being taller and bigger boned, more upright in the foot, and generally presenting a more muscular appearance.

The Suffolk Punch is conspicuous as a variety, and there are many others in different parts of the kingdom.

The exertions of the draught horse are not so violent, but he works a far greater number of hours, than any other kind; and, indeed, it rarely happens,—unless in case of illness,—that a long interval of rest is allowed him. As was before stated, he is completely an animal of our own making; and, in this point of view, more *thorough-bred* than the blood horse, living a laborious and artificial life, which subjects him to several peculiar diseases, or rather modifications of diseases, different from other horses. The chief of these are grease, gripes, inflammation of the lungs or viscera, and farcy; all of which assume a peculiar character in the draught horse, and require, in some sense, a different treatment. Their inflammatory complaints are very simple, arising, generally, from over-feeding and confinement, often occurring when they are first brought into town work, and thence termed the stable fever. As the pleasure horse often suffers from over officiousness, and too much regard to his appearance, &c., so the draught horse, on the other hand, is apt to be too little cared for in these respects; his feet become the subject of canker, from want of cleanliness and attention, while the foul, unwholesome stables in which they are frequently crowded, favour the access of other complaints,—farcy, grease, and mange. Space will not permit us to do more than mention them at present.

Mr. Higgs, of Thames-street, published, in 1815, a little work exclusively relating to the draught horse and his diseases, which may be perused by any one with advantage, as it is the only book of the kind extant, and, therefore, is perfectly original; containing the opinions, too, of an able and experienced practitioner. This book has not been much heard or talked of, but possesses considerable merit.

ROYAL VETERINARY COLLEGE.

This Establishment, as originally constituted, was undoubtedly one of the most praiseworthy and laudable that was ever formed in this or any other country; for, through the artificial habits to which we have sub-

jected them, our domestic animals become liable to so many diseases from which they are exempted in a natural state, that it becomes our proper duty to alleviate and remedy these calamities which we have imposed, by every possible means in our power.

Certainly nothing could more effectually answer this end, or be productive of greater advantage to the interests of the public, as well as to the benefit of animals, than an establishment especially devoted to these objects, if it afforded fair opportunities to the student of acquiring Veterinary science.

At this Institution, a number of pupils are found anxious to obtain that knowledge, so important in their profession; and it would give us pleasure to observe, on the part of the Professor and his Assistant, an equally ardent desire to communicate information in a *systematic and regular manner*, in that highly useful and important branch, Anatomy, on the nature of the different diseases, their causes, effects, and the *modus operandi* of their remedies, actions, qualities, and differences.

We should be the foremost to applaud the system of teaching pursued at the College, if it were well calculated to promote the interests of the pupils; but at present we lament being compelled to acknowledge the truth of those allegations so justly complained of in a letter from some "Old Pupils," to be found in another part of our Number.

To the chief and most weighty of these complaints—viz. the almost total absence of the College Demonstrator, Mr. Sewell, from the Dissecting-room, we have nothing to observe, excepting that the remedy rests with themselves. If our recollection serve us right, but a slight knowledge of anatomy is sufficient to pass the examination; but if no proper means are provided for instruction in this practically important branch, it cannot certainly be just that any pupil should be rejected for want of anatomical skill. A correct Manual, on which they might rely, would form some excuse for this otherwise unpardonable neglect; and, surely, to Mr. Sewell, with his commanding talents and happy mode of expression, the labour of preparing such a work would be a trifle. Neither of these advantages having hitherto existed, it is with unfeigned pleasure that we hear of the probability that a Demonstrator, indeed, will shortly be appointed; and we shall be most happy if, in our next, we are enabled to communicate the actual fact. The pupils only need appeal, in a respectful manner, to proper authority (the Governors), to have what they ask; and it will be much their own fault, if, after paying for instruction, they submit to study without it.

The omission of *post mortem* examinations is another subject of just

complaint. Mr. Coleman, some months ago, gave particular orders that no horse should be removed until this had been properly performed. How is it that his commands are disregarded? What opinion can a pupil form of a case which he has carefully watched to its termination, if the opportunity of inspecting the subject after death is denied him. It cannot be urged that prejudices exist on the part of the deceased's friends, or his master; we should rather be led to apprehend that an objection sometimes lies, on the part of the doctor, to a public investigation.

VETERINARY CERTIFICATE.

In consequence of a Correspondent having made some further inquiries respecting the Veterinary Certificate, we here insert a copy of one, with a few additional remarks.

Veterinary College.

"1st Day of April, 1828.

"*THESE are to certify, that* Mr. Jerry Tape *has attended the* Veterinary College, *as a Pupil, for three months; and having been examined by us,* we consider *him as qualified to practise the Veterinary Art.*

"Edwd. Coleman, Professor.
"Wm. Sewell, Treasurer.

"Wm. Babington, M. D.
"Sir A. P. Cooper, Bart.
"J. Abernethy.
"George Pearson, M.D.
"J. Cooke, M. D.
"Joseph Henry Green.
"B. C. Brodie.
"Chas. Bell."

Such is the vaunted Diploma!

It must be understood, however, that not more than three or four of the medical gentlemen whose names are attached, usually attend the examination; the remaining signatures are to be obtained by calling at their respective dwellings, leaving the paper and half-a-crown with the footman.

The present price paid for this document is three guineas; certainly an adequate remuneration for *considering* a young man qualified to

practise that art in which Mr. Coleman has repeatedly asserted medical men never become good practitioners: yet the public are led to believe that they are competent to judge of Veterinary qualifications.

As medical men, therefore, on the faith of Mr. Coleman, they are incapable of examining Veterinary pupils; as comparative anatomists, &c., however eminent they may be, their talents are not called for, as nothing of the sort is taught or studied at the Veterinary College, being deemed by Mr. Coleman as useless.

ON CRIB-BITING IN HORSES.

BY MR. B. CLARK,

In Rees' Cyclopedia.

CRIB-BITING is a common vice of horses, and the term is purely of English origin, which is not frequent with the terms used in the management or diseases of the horse; which are, for the most part, French or Latin strangely corrupted.

The crib denotes, in modern phrase, the manger, from *manger*, French, to eat; the crib being left for the fodder of cattle, to which the name is at present exclusively applied. The original crib, since oats have been introduced, being fixed to the wall of the stable for the horse, has obtained the name of rack; so that the term crib-biting to some would appear improper, to others too antique, or entirely obsolete. The crib-biting horse has generally a lean, constricted appearance, the skin being contracted about the ribs, a sunken watery eye, or else too dry: the muscles of the face also, as well as the skin, drawn up with rigidness. When unemployed in eating, his almost constant amusement is to grasp the rail of the manger with his front teeth, then to draw himself up to it, as to a fixed point, by a general contraction of all the muscles of the head, neck, and trunk: at the same time the effort is attended with a grunting sound, apparently from air expelled by the mouth;—a relaxation succeeds, and then a new effort, slavering the manger very much with the tongue; as, the mouth being held open, the saliva naturally takes this direction.

The horse that has contracted this unsightly habit grows lean, his digestion is sometimes impaired, and it is generally conceived he draws air into his stomach, which is the cause of this: his temper becomes soured, and, more or less, weakness and unfitness for service ensue,

according to his natural strength; for some do not appear materially in this respect to be injured by it, while others are obviously rendered much weaker by it, and more incapable of a proper day's work. It appears, indeed, that horses of a fiery, hot, and unkind temper, get most easily into this vice.

How this extraordinary propensity is first created, has not been, we believe, much attended to. With some it appears to arise naturally, as though the sucking of air gave them pleasure, or a relief from some sort of suffering. At first we imagined pains in the stomach from acidity, or other causes, might create it, as horses eat dirt, or gnaw the walls, to alleviate unpleasant feelings of this organ. The bad digestion and foul feeding are probably only a consequence, and not a cause, of this malady. That horses at all disposed to it may be easily led into it, by the practices of the grooms in cleaning them, we have little doubt: if they clean them before the manger, and irritate them with too severe a comb, and in parts where they cannot endure it, they seize upon the manger as a counteraction to their suffering; and, in doing this, must first get a habit of it, and may extend it to the removing of other pains or distressful feelings. By this means, especially if the grooms,—and some have a happy knack of this after every bite,—put in a blow or stroke of the comb, they create a vice which may or may not continue afterwards, according to the situation and circumstances attending the individual. Some are said to get it by imitation of other horses: whether or not the same practices of the grooms, applied to several horses in the same stable, should not be rather apprehended to be the cause, we are not assured: in one instance, we think, we observed this satisfactorily enough to be the cause, though it passed for imitation.

To break horses of this vice is difficult. Cutting off the end of the tongue has been recurred to, by some as a cure for it: the soreness created by this means destroying the inclination to the trick, for a time, when the habit, once being interrupted, might, or might not, again return.

Another and more usual way with these horses, is to buckle a strap tight about their neck—so tight as to prevent, by the constriction of the throat, the power of doing it, or, at any rate, creating sufficient uneasiness to disincline them to it. In preventing the habit, it appears but reasonable, with regard to such horses as are inclined to it, always to turn them from the manger before they are cleaned, with their heads to the heel posts, or to clean them in the open air; or, by other means, to avoid, as much as possible, irritating those that have preternaturally thin and irritable skins, by too rough an iron comb, and to break through any regular habit of inducing biting after each stroke of the

comb: for they learn to do this, at first only in the most sensible parts, as the flanks, the inside of the thigh, the belly, &c., and afterwards in every part, on the slightest touch of the comb, or even the sight of it.

Some horses, it must be admitted, are truly difficult to clean; many, also, are rendered more so than they need be, by inconsiderate rashness and ill-applied severity. To prevent these associations and mischief, proper precautions cannot be taken too early against a habit of this kind; for once formed, it is not easily afterwards to be subdued, even by great patience and well judged measures.

In concluding these remarks, we may observe that in the purchase and sale of horses, this vice is not unfrequently a subject of litigation: should we venture to interpose an opinion on the question usually agitated on those occasions, whether a horse be unsound or not, or, in other words, returnable or not, with this defect, we should say, If the warranty extended to soundness only, the horse is not returnable, as horses are often sound with it as to their going; but if vice is stated in the warranty, the horse is unquestionably returnable, as it may be ranked among the worst of them.

AN ACCOUNT OF THE FOOT-ROT IN SHEEP.*

BY M. DE LAFOND,

Veterinarian at St. Amand (Nièvre).

THE foot of the Sheep, one of our most valuable animals, is attacked by different diseases, more or less serious: that known by the name of Foot-rot is the principal, most troublesome, and of which, hitherto, but little has been known. Most authors have confounded this disease with that of the Thrush and Canker in the horse: we have, at last, discovered the cause of this disease, and think it useful to science to give the anatomy and pathology of it. In order to arrive at some data, we shall describe its mode of attack, progress, and nature, and also lay down a rational mode of cure.

History of the Disease.—The disease first appears on the internal surface of the claw, where the skin terminates, forming the cutidural cavity. It first shows itself in one or more small conical pustules, white at the top, covered by a thin membrane, containing a whitish-

* Journal Pratique de Médecine Vétérinaire.

coloured lymph. They are frequently ruptured by the motion of the animal, and present small deep ulcers, red at the bottom and edges: these sores soon discharge a white, purulent, stinking matter; the horn is soon separated, by the discharge insinuating itself between the vascular tissue of the foot and the horn of the claw; and the inflammation thus produced, is the cause of this troublesome disease.

Perhaps, at first, one claw only will be attacked; but after the first pustule becomes ruptured, the disease generally extends to the others. The inflammation from the matter secreted, quickly extends itself to the whole vascular tissue of the internal surface of the last phalanges; and, shortly after, the horn becomes separated from the part, which becomes flaccid, and discharges a white pus, which afterwards becomes dark or black, stinking, volatile, and infectious.

If we remove this discharge with care, we shall perceive the lamellæ, or the tissue covering the bone of the foot—(*the podophyllous tissue.*—BRACY CLARK.)—are fuller, elongated, and thickened; and the intermediate spaces are filled with white matter, but we can perceive no traces of ulceration on the surface.

At last, the inflammation reaches the bottom of the foot; and then detaches the sole, and becomes a dark matter of the nature before described.

In some instances the sores become scabbed, and the inflammation of the podophyllous tissue ceases, and new layers of horn is formed: the disease has then changed its course, and, without judgment, it would be taken for Canker; but, on examination, we cannot mistake the new horn, which presents an uneven surface.

In some instances the matter extends from the podophyllous tissue to the inner surface of the sole, generally descending on the inner side of the claw: this part, being harder, more readily resists the action of the pus, which only destroys the *keraphylla*, or horn-leaves; and ultimately, from the inflammation being renewed, the matter finds its way to the upper part of the foot, and forces itself through the skin at the cutidural cavity.

We then find that the inflammation is diminished or subsided, and a new horn is secreted, and descends over the internal surface of the old: we can readily observe this appearance, by the claw becoming larger, with different waves and cavities which have formed on the surface; after which the old is become useless.

The disease does not always subside with the escape of the pus, but extends to the sound tissue at the anterior angle of the bone, and the same course of the disease, as before described, follows. During

the continuance of this morbid state, the horn rapidly increases, and the claw increases to two or three times its natural length, with a considerable enlargement in size.

If we examine, with care, the podophyllous tissue, where the disease has existed for some time, we shall find the *keraphylla*, or horn-leaves, and the parts covering the bone, thickened and changed into a fibrous texture, firmly adhering, and with difficulty separated from the bone, even by long maceration. This is likewise covered with hardened processes, and more porous than in the natural state. We have only seen one instance, out of sixty-two cases which we have operated on, where the bones and flexor tendon have become diseased in consequence of Foot-rot, although the disease had been of long standing.

After our observations on the mode of attack, the progress, and general termination, of this disease, we shall find, in summing up, First, That the pustulous inflammation of the skin at the cutidural cavity and perioplic band, and also the internal surface of the inner foot, after a time, forms ulcers.

2dly, Inflammation of the podophyllous tissue, with increase of size, and all the parts of the *keraphylla*, or horn-leaves, accompanied by an unhealthy thick discharge, but with little or no smell.

3dly, The softening of the horn by the matter, after which a dark or black stinking discharge is secreted.

4thly, Evident marks of inflammation of the bones and flexor tendon, and sometimes, though rarely, of their becoming rotten.

5thly, and lastly, The constant propagation and locality of the disease.

In attempting to name and classify this disease, cannot we found it on that already formed upon the different structures? After our various researches in this disease, we have been led to believe that it ought to be classed under the head of inflammatory pustules of the skin; and considering the nature and mode of attack, if we adopt the name of *cutidura*, instead of the coronary ring, we should then say it was cutidural pustules of the internal surface of the superior claw or hoof of the Sheep,—this is the name, then, which we propose to give.

The mode of cure comes next under consideration. The first step in the treatment, is to destroy the pustule, or ulcer, by the application of nitric acid,—a remedy first proposed by M. Morel de Vinde, which produces an excellent effect, for, in six hours after, the animal has been observed to be free from lameness: it forms an escar, which sloughs off in a few days, and a cure follows. In applying the acid, we

ought to take care that it goes far enough under the horn which has become diseased; and perhaps a feather will answer this purpose best.

When the horn is separated by the matter, the next step is to remove it nearly to the sound part, and to clean away the pus carefully, and then apply the nitric acid; after which, a dressing of Ægyptiacum.

When the horn is destroyed, and we can see the dark or black discharge, the cure is certain: it is then only necessary to clean the *keraphylla*, and apply a dressing of Ægyptiacum; the horn is quickly renewed, and, in a few days, the animal is safe.

When the disease attacks the wall and sole of the foot, and these parts become detached, the horn should be cut away till we arrive at the healthy part, and the same treatment is to be pursued; and also apply some emollient substance to promote the growth of horn, for we observe the foot becomes dry and hard, which should also be protected by properly covering the foot,—not omitting to pass something between the claws.

Two or three days, at farthest, after the operation, it becomes necessary to renew the first dressing, carefully examining the wound. If the foot is hot, and the old horn become detached, and the new horn growing up, there still exists white matter, which, on slight pressure, will be forced out; the horn must be again removed, and the same applications had recourse to.

During the cure, it will be necessary to remove their soil, and keep the fold well covered with clean straw: by these means, sixty-two sheep were completely cured in twelve days, many of which were affected in three, and even all four feet; and the flock had been diseased for six or seven months previous.

With regard to the contagion of the disease, my experience does not warrant my giving a decided opinion: the flock on which I made these observations was purchased in the month of March, 1827; and some of them, at that time, were affected: and in the month of November, in the same year, forty-two were diseased. The flock of a neighbouring farmer which fed upon the same plain, and had, up to that time, been free from the disease, were found, on examination, to be affected to the number of thirty-eight.

EXPERIMENTS ON THE BLOOD.

BY MR. RICHARD VINES,

Veterinary Surgeon, Mr. Coleman's Assistant at the Veterinary College.

(ABRIDGED FROM "THE LANCET.")

BEING at a slaughter-house with some pupils, I selected for examination a young mare, which was brought there on account of a disease in her foot. After being destroyed we proceeded to dissect the abdominal viscera; when, on detaching the cœcum from the colon, I observed the lacteal vessels situated in the mesentery and surrounding the lymphatic glands, near the spine, among the adipose substance, were greatly enlarged and containing red blood; whilst those near the small intestines were much diminished, and containing a transparent fluid. I then examined those on the concave surface of the liver, and found them containing red blood likewise. Those vessels which pass through the glands were full of blood.

At first I thought it must be disease of the glands; but on close inspection I found they were perfectly healthy, and that the animal was living on her fat, by converting it into blood. A strong ligature was then passed round the superior part of the mesentery, above the mesenteric glands, as near the spine as possible, to prevent the fluid escaping. The intestines were then removed, with the liver attached to the stomach and duodenum. These parts were sent to the College for inspection.

I then examined the thoracic duct, and found it contained red blood; then the lymphatics in the lungs, and various other parts of the body, and found them containing a transparent fluid, those which transmitted red fluid only existing in the adipose substance in the mesentery.

Every organ in the animal was in perfect health, except her foot. The stomach and intestines contained only a few ounces of food.

Case I.—A horse was ordered to be destroyed, which was done at 11 o'clock, A. M. At the usual hour, namely, six in the morning, he was fed.

Examination after Death.—On opening the abdomen, and examining the lacteals, I found them full of a white fluid. I then opened the thorax, and exposed to view the thoracic duct; on dividing which, there issued from it a white fluid. Of this I caught about half an ounce in a glass vessel, and set it aside. The following morning I found the greater part of it had coagulated firmly; the quantity of

serum it gave out being very small. To this I applied heat, and found it to coagulate likewise.

All the different organs contained in the chest and abdomen were in a healthy state, with the exception of the lungs, which were slightly diseased.

Chronic glanders existed in the frontal and nasal cavities of the head.

Case II.—A horse died of inflammation of the lungs. On examination after death, he was found to have also a chronic disease of the liver. On the peritoneal covering of which, I perceived all the lymphatics arising from thence contained red blood, and were greatly enlarged. The liver itself was considerably increased in size, weighing upwards of 80 lbs. The thoracic duct was full of red blood, which had coagulated in several places.

The lymphatics in all the other parts of the body were of the usual appearances.

Case III.—A glandered horse was destroyed. On examination, the lungs were found, in many parts, to contain tubercles. The lymphatics arising from those parts were enlarged, and contained red blood. Those which arose from healthy parts possessed their usual appearance. I found also the left lobe of the liver diseased slightly, and the lymphatics arising from it containing red blood; the right lobe was healthy, and its lymphatics contained a transparent colourless fluid. The fluid in the thoracic duct was nearly as red as venous blood.

Case IV.—A horse was destroyed in consequence of having broken knees: both joints were laid open. Previous to this he was very fat. On examining the abdomen, I found a great quantity of adipose matter in the mesentery. The lacteals, near the intestines, were of the usual appearance; but as they passed through the lymphatic glands, they appeared very large, and contained red blood. The glands themselves appeared full of blood. The arteries which supply the glands, and which arise from the mesenteric arteries, were much larger than usual, as well as their veins.

The thoracic duct contained red blood. All the organs within the cavities of the chest and abdomen were in health. The intestines contained a small portion of food.

Having made secure, as near the spine as possible, the mesenteric arteries and veins above the glands; below them I took up the arteries and veins, passing a ligature around each. Opening one of the arteries, I introduced some quicksilver, which very soon appeared in the lymphatic glands, and from them passed into the mesenteric veins and lacteals which contained red blood. From this I infer that there is a free communication between the mesenteric arteries and veins and lacteals, by means of the arteries which supply the glands.

Remarks.—From the first case, it appears that the chyle possesses all the properties of blood, except that of being red. From the second, third, and fourth, that the lacteal and lymphatic vessels are the minute or finer part of the venous system, which correspond to the minute or finer part of the arterial system in which white blood circulates.

That under organic disease, or otherwise, these vessels, by receiving an increased power from those parts of the arterial system from which they arise, thereby become enlarged in size, and convey red blood like the large veins.

I have carefully examined a great number of horses destroyed at different slaughter-houses for various diseases, both acute and chronic.

In most of them I have found the lymphatics of the chest and abdomen containing red blood; the thoracic duct containing a fluid of the same appearance, and this fluid undergoing the same change as blood drawn from any of the veins.

It is an established fact that the blood puts on a peculiar appearance when an animal is labouring under disease: for when it coagulates it separates into two parts—the superior part being of a yellow colour, which has received the name of lymph or buffy coat; and the inferior of a red colour. We find, however, a similar thing takes place when in health; but this has not yet been accounted for. I have, therefore, been induced to try a great number of experiments, and am now able to prove the following facts:—

1. That if from an animal,—as, for instance, an ass,—being in perfect health, feeding only on hay, and living in the open air at a temperature between 45 and 55 degrees, blood be drawn to the amount of two ounces, it will be found buffy.

2. That if the temperature be increased to beyond 60 degrees, the blood will be found wholly red.

3. That if the temperature be reduced to below 35 degrees, the blood will be wholly red also.

4. That if an animal in health, his blood being buffy, be made to undergo moderate exercise, it will become wholly red, and will continue so for some hours afterwards. But when the circulation becomes tranquil, it will again put on its buffy appearance.

5. That should the exertion be continued to an immoderate degree, the blood becomes again buffy.

6. When the venous blood is buffy, the arterial is so likewise, but in a less degree. In old weak animals, and those suffering from disease, these changes are not so evident.

7. That if a horse or an ass being in health, and the blood buffy, be destroyed by bleeding from the jugular vein, and the blood be caught in different glass vessels, and allowed to coagulate, on examination it will be found that that which flowed until the animal manifested symptoms of exhaustion from loss of blood, will be buffy; whilst that which flowed after, even until the death of the animal, will exhibit no such appearance.

8. That if from a horse or an ass being in health, and the blood buffy, blood be drawn from the jugular vein to some amount, and the spinal marrow be divided as near the brain as possible, the arterial blood, the moment respiration ceases, will become as dark coloured, as venous, and of the same temperature. And if from the same animal blood be taken from the right and left auricles of the heart, and allowed to coagulate, that from the right will be found to possess the buffy coat, whilst that from the left will be entirely red, without the least appearance of buff.

9. That in young healthy animals the buffy coat is nearly white, much resembling coagulated chyle.

Whilst prosecuting these experiments on the appearance of the blood. I was induced to notice its temperature, and found,

1st. That in all cases it is nearly the same.

2d. That the arterial is from three to five degrees hotter than venous.

3d. That those parts of the body which are supplied with red blood, as the glutei muscles, &c., are several degrees hotter than those which are supplied with white blood, as the interior of the ball of the eye, &c.

On examining an animal (horse or ass), and when in the highest possible degree of health and strength, and performing moderate exertion, the muscles are of a bright red colour; and if blood be then extracted, it will coagulate into a solid bright red mass, and give out a small quantity of serum, while, on the contrary, if the same animal be exposed to severe cold, and supplied only with little food, the blood will be found to coagulate much more slowly, and to separate into two parts, white and dark red, constituting what is called buffy or inflamed blood; and in proportion to the intensity of the cold and deprivation of food, so will the blood put on this inflammatory appearance; and in proportion to the increasing strength of the animal, when supplied with plenty of food, and a more congenial temperature, so will the blood recover its original appearance. In strong and healthy horses, the blood may be rendered buffy, by drawing large quantities at short intervals, while the muscles become pale in colour, and their power greatly lessened. In short, any cause which produces debility will produce buffy blood.

Mr. Hunter, in his work on the blood, considers the buffy appearance to arise "either from an increase of animal life, or from an increase of a disposition to act with the full powers which the machine is already in possession of." (*Vide* Hunter on the Blood, page 68 and 69, Vol. II.) This, I consider, cannot be the case, since we find it in horses turned out to straw-yards during the autumn and winter, when the vital powers are weak, in consequence of a want

of proper nourishment; but not in the spring and summer, when they are in the full enjoyment of good food. The blood is found to assume this buffy appearance in horses labouring under organic disease, as inflammation of the lungs, &c. The vital power of the animal having been exhausted from some exciting cause, the action of the heart and arterial system is found quicker than usual: some practitioners, therefore, observing the blood then to be of this buffy appearance, consider this the highest stage of the inflammatory action; the horse is therefore bled and blistered largely, with a view to subdue the disease, but which treatment will tend to exhaust the vital powers. In the latter stages of farcy and glanders, the blood is always buffy, the circulation quick and weak, and the lymphatics of the extremities become distended with fluid,—all indicating extreme debility. It appears, therefore, from this, that the blood assumes this white or buffy appearance when the *vital powers are weak*, and the *florid hue* when strong. If, therefore, we examine the base of the blood, which is white (like the chyle), we find, that according to the vital property which is imparted to it from the atmospheric air in circulating through the lungs, it is found to assume this bright red colour, and according to its diminution it will appear dark, red, and buffy; this is likewise proved by the venous blood being darker in colour, and more buffy, than arterial. The temperature of the blood likewise varies according to the strength or debility of the animal; for if the bulb of a thermometer be plunged into the jugular vein of a healthy ass, and afterwards into the carotid artery, the arterial blood will be found five degrees warmer than the venous: but in the debilitated animal there will be a difference only of one or two degrees, according to the diminution of vital power. The blood, therefore, when white, possesses less power than when red, which is seen in the minute vessels of the body; but when from any cause these vessels convey red blood, their power becomes increased, and not, as is generally supposed, diminished, so as to allow the red particles to pass: the blood in all parts governs the action of its vessels, and not the vessels the action of the blood; and according to the blood they receive, so will their action become increased or diminished. This I have proved by the examination of horses after death, which had been suffering under organic disease, or the effects of long abstinence; for in these cases the function of digestion being suspended, a rapid absorption of the fat takes place to support life; for no chyle being made in the intestines, the circulation of the blood there becomes greatly diminished, and the action of the lacteals of the first order almost ceases, while that of the second order, which arises from the former and lymphatic glands, becomes increased

to absorb the surrounding fat; at the same time, on examining the mesenteric arteries at the root of the mesentery, as they pass between these glands, they appear to have sent off large lateral branches, which ramify in the mesentery, and terminate in the lacteals of the second order; and this action will continue until all the fat be absorbed, and the animal then dies from exhaustion. From this it appears to me, that the lacteals and lymphatics are nothing more than the inferior order of vessels of the venous system corresponding to the inferior order of the arterial system, in which *white blood* is circulating; and that they can take on an increased action near the centre of the circulation, and become of the same character as the real veins.

THE VETERINARY SOCIETY.

THE Meetings of this Society have been held as usual, and during the last month are become additionally interesting.

On the first evening, the subject of Grease was further discussed; and in consequence of the presence of several new visitors, some other important facts were elicited, and which were considered as throwing additional light on the prevention and treatment of this very common and troublesome disease.

On the 21st, an able paper was read, by Mr. Charles Clark, on Inflammation of the Eye of the Horse (Ophthalmia); in which paper the various causes and appearances of this complaint, and the states and ages of the animal in which it was most likely to occur, were particularly detailed, and the treatment most available in each case pointed out.

A long discussion followed on the liability of particular breeds of horses to this complaint, and the comparative value of different remedies.

Popular errors and vulgar remedies for this affection came next under consideration; more particularly that of destroying one eye, in order to preserve the other; but, as no very rational reason could be assigned for it, it appeared that the credit which this, as well as various other practices, had obtained, was due only to the periodical subsidence of the inflammation.

But, there being so much to say on this frequent disease among horses, the Society were under the necessity of postponing the question for discussion, on its treatment, until the next night of meeting.

The new arrangements which have been entered into appeared to give general satisfaction.

ON THE TREATMENT OF HORSES' FEET.

BY F. C. CHERRY, ESQ.

Veterinary Surgeon in the Army.

[Continued from p. 451.]

How, then, are these evils to be prevented? how is the sole to receive a natural degree of support—a degree of support that will perserve its functions, and also those of other parts of the foot from being violated; that will not expose to bruises or injury the sensible parts that it covers, by subjecting them to a greater degree of pressure than nature intended them to receive?

Experience has shown, a firm unyielding support to the sole to be the greater evil; and no support at all being the lesser evil, it has become an adage in shoeing, that "the sole cannot bear pressure," and custom sanctions its being left without any support to its under surface; while that given by the outer edge being attached to the hoof, is materially weakened by the ordinary paring of the foot, previous to applying a shoe.

I believe it next to impossible to invent a shoe, or any mode of applying a shoe, that will not produce either one or the other of these ill consequences: it is therefore by stable management alone that the evil can be corrected; yet the general system of management, which many claim credit for observing, namely, that of making the foot clean by washing, and then leaving it so, without stopping of any kind, increases the evil.

It is a common observation, that the feet of farm horses are less liable to contraction, are more free from disease, than the feet of horses more carefully treated. This is accounted for in various ways; but I am inclined to believe that it arises more from the general support given to the whole ground surface of the foot, by allowing it to remain clogged with earth, than from any other cause, and that the state which common stable language calls one of neglect, is in reality one of high preservation.

If a foot in this, so called, state of neglect is examined, it will be found moist, cool, and healthy, with the frog highly elastic; while a foot that has been washed and left in the state just described, is dry, brittle, and full of cracks, with the frog hard and unyielding; these are the appearances of the insensible parts: the consequences resulting to

the whole sensible foot contained within the horny box or hoof, may be imagined, when we consider the difference between this horny box, which is elastic in all its parts, receiving support to its whole under surface, or resting only on a narrow edge, at least twenty out of twenty-four hours; for as to the frog being supported, or receiving pressure, it does not, among saddle horses and the best kind of coach horses, take place very frequently after they have been once shod.

I may be told, that to stop the feet is a common practice: I know that they are often daubed with cow dung, wet clay, or other similar substances to make them moist, and with tar or other ointments to make them hard; but I do not know that stoppings for the purpose of *support* are used, though it is hardly possible that so obvious an approximation to nature should be totally overlooked, as not to be found forming a part of the stable management of some reflecting individuals. But although I have said that a foot clogged with earth, and in a state of commonly called neglect, is in my opinion probably one of high preservation, I do not by any means intend to advocate the cause of dirt and slovenliness; on the contrary, cleanliness and neatness in the greatest degree are perfectly compatible with the suggestions I shall offer; indeed they are inseparable.

Perhaps it may be possible to prepare some compressible and adhesive substance, to fill up the cavity after the shoe is on, which shall give support to the whole foot, yet without impeding the full action of its elastic properties; but as I am not acquainted with a substance that can, without manifest objections, be kept in the foot when on the road, I must confine my suggestions to stable treatment; content that horses shall continue to be shod as they now are, by those who study "the different nature, form, and texture of horses' feet;" and I believe the practice of picking out and clean washing the feet of horses, immediately after they enter a stable, to be indespensably necessary; but, this having been done, *the foot should be filled to a level with the shoe, with any substance that can be kneaded in by the strength of a man's fingers or thumb;* or, in other words, *a substance that will afford support to the whole surface of the foot.*

This treatment of the foot will make it approximate to its state in nature: the greatest weight will be supported by the hoof resting on the shoe, while the sole and frog will be supported in a degree approaching to what takes place on the natural surface of the earth when the horse is unshod.

The descent of the sole is probably much more considerable when the horse is going fast, with the additional weight of a rider, than at

other times; therefore, when a horse quits the stable for work or exercise, the foot ought to be picked out, and thus any ill consequences will be prevented that might arise from the stopping for support becoming hard and unyielding. This treatment certainly will not fully attain the object of *constant* support to the whole surface of the foot, similar to that which takes place in a state of nature, but it affords relief during the very long period a horse remains in a stable, when in general, by resting on the crust only, the functions of the foot are most violently perverted.

The natural foot has two large cavities between the frog and bars, but I am not aware of any particular use being assigned to these cavities, by any writer or teacher, though the use of the frog forming one side of each cavity, and the importance of the bars forming the other side, have been elaborately considered by many.

Now, these cavities on each side of the frog, are capable of performing very important functions; indeed, no less important than that of powerfully contributing to the expansion of the foot, and to the preserving of its elastic properties unimpaired.

The sides of the frog are nearly perpendicular, but the bars slope very considerably, so that the foot receives lateral or expanding pressure every time the bars rest on any convex substance; and when the soil is yielding, the hoof, at every step, embraces a portion of it, which enters the cavities already noticed; and, being compressed into a smaller space, equally gives lateral or expanding pressure. When the soil, from being adhesive, remains in these cavities, it becomes hard; and in this state, whenever pressed on, it acts somewhat as wedges, in expanding the foot.

Nature has made a foot particularly strong at the heels, by a doubling round, or reflection inwards, of the hoof; therefore it follows, from that unerring principle in physiology, that every part is suited to the functions it has to perform—that the principal weight is borne by the heels: indeed a mere inspection of the position of the limb shows that this must be the case; consequently, these wedges of indurated earth, are driven or pressed upwards with considerable force at every step.

The shoe, however, in general covers a part of these cavities, or at least makes it more difficult for any projection from the surface on which the horse moves to reach the sloping internal hoof, or bar, and press it outwards; but the natural soil, when soft, enters, notwithstanding the shoe, these cavities between the frog and bars, and the whole cavity of the foot generally, and becoming hard, when allowed to remain, produces a somewhat similar effect to what takes place in a state of nature.

The criterions of a perfect foot have been erroneously taken to be a circular hoof and a large frog; but there are many feet having these external appearances, that are of all others the most difficult to manage, and which render the horse useless to a greater degree, if not entirely so, than generally takes place with strong narrow hoofs and small frogs, which, although they are attended with lameness, commonly leave a horse useful for many kinds of work in harness.

Many of those feet with a full frog, and the hoof circular, have the latter thin and weak: the sole is thin and weak in the same proportion, so that the foot, instead of having a certain degree of concavity, becomes flat, and in many cases convex. When convexity takes place, all sorts of expedients, in regard to the form of shoes, are had recourse to, but none of them arrest the progress of the evil, since they are all resorted to with a view to prevent the sole being pressed on.

But when these expedients can no longer be employed with effect, the treatment which I have suggested as being advisable, generally in a moderate degree, is adopted in the opposite extreme; and the soles, from having had no pressure at all, are, by taking off the shoes, exposed to some pressure in the greatest degree. This is done with a view to relieve the hoof, and at the same time to press the sole upwards towards its original situation.

In these weak feet the benefit to be derived from filling the concavity of the foot and shoe with some substance that shall give support to the sole, must be peculiarly evident: since, by giving uniform and constant support to a weak sole, and thereby relief to a weak hoof, the tendency to flatness and convexity will in most cases be overcome, and the necessity for rest without shoes be prevented.

If the ideas that I have expressed of the form and functions of the horse's foot are correct, there can then be no doubt, that to make him stand on the hoof only, or even on the hoof and frog jointly, without pressure or support to the bars and sole, is a violent perversion of the functions of all those parts, and tends to produce contracted feet when the hoof is strong, and convex feet when the hoof and sole are weak; and that to keep the hollow of the foot and shoe filled with any stiff substance that can be forced in by the strength of a man's fingers or thumb, under the precaution before mentioned of picking out the foot every day, or with any substance capable of affording support to the whole surface of the foot, is one of the means most likely to diminish these evils.

Clapham, October, 1828.

THE LION OF SOUTH AFRICA.

[Continued from p. 460.]

AMONGST other peculiarities ascribed to the lion, is his supposed propensity to prey on Black men in preference to White, when he has the choice; or, as the Cape Boors explain it, his discretion in refraining from the flesh of "Christian *men*," when "Hottentot *folk*" are to be come at. The fact of this preference, so strongly alleged, need not be disputed; but I am inclined to account for it on somewhat different grounds from those usually assigned. The lion, like most other beasts of prey, is directed to his game by the scent as well as by the eye. Now the *odour* of the woolly-haired races of men, and especially the Hottentot, in his wild or semi-barbarous state—"unkempt, unwashed, unshaven"—is peculiarly strong; as every one, who has sat behind a Hottentot waggon-driver, with the breeze in his nostrils, knows right well. The lion, prowling about after night-fall in search of a supper, is naturally allured by the pungent effluvia, steaming for miles down the wind; and doubtless equally attractive to him as the scent of a savoury beef-steak to a hungry traveller. He cautiously approaches—finds the devoted wretch fast asleep under a bush—and feels it impossible to resist keen appetite and convenient opportunity. He seizes on the strong-scented Hottentot, while the less tempting Boor is left unnoticed, perhaps by his side, but more probably reclined at a little distance, with his feet to the fire, or within or under his waggon. The following anecdotes, illustrative of these remarks, were told me by old Jacob Marè, (my respectable and friendly fellow traveller across the Great Karroo), who knew the parties personally.

A farmer of the name of Van der Merwe had outspanned his waggon in the Wilderness, and laid himself down to repose by the side of it. His two Hottentot servants, a man and his wife, had disposed themselves on their ready couch of sand, at the other side. At midnight, when all were fast asleep, a lion came quietly up and carried off the poor woman in his mouth. Her master and her husband, startled by her fearful shrieks, sprung to their guns; but without avail. Favoured by the darkness, the monster had conveyed, in a few minutes, his unfortunate victim far into the thickets, beyond the possibility of rescue.

A Hottentot, at Wolven or Jackall's Fountain, had a narrow though ludicrous escape on a similar occasion. He was sleeping a few yards from his master, in the usual mode of his nation, wrapped up in his

sheep skin *carosse*, with his face to the ground. A lion came softly up, and, seizing him by the thick folds of his greasy mantle, began to trot away with him—counting securely, no doubt, on a savoury and satisfactory meal. But the Hottentot, on awaking, being quite unhurt, though sufficiently astonished, contrived somehow to wriggle himself out of his wrapper, and scrambled off, while the disappointed lion walked simply away with the empty integument.

Numerous stories of a similar description are related by the back-country farmers, and many of them sufficiently well authenticated to prove the general fact of the lion's curious taste for "people of colour;" but I suspect there is also some degree of exaggeration about the matter, which will not fail to be exposed whenever we get the lion's, or at least the Hottentot's, "own account" of these transactions.

The following amusing story, which was related to me by some respectable farmers of the Tarka, who were present on the occasion, would make a good figure in "The Lion's History of the Man."—A party of boors went out to hunt a lion which had carried off several cattle from the neighbourhood. They discovered him in a thicket or jungle, such as abound in that part of the colony, and sent in a numerous pack of fierce hounds to drive him out. The lion kept his den and his temper for a long time—only striking down the dogs with his mighty paw, or snapping off a head or leg occasionally, when the brawling rabble came within his reach. But the hunters, continuing in the mean time to pepper the bush at random with slugs and bullets, at length wounded him slightly. Then rose the royal beast in wrath, and, with a dreadful roar, burst forth upon his foes. Regardless of a shower of balls, he bounded forward, and in an instant turned the chase upon them. All took to their horses or their heels: it was "Devil take the hindmost!" One huge fellow, of greater size than alacrity, whom we shall call *Hugo Zwaar-van-heupen*, (or Hercules Heavy-stern), not having time to mount his horse, was left in the rear, and speedily run down by the rampant *Leeuw*. Hugo fell—not as Lochiel, "with his back to the field and his face to the foe," but the reverse way; and he had the prudence to lie flat and quiet as a log. The victorious *Leeuw* snuffed at him—scratched him with his paw—and then magnanimously bestriding him, sat quietly down upon his back. His routed companions, collecting in a body, took courage at length to face about; and, seeing the posture of affairs, imagined their comrade was killed, and began to concert measures for revenging him. After a short pause, however, the lion resigned of his own accord his stool of triumph, relieved his panting captive, and retreated towards

the mountains. The party, on coming up, found their friend shaking his ears, unharmed from the war, except what he had suffered from a very ungentlemanly piece of conduct in the lion, who it seems had actually treated his prostrate foe in the same ignominious sort as Gulliver did the palace of Lilliput on a certain occasion, and for which he was afterwards justly impeached of high treason. This story continues to be repeated as one of the best standing jokes of the Cradock District.

The following occurrence is another evidence of the lion's general forbearance towards mankind, so long as other prey can be got. Three butchers' servants were crossing the Great Karroo, and, having halted near a fountain, with the intention of resting for the night, two of them went to collect firewood, the other remaining to knee-halter the horses, as is usual, to prevent them from straying. Whilst he was thus occupied, three lions suddenly made their appearance, and selecting each a horse, brought down in an instant the two that were haltered; the third horse, breaking loose from a bush to which he was tied, galloped off, with the third lion in chase of him. Of the two successful lions, one carried off his prey into the thicket, while the other, lying down beside his, watched the man, who, half stupified with the havoc, now began to think of making his retreat. But as soon as he moved, the lion began to growl and bristle up in a threatening attitude; lying quietly down again, however, when he stood still. After several timid attempts, thus checked by his watchful adversary, he judged it advisable to remain stationary till his comrades returned. They did so soon after, and the lion, on seeing this reinforcement, resigned his prey and hastily retired.

Another instance of the lion's preference of horse flesh to human, and even to Hottentot, occurred lately, at Jan van Zyl's, near the Brak River, Cradock District. A Hottentot servant of this family, riding home one night from a neighbouring farm where his wife resided, was pursued by two lions, and pulled off the horse by one of them, which, in the struggle, severely bit his leg and arm, but immediately left him without further notice, and joined his comrade in pursuit of the horse. The poor man was found next day by the herdsmen; and was lately seen by a friend of mine, quite recovered, though with the loss of a hand and foot.

[*To be continued.*]

To the Editor of the FARRIER *and* NATURALIST.

SIR,

I have lately turned over the annexed paper; it was written at the time it bears date, and intended for publication through another channel. If you think it worth inserting in "*The Farrier and Naturalist*," it is at your service.

I am, Sir,
Your obedient Servant,

Clapham, Oct. 6, 1828. F. C. CHERRY.

THE VETERINARY COLLEGE.

As the Veterinary College is called a Public Institution, and those who conduct it derive the advantages of its being so considered, it is only fair that the acts of these persons should be open to public examination and scrutiny; I therefore send for your perusal,—and its bulk, when divested of the pompous form of a book, will probably not prevent its being inserted,—the accompanying—I hardly know what name to use, but suppose it must be dignified with the appellation of — work, emanating from Mr. Sewell, and subjoin a few remarks connected therewith.

It appears that in May, 1817, the Professor's Assistant was ordered to submit a Report of his visits to the Continental schools at the next General Meeting.

Secondly, it appears that in June, 1818 (rather a long interval), a Report of some kind was read by the Chairman at a General Meeting; but that Report, whatever it might be, is not recorded.

Thirdly, it appears that in November, 1818, Mr. Assistant Sewell printed a Report of his visits to the Continental Veterinary schools, that is, a Report of occurrences that took place in 1815; so that, at any rate, he has no claim to indulgence on the score of having been hurried.

In this Report there is, indeed, a marvellous lack of Veterinary intelligence,—it is brevity itself; indeed, any commentary that I could attempt must infinitely exceed the work. However, I shall notice one or two particulars.

The travelling Assistant, in pursuit of Veterinary science and Continental Veterinary schools, informs his readers of fourteen places honoured by his research; though, unfortunately for Veterinary science, in ten of them there was not a single patient; in two others,

only a very few ordinary casualties; and of the other two, though full of patients, all that regards them is disposed of in a very few lines. But let not the reader be too fastidious, since this travelling Assistant has discovered that at Vienna the thermometer either influences or indicates temperature, I cannot make out which; that in France asses are kept to *produce* mules; and, moreover, informs his readers, that the Inspector of the French Veterinary schools, stimulated, no doubt, by the presence of the English Assistant, actually devoted a whole day to inquiry of the principal Veterinary Establishment of France. Here, however, a hiatus is to be found, as we are not told whether or not this Establishment condescended to answer the inquiries of its inquisitive Inspector, and, consequently, are left in the dark as to any information it might give.

I shall now merely add, that it appears a General Meeting in May, 1819, resolved, that in consequence of the zeal and assiduity evinced by Mr. Sewell, "*more especially in the additions which he has made to Veterinary science during his late tours upon the Continent*, and also in the skill which has been displayed by him in bringing into use very many horses, by dividing and cutting out a portion of the nerves,"—or, in other words, paralysing the foot,—"the General Meeting request Mr. Sewell's acceptance of a gratuity of three hundred pounds, with an addition of fifty pounds per annum to his present salary."

With funds so ample and members so liberal, what may not be hereafter expected from this flourishing Institution!

F. C. CHERRY.

September, 1827.

"REPORT TO THE GOVERNORS OF THE VETERINARY COLLEGE.

"BY MR. WM. SEWELL, PROFESSOR'S ASSISTANT.

"HAVING been directed by the annual General Meeting of the Governors of the Veterinary College, held last year, to give a Report of my visits to the Continental Veterinary schools, the following was laid before them, read by the President,* and is now respectfully addressed to the Subscribers in general.

* Did the late Duke of York really attend and read this brilliant Report, or is it a —— palmed upon the public?—we suspect the latter. A Secretary ought to know better than mistake a Chairman for a President.

"The return of peace having opened a free communication with the Continent, I became desirous of visiting the various Veterinary schools which had been established at a much earlier period than our own; and of endeavouring to ascertain the state of Veterinary science, or at least as much as a cursory visit to each of them would admit; commencing with the earliest formed establishment, at Lyons.* With that view I proceeded there direct in November 1815, and being favoured with a letter to the Mayor of that city (by Sir Thomas Webbe, one of our earliest subscribers), I was readily introduced, by the same means, to the Director of the school, and kindly permitted to view the Museum and other parts of the Institution by repeated visits.

"The Museum contained many preparations of great utility and novelty, appertaining to the Veterinary art; such as full-sized muscular subjects, the same with the blood-vessels injected; and also the brain and nervous system, entirely separated from other parts, in a fine state of preservation. The last are difficult to prepare, and not to be procured.

"Many things of a minor description, but equally useful, are amongst the collection; and an assortment of shoes of various countries.

"The Infirmary stables are good of their kind, but not extensive; paved and drained in the ordinary way, and ventilated by the windows only. There were very few patients in them, and those ordinary cases. There are appropriate places for other domestic animals, as dogs, &c. The forge is commodious, and well adapted for shoeing horses, and instructing the pupils in the art of making and putting on shoes, all which is superintended by a Director of that particular branch of the art, who gives manual instructions.

"A Botanical Garden is attached to the school; lectures are given on Botany, and also on Chemistry, in a room adjoining a laboratory.

"The Theatre of Anatomy is capable of containing about one hundred pupils, where the lectures are delivered on that subject, and on Veterinary surgery and diseases. The dissecting-room is adjacent, and well suited to the purpose.

"In the rear of the buildings is a yard and paddock, which are occasionally used for the purpose of turning horses out.

"Mons. Bredin, the Director, favoured me with specimens of shoes, as used at the school, several Tracts on Veterinary subjects, and letters of introduction to the Inspector and Professor of Anatomy, of the school near Paris.

* Opened January 1, 1762.

"Arriving at Paris with a letter to Mons. Huzard, Inspector of the French Veterinary schools, he most obligingly facilitated the object of my journey, by permitting his son to accompany me in a visit to the school, situated at Altfort, about four miles from Paris, and devoted a whole day to inquiry and inspection of that extensive Establishment, which is now the principal school * of France.

"The remarks relating to the several departments and arrangement in the Lyons school, apply also to this, but which is in a more improved and complete state, particularly in regard to the Museum, which occupies three large apartments; the upper one of which is a complete and extensive library on Veterinary science, Natural History, Agriculture, &c. A resident Librarian has the charge of it.

"A powerful electrical apparatus is fitting up for medical purposes. Instruments and implements of all kinds are kept as patterns.

"In addition to the lectures delivered at the Lyons school, here are given agriculture, rural economy, and medical jurisprudence. The latter I consider very important, and might be attended with great advantages, in this country particularly.

"Stallions are also kept at the expense of Government, and annually sent into the provinces, in order to propagate their respective races. With the same intention, asses are also kept to produce mules, which are much used in some provinces.

"The Infirmary stables and places for domestic animals are more extensive than at Lyons, and the arrangement more select.

"The forge and its appurtenances afford better opportunities for instruction in shoeing, and operations in that branch. A small portable forge is also kept, to be removed to any part of the stables where its use is required. This appears to be exceedingly useful in urgent cases, and worth adopting.

"A field of about six acres is set apart for agricultural experiments. It was under a course of winter fallow.

"I was obligingly presented with specimens of various kinds of shoes employed at the schools, and also with works on Anatomy, Medicine, Surgery, and other subjects relative to the Veterinary art. Some instruments of a novel kind I also procured.

"The Royal stables at Paris are well-constructed buildings, kept in good order, paved, drained, and ventilated, like the school stables. The horses do not stand on litter during the day, as is customary in most stables in this country. They appear capable of containing

* It was opened in 1766.

about two hundred horses. An infirmary, stable, and forge, is attached. There were four or five patients, ordinary casualties, but none sick. All the horses are shod upon the plan of the Veterinary schools, under the superintendence of a resident Veterinary surgeon.

"The French cavalry is also shod upon the same plan.

"Having derived great satisfaction and, I trust, improvement in Veterinary knowledge by the visit to the French Veterinary schools, I had leave granted, by the General Meeting in May, 1816, to proceed to those of Germany; which I accordingly did, in July following, and arrived at Vienna in August, with a letter to Lord Stewart (Ambassador at the Court of Vienna) from Captain Bamford, Adjutant of the Light Horse Volunteers, which procured me an introduction to Professor Waldinger, at that school.*

"The Theatre of Anatomy, Museum, and means of theoretical instruction, are not so extensive as at Paris; but there is great scope for practice, the stables and other accommodations being calculated to receive a considerable number of patients, all of which were occupied during the time I remained there; where I had the opportunity of seeing some diseases peculiar to the season, which was then hot† and dry. Those were lamenesses, called fever in the feet, and lethargic attacks.

"The lameness was treated in a similar manner to what is practised in this country, but with the addition of being turned in a paddock, where the grass was high and kept watered, and well shaded with trees. The horses with lethargy were also kept in the paddocks under the trees, for the advantage of cool air. I also observed a shower-bath, under which the head is often placed: their medical treatment was of an opposite nature to what is practised in this country. From the numbers that were convalescent, it appeared more successful, although it does not accord with our general theory of that disease.

"The digestive organs and liver are considered as the seat of the disease, and the vertigo coma, or lethargic affections, as merely symptomatic. The practice was consonant to their theory, and, as before stated, successful.

"The pupils are taught shoeing, practically, at the forge.

"The shoes employed differ from our own, and those of the French school. Professor Waldinger favoured me with patterns. Books on the Veterinary art I procured at the school.

* "Established by the late Emperor, Joseph the Second."

† "The range of Fahrenheit's Thermometer was from 72° to 85° in the shade, while I remained at Vienna."

"The stables * are not of the first order, but roomy, and floored with wood; a common practice in Germany. It is preferred to any kind of pavement, for its elasticity to the feet.

"The other accomodations are very good; such as box-stalls, and places for other domestic animals. The Pharmacy and other offices are well arranged.

"The stables have no other means of ventilation but by the windows, some of which open above the horses' heads; the plan of draining is very good. The litter is removed during the day, unless when required for particular cases.

"There is also a very old hermaphrodite horse, which partakes mostly of the male, of which it appears to be a malformation.

"The imperial stable is a fine spacious building, capable of containing several hundred horses. It is floored with wood, well drained and ventilated.

"An Infirmary is attached, but there were no patients in it.

"There is also a forge, and a good contrivance to suspend a restive horse for shoeing, or others for particular operations. The horses are shod upon the school plan, and the cavalry also.

"Prince Charles's stables are exceedingly good as a model, on a small scale; the floor is peculiar, wooden piles, or pieces, cut out of a rounded figure, like large paving stones. Well drained and ventilated.

"Arriving at Prague, I found nothing particularly interesting on Veterinary subjects to detain me, therefore proceeded on to Dresden, at which city there is no school; the pupils go to learn the profession at Vienna, Berlin, or Hanover.

"The royal stables are, however, worth visiting; the coach-horse stable is probably the best drained of any yet seen; a covered streamlet of water † passing down the centre, which keeps it always clean and sweet. They are also well ventilated, lofty, light, and spacious. and floored with wood.

"The saddle-horses work unshod from spring until autumn, when the wet season commences. Their feet are in a fine state of preservation in consequence. There were none sick or lame. I procured Saxon shoes at the King's forge.‡

"The kennel of boar hounds is worth attention, to observe the variety of arrangement in every respect, breeding, &c.

* "The buildings are considerably dilapidated, and a grant was expected soon to rebuild the whole premises. They are constructed of wood."

† "A branch of a rivulet, called the Weser, flowing into the Elbe close by."

‡ Saxon shoes procured in Saxony!

"I arrived at Berlin late in August, with a letter of introduction from the Earl of Harrowby to Mr. Rose (Envoy at the Court of Berlin), who accompanied me to the Veterinary school,* and passed several hours in viewing the greatest part of the establishment.

"The Theatre of Anatomy, Museum, and Dissecting-rooms, form one detached building, probably the most ornamental, handsome, and commodious structure of the kind in Europe. It bears some resemblance to our late Theatre,† and the new one at St. Thomas's Hospital, in Southwark.

"The Museum is less extensive than at Paris, but larger than that of Vienna, and contains some novelties which they do not possess. It has a complete series of skeletons, down to the smallest quadruped—such as the horse, ox, sheep, dog, &c. &c.; also birds, and the stuffed skin of an African horse, which had not the slightest appearance of a single hair upon it. It is of a dun colour, and is no doubt a particular genus.

"There is a good collection of shoes of different countries. Professor Nauman presented me with some specimens of those used at the school.

"The stables are well constructed, paved, drained, and ventilated.

"The box-stalls, and places for other domestic animals, are well arranged. Litter is not used during the day, but sand strewed under the horses: an excellent plan for cleanliness, and particularly to be recommended.

"The stables were full of patients of all descriptions; several lame and lethargic, the same as at Vienna.

"The practice, with a little variation, similar to that at Vienna. There was also a successful recovery of a lock jaw, by a different remedy from what we practice.‡

"A riding-house is attached to the school, for the instruction of pupils intended for the army, who receive pay from Government upon entrance.

"The forge is well-conducted, and the pupils manually instructed by the Director. The means of securing restive horses for shoeing, or operations, are very ingenious, and worthy of imitation.

"The king's horses are all shod at the school forge. The cavalry is also shod upon the same plan.

* "Established by the late King, Frederick II."

† Now, alas! no more.

‡ "A method is pursued of allotting to the care of each pupil one or more patients: a highly useful plan, and particularly worthy imitation in our own Institution."

"There is a beautifully-constructed warm and vapour bath, with a room adjoining, capable of being heated by a stove, to receive the patients after bathing.

"An ingenious hydraulic machine supplies either hot or cold water, as the thermometer indicates.

"There is likewise an excellent cold bath, supplied by a branch from the river Spree, passing through the premises.

"A water-engine is kept in use for medical purposes, and applied in lethargic cases particularly.

"There is an excellent ice-house for medical purposes. Ice was said to be used in some diseases successfully, wherein we consider it injurious.

"A room is fitted up with the most powerful electrical apparatus that, probably, was ever constructed; said to be successfully employed in various diseases, such as paralytic attacks, tetanus or lock jaw, cataract, and gutta serena (paralysis of the optic nerves).

"The Pharmacy, and other offices, are well arranged.

"There is a good Botanical Garden, and several grass paddocks, well shaded with trees. A branch from the Spree amply supplying them with water. Some of the patients were turned out.

"Near the Botanical Garden there is an excellent structure for drying preparations, and bleaching bones. It is open frame-work, upon the principle of an aviary.

"There is an hermaphrodite horse, twenty-six years of age, kept at this school: it is similar to that at Vienna, and has tushes like a stallion.

"The royal stables are handsome buildings, and kept in excellent order. They are well paved and ventilated, and sand used under the horses in the day-time.

"They adjoin the Spree, into which a paved slope enables them to cold bathe, or wash the horses at any time.

"There were no sick or lame horses at the time of my visit.

"The royal barracks are kept in similar order.

"The ventilators admit of being opened and shut at pleasure. In some instances the front of the stalls are floored with wood, to give elasticity to the fore feet.

"Before quitting Berlin, I procured all the works of the existing Professors, and several others. Also some useful instruments for relieving sheep and cattle, when afflicted with an over distention of the stomach, from gas being evolved, called Hoven.* They are very successfully employed in Germany.

* "I have since sent several into the country to be made trial of."

"Arriving at Hanover, I called upon the Assistant-Professor, Houseman, whom I had seen in England. Was introduced to Professor Havemann, of the Veterinary school,* and shown the Museum, which is upon a small scale, but very useful. He obligingly answered all my inquiries, and communicated his opinions on several subjects with great clearness, as to some doubtful points in physiology. He has a good collection of the shoes of different countries.

"The Assistant-Professor presented me with some patterns of those in use.

"The Infirmary stables were much dilapidated during the war, by being occupied by foreign cavalry. There were no patients in them, so that the opportunities for practice is limited to the King's stables and out-patients.

"The royal stud is shod at the school forge.

"The royal stables, which will contain between two and three hundred horses, are near the school, and are fine buildings, well-constructed, light, airy, spacious, clean, and well ventilated. The windows have canvas shades, which I have not observed in other stables: doubtless an advantage, under a bright sun, and in hot weather.

"Before quitting Hanover, I procured some useful Veterinary works and instruments.

"In Holland † there is no Veterinary school; but by observations and inquiries I derived some useful practical information, and brought home several specimens of various kinds of shoes for healthy and diseased feet.

"The royal stables at the Hague are well constructed, and in fine order. Sand is used in the stalls in the day-time: they are well paved, drained, and ventilated. The heads of the stalls and bottoms of the mangers, being lined with glazed Dutch tiles, are kept in the cleanest state, with very little trouble.

"In several other stables I observed a similar arrangement.

"At Brussels nothing particularly worthy notice appeared, but the effectual and simple manner of draining one large barrack stable capable of containing about two hundred horses. It is well worth consideration and trial in a public establishment."

* "Established by his present Majesty for the Electorate, now Kingdom of Hanover."

† "From this, and some other countries, were there are no Veterinary schools, pupils go to those of France and Germany."

To the Editor of the FARRIER *and* NATURALIST.

SIR,

THE favourable reception which you have given to my former letter, induces me again to address you on French Veterinary affairs; and it will be my study to offer only such observations as I am warranted in making from a short stay in that country, occupied chiefly in obtaining information on these subjects. The most decided feature in the constitution of the French Colleges, is that of their being completely under Government patronage,—a circumstance which adds to their importance, and is productive of some good effects—creating a degree of regularity in their system of teaching, and raising the profession in public estimation. As every pupil is obliged to submit to a prescribed course of study, which must occupy a certain time, and comprise *all* the subjects which it is thought needful for the Veterinarian to understand, the testimonial they receive, after a public examination, is a valuable document, when contrasted with Mr. Coleman's certificate signed by his medical friends. The interest of the pupils is, or ought to be, the first and only consideration; for where each Professor receives only a regular annual stipend, education must be the leading object of the institution; whereas, in the English school, which appears to be supported only by an association of persons for mutual benefit, the case is wholly different, and the Professor has an undeniable right to make his situation as lucrative as possible: the primary purpose of the establishment is getting money, and the instruction of Veterinary pupils is merely a secondary object; and, as the College at present stands, a sort of favour conferred upon young men who desire to study this profession, viz., that of teaching the art and mystery of Veterinary surgery in consideration of a stipulated sum. I do not believe, however, that it is generally considered in this point of view, at least in the letters of various pupils I have seen in your journal,—they seem to speak rather as if they were claiming rights, instead of asking favours.

Our English College is not bound by law to dispense Veterinary instruction, but the French schools are instituted for that particular purpose: they have no subscribers, and disregard private practice; but are so much the servants of the public at large, as to be obliged to give professional opinion gratis to those who ask it.

Thus far, Mr. Editor, I think you will allow they are superior to us; but still there are inconveniences in this system, though not equal in magnitude, I should suppose, to those complained of at St. Pancras. Legislative interference, beyond a certain extent, is decidedly unfavour-

able to the progress of true knowledge, though it often gives an imposing character to scientific institutions. It tends to check the active spirit of improvement in the Professors, and rather fetters the exertions of the pupil, when the former receives a regular stated salary; and the latter is compelled, whatever may be his talents or abilities, to study a fixed period before he can obtain a certificate of competency.

Embracing, as their system of education does, the whole field of Veterinary science in its widest range, it is evident that much of the student's time is wasted in trifling studies,—things which he must infallibly forget, and that rather impede his progress in useful knowledge, by loading the mind with a variety of matters almost unconnected with the subject of practice. It is not that agriculture and medical botany are wholly irrelevant to the Veterinarian's pursuits, but the importance which is attached to them in these French schools seems more to bespeak a dearth of intelligence relating to the horse; and they are perhaps introduced as much with a view to render the student's path a little more crooked, for the sake of display, or to add another Professor to their corps, as for any other reasonable purpose.

Had they exhausted the subject of the horse, or even made any remarkable discoveries or improvements in his treatment, these remarks would be impertinent, but the contrary is the fact; notwithstanding the diversity of their acquirements, and their multitudinous writings, the French have not for a long period added anything very valuable to our stock of practical knowledge,—not a new medicine, or new operation, have we been enabled to adopt, though decidedly prejudiced in favour of everything they send us.

As practitioners, it does not appear, then, that they are superior to the English; at least the proof lies in what I have stated: though a much more numerous body, they have taught us nothing of late, while all that is original and valuable has emanated from our island, and is now undergoing its ordeal among them. In minutiæ the French excel, and they have also great command of precise scientific language, which is employed in setting forth the most trifling observation; and their essays evince a degree of professional pedantry that would scarcely be tolerated amongst us. But a different influence rules the affairs of horses in the two countries. The Veterinarian's authority is there established and undoubted, whereas here, as it were, we have but just obtained firm footing as a respectable class of men, and are still subject to be called in question, occasionally by the unlearned practitioner, by the cunning sportsman and imperious jockey, and even sometimes by an ignorant groom.

The belief in jockey knowledge has no place at present in France; and I was informed by an eminent practitioner in Paris, that the groom very rarely steps out of his proper province, to canvass the propriety of a Veterinarian's measures. To return to the schools; their greatest fault is an excess of theory, which is exhibited in the publication of books of all sorts and sizes. A vast quantity of books are distributed at the annual examinations of the pupils, furnished by the Inspector-General of the Veterinary schools, from his bookselling connection.

However, it ought fairly to be stated that there exists a laudable spirit of emulation among the profession in France, and not the least so at the Colleges. It is true that no discoveries or improvements of first rate importance have proceeded of late from their exertions, but they are indefatigable in turning over and over again, and setting in new points of view, the various facts in Veterinary science which are admitted to be correct, and re-discussing subjects which, with us, being once admitted, cease from that time to be matter of debate. Having long taken the lead in Veterinary affairs, they justly claim seniority over all other nations, and are extremely jealous of the improvements of foreigners. There is a kind of rivalship between their two most popular journals—the *Recueil de Médicine Vétérinaire* and the *Journal Pratique*. More has already been written on the operation of Neurotomy, in these periodicals, than has appeared altogether on the subject in England. Some have warmly espoused it; others condemn it as warmly: the result will probably be much the same as in this country, when the novelty of its first introduction has subsided. Their nationality, however, is fast subsiding in favour of Mr. Bracy Clark's doctrines, which have been acknowledged and adopted by the Colleges; and a new edition of his work on the Foot is now publishing at Paris. Extraordinary as it appears, it is nevertheless true, that these opinions are nowhere denied but at our own College. Whatever the French may suppose are Mr. Coleman's reasons for opposing them, it seems by this fact that they do not hold that gentleman's judgment in the very highest estimation. Bourgelat's rules for shoeing, and the proportions he has laid down for the shoe, appear to have been quite satisfactory to the French; and this subject has undergone but little of that discussion, and those various changes, which, for a long time past, have attended its practice in this country. At the same time their horses are very far from going, as some writers have reported, universally well; on the contrary, a great number of them go miserably. It is true that the horses employed in their stages,

being of a coarse, hardy breed, suffer much less from shoeing, and go better, than the same class in England; but we have only to look at the numerous well-bred horses in the metropolis, to learn that the evils of contraction and lameness are no better averted by their method than ours, when it is fairly tried on the same kind of feet—for it is on this particular that everything depends. As they are now making great exertions to improve their stock by importations from Britain, and attention to breeding, there can be no doubt that, in a few years, the observation that French shoeing is superior to ours, will be no longer passable at all.

I must agree, Mr. Editor, in general, with your remarks on this subject, in a former Number, but am inclined to attribute even more to the extent of the bearing surface their shoes have upon the ground. Seldom they project less than a quarter of an inch on the outside. This plan of coarse nail holes, and projecting shoes, is particularly suitable on their light sandy roads, which are very favourable to the wear and nailing.

Yours, &c.

CHARLES CLARK.

Stamford Street, Blackfriars,
Oct. 11th.

To the Editor of the FARRIER *and* NATURALIST.

MR. EDITOR;

As you have been kind enough to insert my letter in your last Number, and also to answer my inquiries relative to our Clerk's (or *Pharmacien*, as he sometimes styles himself,) lecturing and giving certificates, I shall again take the liberty of troubling you with a *query* or two, respecting the office which Mr. W. J. T. Morton fills at the Veterinary College. I have to regret being under the necessity of thus intruding upon you; but trust that, after having been imposed upon,—for as such I consider myself,—I am most anxious to prevent others, particularly the new pupils, from suffering in the same way; and this I hope will be considered by you as a sufficient plea for my request.

Query 1st. Does Mr. Morton receive an adequate salary for the office which he fills as Clerk or Secretary to the College?

2d. Is he allowed by the Governors to receive a guinea each (or

any fee), from as many pupils as he can cajole, for free admission into the Pharmacy, under the cloke of private instruction in dispensing?

3d. Does Mr. Coleman sanction his selling his Lectures, by lending a manuscript copy to those who will pay him?

4th. Is it true that a union of the HOUSES of Coleman and Morton is in agitation?

I am, Sir, yours,

Royal Veterinary College, much obliged,
Oct. 12. AN OLD PUPIL.

P. S. I have a few *curious* facts, relating to the office a certain spruce person holds at the College, at your service; and if you think proper, I will forward them.

In answer to the first query, we have to observe that the Secretaryship to the College, an office which is held by Mr. Sewell, has a salary of from two to three hundred a year attached to it; but it appears, in consequence of the great number of situations which Mr. S. has monopolized, it has become necessary to add another person in the shape of a clerk; but as the employ was not deemed sufficient to occupy the whole time of one person, it was joined with that of the Dispenser—a situation occupying but a small portion of time: thus constituting about a moderate employ for one person; and to which, independent of lodgings, fire, and candles, with some other advantages, a salary of eighty pounds a year is attached; and we have no hesitation whatever in stating that we consider it a fair remuneration.

Next, if the Governors permit the extortion of any sum from the pupils, by the minor officers of the College, we consider it cruel and unjust, after the twenty guineas pocketed by Mr. Coleman; and we hope and trust that it is not done under their sanction, and if not, that they will take effectual measures to put a stop to such a practice, which, however, can only be done by instituting proper lectures; for if the pupils do not get sufficient pharmaceutical instructions from Mr. C., they do perfectly right in obtaining it where they best can.

The practice of selling copies of Mr. Coleman's Lectures has existed so long, that we cannot for a moment even suspect it has been done without his knowledge: we say nothing about his consent;—his love for money is, we believe, well known.

We know nor care nothing of family affairs; but are always glad to receive information respecting the College, in the shape of facts, whether *curious* or otherwise.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

I have, with great pleasure, observed in your former Numbers, your notice of our *many* grievances, *and we pupils have to thank the Editor of this work* for many new improvements *that are to be.* It is confidentially announced, and that from good authority, that we are to have a Demonstrator. I have now been nine months at the College, and a regular attendant at the Dissecting-room, yet never have I had, or seen, a Demonstrator; being destitute of which, we cut and slay (it cannot be called dissection) twice as many subjects as there is any occasion for.

But my more particular object in writing these few lines, was to acquaint you of the manner in which the dead are disposed of: the last five subjects were taken away, and I think only two pupils had the opportunity of seeing them; when, perchance, we may catch a glimpse of a dead subject, we have no Demonstrator. Mr. S——— looks, and does no more than look. Now and then there are some few sentences drop from his lips, such as the following:—"You see, I said he would die,"—"Great inflammation,"—"Cut here,"—"Cut there;" and, lo and behold! that is all the *wonderful knowledge* we gain out of a subject, and away goes the horse to the knacker's, for which, I understand, Mr. S——— gets 1*l.*; but if a pupil dare to touch the subject before this *Assistant*-Professor has seen it, he *is considered worse than a felon.*

But I hope, Mr. Editor, you will not permit such misconduct and irregularity to be looked over without notice. I shall conclude, by returning you thanks for the contents of past Numbers; and by inserting the above in your valuable periodical, you will much oblige many constant readers, and

SOME OLD PUPILS.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

I admire, very much, the ingenious mode of applying the actual cautery through the medium of an intervening substance, as detailed in the last number of "*The Farrier and Naturalist,*" at page 441; and although, from the statement there given by M. Gellè, it may be

by some considered as a modern mode of treatment;—it is, in point of fact, a very old one: our countryman, Gibson, quotes it from Solleysell, whose words are these:—

"Shave the hair, knock, rub, and soften the splent; then take a piece of the rind of bacon, not very fat, and lay it on the part with the fat side outwards; afterwards apply a flat cautery, or red-hot iron, of the bigness of a shilling, holding it upon the skin, and in the mean time order another iron to be heated, which must be applied on another part of the skin, but still over the splent; continue, after the same manner, till the swelling be dissolved; then lay a plaster over it, and shavings of cloth over that, taking care that the horse do not bite it off."

The mode of blistering proposed by Sir A. Carlisle,* by a metallic substance heated in boiling water and wetted silk, bears some resemblance to this treatment, and perhaps the idea may have been derived from one or other of these sources.

The following case of Fractured Jaw is also at your service.

July 28, 1828. A black gelding, five years old, belonging to the 3d Reg. Dragoons, had one of the upper maxillary bones fractured, probably from rearing, and in descent striking the teeth on a cross bar. The three teeth remain firm in the fractured portion of the bone, and protrude forwards and upwards. The hemorrhage was stated to have been, at first, considerable; but it had ceased when I saw the case, about three hours after the accident. The fleshy palate was lacerated and extensively separated.

I replaced the bone, as nearly as possible, in its natural situation, which was done without much difficulty, and secured it there by a ligature embracing all the upper front teeth. To avoid the risk of mischief, by drawing hay from a rack, it was ordered that he should be fed only on bran; cut hay was, a few days afterwards, mixed with the bran.

July 30. The fractured bone remains in its place, and there are no unfavourable symptoms.

August 2. Is going on extremely well.

6th. Continues to go on well.

13th. The like.

20th. The like.

27th. The parts are now firmly united, and without any deformity. The ligature was left to come off of its own accord. There has not

* Vide *Lancet*, No. 171, page 315.

been a single unfavourable symptom; and the parts being now strong and healthy, the horse was this day dismissed to duty.

F. C. CHERRY.

Clapham, Oct. 23, 1828.

THE FAULTS AND DEFECTS TO BE AVOIDED IN BUYING HORSES.

[Continued from page 457.]

I BELIEVE most of those who have had any great dealings in horses will readily agree to this—that few things in common life are more difficult than buying a horse well; and I have known many who have boasted of their skill and dexterity that way, and made greater pretences than others in the knowledge of horses, very much deceived. This is a matter that does not depend upon a man's having more wisdom or parts than his neighbours, but upon long experience, with a good taste or fancy, regulated with some judgement; otherwise, a man is like to make but an indifferent choice.

There are so many circumstantial niceties about horses, especially in what relates to the shape, make, and going of a horse, and so much is said about the marks of goodness and badness in horses, that it would fill up a whole volume to recount half what we may hear talked in a few days upon that subject; and therefore I shall only here have a regard principally to such things as relate to a horse's being sound or unsound, as that which more immediately concerns my present province, with such natural defects and imperfections as render horses the most unfit for common use; and shall recommend those, who would be further instructed in such matters, to the writings of the Duke of Newcastle and others on the like subject.

When a man is about to choose a horse, if he be ever so good a judge, yet he must be forced to take some things upon trust, unless he be allowed a sufficient trial; for several defects in a horse are of such a nature, that they cannot easily be discovered till a person has had him a short time in his own keeping. If a horse has a lameness in any part that is easily perceived; if a horse's limbs are swelled; if he has specks or defluxions on his eyes; if he startles and flies off at the sight of common objects; if his feet are so plainly bad as to make him go crippling along; if he heaves at his flanks, and coughs;—these, and many other such like, are defects that cannot be hid, even from those who perhaps know but little of a horse. And as to the shape and

going of a horse, some criticise with more judgment, and are less guided by fancy than others; but the hidden faults of a horse are not so easily seen into. For instance, some horses, when turned six or seven years old, are subject to a dry chronical fixed cough, which comes upon them at uncertain times, perhaps twice or thrice a day —especially when such horses happen to catch a fresh cold. Sometimes a horse with this malady coughs seldom, but often drinking: sometimes one shall never hear him cough while he is in exercise, but as soon as he comes into a stable, or stands still any time after riding, he falls into a vehement fit of coughing, which often lasts but a little while. Sometimes he shall not be heard cough more than any other sound horse for several weeks; and when the owner is ready to think him recovered, he shall fall again into his old way of coughing all of a sudden, and without any symptoms of a fresh cold. As this is a malady that cannot be easily cured, and often, though not always, endangers a horse's wind, so it is not easily discovered by any apparent symptoms to the buyer, unless by chance he sees him fall into one of his fits of coughing; for the method that most people take to try a horse's wind, by pinching the windpipe, will make any horse cough dry and hollow: so that a man by such trial may be easily deceived; and there will be but little alteration in the flanks, unless a horse be old, or his wind pretty far gone.

The goodness or badness of the eyes is another thing wherein the best judges are sometimes mistaken, for most people regard the clearness and transparency of the eye, which indeed ought to be considered; but it is worth observing, that horses, before they are six years old, have not that transparency in their eyes which they arrive at afterwards, because while they are young and growing, their juices are viscid and balsamic; so that their eyes look thicker or clearer in proportion as their blood and juices happen to be more or less in a good state. The same may be observed in all horses that have colds, when the vessels of the eyes are full: the eyes at times look thick, and sometimes inflamed; and a blow on the eye, or a bite, will have the same effect, when there is not the least danger of blindness.

It is not, therefore, always the clearness of the eye that denotes its goodness, but a man is also to form his judgment from other indications, particularly from the form and manner of the eye, which includes not only the body of the eye, but the eyelids, eyebrows, and all the parts belonging to it. Many good eyed horses have a heaviness in their countenance, with a lowering brow; yet great numbers of this aspect go blind with cataracts when they are about seven years old,

or between seven and eight, and sometimes later. Those are the most suspicious where there is a bunch of fullness between the upper eyelid and the eyebrow, with a fulness round the under eyelid, so that the eye appears as if it were environed in a ring. Such horses are often fleshy about the head and jaws, which, upon every cold, or other slight accident, exposes them to defluxions on their eyes.

When the eye is extremely flat, or sunk within the orbit, it is always a bad sign, even though there be no defluxion or humour upon it. A small pig eye is none of the best, nor a very large gogling eye: the one often perishes for want of nourishment, occasioned by some defect in the nerves, or the arteries that supply it with blood; the other by being too much exposed to accidents, and by having too great supplies of nourishment.

That eye is almost always weak which is of a longish oval figure, especially where the two corners are narrow like the shape of an almond. When the coat or membrane that rises from the under part of the eye happens to be large and thick, so as to press the eye-ball, and the caruncle or kernel on the inward corner next the nose is spongy and moist, though there is a remedy for this defect, yet such horses in the end generally go blind.

When the eyes are bad, the muscles or movers of the eyes are generally weak; so if the eye looks dead and lifeless, the best way of trial is to hold up the horse's head in the same manner as when a drench is to be given which will draw the eye upwards; and if it remains there fixed and immoveable, or has a languid motion, it is a pretty sure sign the eye is bad; and this trial will, for the most part, hold good whether the eye be moist or dry.

Some regard the colour of the eye, which, however, is different according to the difference of colour in horses; and indeed we are so far to regard the colour, that if the iris or circle that surrounds the pupil or sight of the eye be distinct, and of a pale variegated cinnamon colour, it always denotes a good eye. For the iris is always most distinct where the humours of the eye are most clear and pellucid; and those horses have the best eyes which, in colour, resemble the eyes of a sheep or goat; but few horses arrive to that perfection of colour and transparency, till they are at least six years old or upwards. On the other hand, if the iris or circle round the pupil be of a dark, muddy colour, and does not appear distinct and variegated till one approaches near the eye, and if the narrow sky-coloured verge (which we observe more or less in most horses on the outside of the iris)

happens to be of a milky hue, it is no good sign. Nevertheless, wall-eyed horses have, for the most part, good eyes.

Some in examining the eyes have a regard to the colour of the horse, which I take to be no sure way of judging; for as there are good horses of all colours, so there are good eyed horses of all colours. The grey, especially the pigeon or dove-coloured grey, are the most suspected; also the iron grey, and the dun, &c. But I think I may say, from experience, that whatever colour is most common among horses, so as to exceed in number, abounds most with bad eyes. And I have observed as many bad eyed horses among the black coach breed as any other.

Most people in examining a horse's eyes, lead him under a gateway, or some shade, that they may see perfectly the colour and transparency of the eye; but the best way is to observe his countenance when he comes first out of a dark stable into a strong light, for if he has any weakness in his eyes, he will wrinkle his brows, and look upwards to receive more light: and if the pupil at the same time be large, it is a bad sign; and, therefore, the best way is to look to a horse's eyes first in the shade to observe the dimensions of the pupil, and if that lessens upon his coming out into a strong light, it is almost an infallible sign that the eye is good.

Some suspect all horses that startle to have bad eyes—indeed many bad eyed horses are apt to startle. But a horse that stares and looks upwards, lifting his feet high when he moves, and as if afraid to touch the ground, such is more likely to have bad eyes than one that startles; for many horses startle merely out of fear, and I imagine not a few from some defect in vision, viz., from seeing objects indistinctly at some distance, in all which cases the eyes may be strong and durable, though many fancy them to be weak. But if a horse frequently startles when no object is before him that might cause him to startle, we may then suspect his eyes to be but indifferent.

Upon the whole, that eye is generally good where the eyelids are thin; where the outward coat or tunic of the eye is also thin and delicate; where the caruncle next the nose is small and dry; where the eye is transparent and sprightly; where a horse has a bold resolute look, and takes notice of objects without fear. On the other hand, when a horse moves his ears backwards and forwards, and seems surprised at every noise or motion of the hand; when he raises his feet high, is uncertain in his walk or step, and unequal in his goings; when his eyes appear full and swoln, with a fleshy circle round them, or when they are sunk or flat, or of a longish oval figure; when the outward

coat is thick and covers a great part of the eye-ball, and glands or kernels of the eye are spongy and moist;—all these denote the badness of the eyes, and are often the forerunners of blindness.

[To be continued.]

ROYAL VETERINARY COLLEGE CASES.

A Chesnut Gelding, Seven years old,

Belonging to Matthew Wyatt, Esq., was admitted on the 6th of August, and the disease stated by Mr. Sewell to be *Dyspepsia.*

The horse was out of condition, and did not feed well. Was directed to have hay and corn diet, and a ball given composed of two drachms of powdered ginger, the same quantity of sulphate of copper, with sufficient turpentine to make it into a ball.

On the 8th the dose was directed to be repeated.

10th. Farcy tumours were to be seen under the belly, and the glands under the jaw enlarged; likewise a discharge from the nose.

A rowel ordered to be made in each thigh, and one ounce of powdered ginger, half an ounce of sulphate of copper, and the same quantity of turpentine, formed into a ball to be given.

12th. The enlarged glands directed to be blistered, the ball to be repeated daily, and the rowels to be kept discharging.

14th. An ounce of powdered ginger to be given twice a-day in a ball, and to have potatoes to eat with the corn.

15th. Sulphate of copper, half an ounce; powdered ginger, one ounce: to be given twice a-day.

16th. Two ounces of ginger, and three drachms of sulphate of copper, to be given in a drink.

17th. Two ounces of ginger, and two drachms of sulphuric acid, to be given as a drench, in three pints of water.

18th. The dose to be repeated.

19th. Three quarts of blood directed to be drawn from the jugular vein.

Mr. Coleman stated, as a reason for this, that taking away blood acted as a tonic.

From the 20th and 21st the horse became rapidly worse, *from the effect of the tonic, and which did not appear to be a suitable one for the complaint.* The discharge from the nose became much worse, he breathed with much difficulty, and refused all food; and in the night of the 22d he died.

Post Mortem Appearance.

The lungs were tuberculated, the mucous membrane lining the nose, the nasal frontal, and maxillary cavities, were ulcerated.

A Brown Gelding, Four years old,

Belonging to W. Wimbush, Esq., was admitted on the 1st of October, with Broken Knees: the accident had happened nearly a week before.

The capsular ligament was cut through, and the periosteum covering the bone also destroyed, with the integuments considerably cut and bruised, and the synovia escaping.

The wounds were directed to be well washed with warm water, turpentine ointment to be applied and a bran poultice over, with a mash diet.

2nd. Four quarts of blood directed to be drawn; one ounce of aloes given in a ball, and the same dressings continued.

3d. Oil of tar directed to be applied instead of the turpentine ointment, and the poultice as before.

5th. As the swelling was rather reduced, the poultice was directed to be discontinued; oil of tar to be applied twice a-day; and a bandage to the part. Seven drachms of aloes to be given in a ball.

7th. Oil of tar to be applied as before, and five drachms of aloes given in a ball. The horse gradually became worse till the

10th. When the parts were considerably swollen, and with great and general irritation.

Fomentations were directed; after which, turpentine ointment, three drachms of aloes in a ball, and a bran poultice at night.

The case proceeded, with the symptoms increasing, till the 14th, the same treatment being pursued.

On the 16th, the animal became rapidly worse, and died in the course of the day.

As the parts were in a state of sloughing and mortification, little more could be observed than that in the fall a piece of bone had been broken, which Mr. Sewell asserted was an exfoliation, when, four or five days after, he condescended—as a particular favour—to explain as he termed it, the injury the parts had sustained. Amongst other remarks, of somewhat similar nature, he stated that there were no signs of active inflammation present.

N. B. The parts were nearly in a state of decomposition, and were obliged to be well washed at a pump before he ventured to approach

them. We are by no means friendly to such uncalled for delays in examining diseased parts; and though it may answer some persons' objects, the benefit to the pupil is entirely lost.

CASTRATION.

A Bay Horse, Five years old,

Belonging to H. Gibbs, Esq., was admitted on the 13th of October to be castrated. He was directed to be kept on a mash diet.

14th. Six drachms of aloes were directed to be given in a ball.

16th. Two drachms more were ordered; and on the

17th, he was castrated on by Mr. Sewell: the Professor being at his country seat, of course was not present.

The operation was performed in Mr. Sewell's *best style;* several new pupils were present and appeared rather amused with the novelty, of the thing when contrasted with the rustic and simple operations which they had been accustomed to see,—of the alternate applications of *cold water,* RED *hot iron, resin,* &c., when the hissing and smoke might well be compared with a modern improved steam-engine. But notwithstanding, the case is hitherto going on well. Nature does occasionally beat when pitted against Art.

A Bay Gelding, Six years old,

Belonging to T. Devas, Esq., was admitted on the 9th of July with Inflammation of the Foot; when, after the usual routine of bleeding in the toe, poulticing, aloes, a rowel in the chest, a seton through the frog, standing on wet straw, not omitting the *grasshopper* shoe, the horse became affected with Farcy on many parts of the skin, particularly about the hind quarters and neck. Rowels were inserted in several parts, and aloes, with turpentine, given internally, and blisters were applied to some of the farcy swellings.

He now became evidently Glandered. The glands under the jaw were enlarged; a discharge took place from the membrane lining the nose, which also appeared ulcerated.

Between the 31st July and the 21st October, when the horse was destroyed, pounds of sulphate of copper (blue vitriol), Mr. *Assistant* Sewell's *once boasted specific for Glanders,* were administered; but in this as with his other vaunted cases,—*alas!* one of his *worthy* friends among the Governors, has even gone so far as to say that Mr. S. was not considered by them to have succeeded in curing Glanders; notwithstanding they have so liberally rewarded him, and his advertising to the world his forthcoming and *(now no more)* mighty specific.

On the animal's being examined after death, the lungs were found tuberculated and weak in their substance, the mucous membrane of the nose and cavities of the head ulcerated, and exhibiting the usual appearance observed in Glanders.

ACCOUNT OF A BATTLE OF ANTS.

BY M. HANHART.

The author in this memoir describes a battle which he saw between two species of ants; one the *Formica rufa*, and the other a little black ant, which he does not name, (probably the *fofusca*). In other respects there is nothing new on this subject, this kind of combat having been described in detail, and in a very interesting manner, by M. Huber, (*Recherches sur les mœurs des Fourmis*, 1810,) a work to which we refer, not being able here to enter into the requisite details.

M. Hanhart saw these insects approach in armies composed of their respective swarms, and advancing towards each other in the greatest order. The *Formica rufa* marched with one in front on a line from nine to twelve feet in length, flanked by several corps in square masses composed of from twenty to sixty individuals.

The second species, (little blacks,) forming an army much more numerous, marched to meet the enemy on a very extended line, and from one to three individuals abreast. They left a detachment at the foot of their hillock to defend it against any unlooked-for attack. The rest of the army marched to battle, with its right wing supported by a solid corps of several hundred individuals, and the left wing supported by a similar body of more than a thousand. These groups advanced in the greatest order, and without changing their positions. The two lateral corps took no part in the principal action. That of the right wing made a halt, and formed an army of reserve; whilst the corps, which marched in column on the left wing, manœuvered so as to turn the hostile army, and advanced with a hurried march to the hillock of the *Formica rufa*, and took it by assault.

The two armies attacked each other and fought for a long time without breaking their lines. At length disorder appeared in various points, and the combat was maintained in detached groups; and after a bloody battle, which continued from three to four hours, the *Formica rufa* were put to flight, and forced to abandon their two hillocks, and go off to establish themselves at some other point with the remains of their army.

The most interesting part of this exhibition, says M. Hanhart, was to see these insects reciprocally making prisoners, and transporting their own wounded to their hillocks. Their devotedness to the wounded was carried so far, that the *Formica rufa*, in conveying them to their nests, allowed themselves to be killed by the little blacks without any resistance, rather than abandon their precious charge.

From the observations of M. Huber, it is known, that when an ant hillock is taken by the enemy, the vanquished are reduced to slavery, and employed in the interior labours of their habitation.—*Bull. Univ. Mai* 1826.

THE COCCUS LANIGERA, OR WOOLLY AMERICAN BLIGHT

Is an important injurious insect. It is said it was first introduced from France by a Mr. Swinton, brother of the late Lord of Session Swinton, in Scotland: he was a lieutenant in the royal navy, and, marrying a French lady, settled at No. 6, Sloane Street, Chelsea, where he established a Foreign Nursery, and published a French Newspaper. That this gentleman introduced the insect to the neighbourhood of London is probable, as his collection of apples, in 1790, was sadly overrun with it; but it must have been in England long before that time, because it was common on crabs, and even thorns, in the wild copses of Buckinghamshire, in 1795. It is not generally known that there are two species of coccus frequent in our hedges and underwoods, designated ovate and reneform; they are both found on the smooth bark of young ash-poles or trees, and sometimes on the red willow. Both species may be collected, and they appear to yield the dyeing matter of as deep a tint as that from the cactus cochinillifer. Washes of lime water, laid on with a strong brush in winter and early spring, are destructive to them; and soft soap and water is also useful in the spring, because its glutinous consistence prevents their migration, and it may be otherwise offensive to them. They are imperceptible to the naked eye when very young, and it appears they can even insinuate themselves under the bark: before they bring forth their young they become stationary, and construct for themselves nurseries for that purpose, composed of some exuviæ from their bodies, which are formed into a brown hemispherical shell, as on orange trees, pines, ash, &c., or into an efflorescent fibrous covering, (hence lanigera,) as on apple, larch, and Weymouth pine, &c.

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No. 12.] DECEMBER. [1828.

MR. COLEMAN'S INTRODUCTORY LECTURE.

THE Professor of the Royal Veterinary College delivered his Annual introductory Lecture on Wednesday last, on which occasion he was more than usually diffuse in his remarks respecting the inaptitude of medical practitioners to acquire the knowledge necessary to constitute a veterinary surgeon. To his usual statement of comparative anatomy leading to comparative physiology and pathology, and consequently to error, he this year added to the other comparatives, that of comparative treatment as the climax of these errors, resulting from veterinary practice being attempted on the basis of a knowledge of anatomy and physic as regards men, and that experience was essential to make a competent veterinary surgeon.

These opinions, given as the result of close observation and long experience, may, to ordinary minds, seem at variance with the declaration purporting to be that of his colleagues in the Medical Examining Committee—that they alone,—though not one of them is remarkable for a knowledge of horses, or for experience or skill in veterinary practice, though all deservedly celebrated for a knowledge of their own profession,—are competent to examine the veterinary student as to his veterinary acquirements; and who, with all due form, declare that, having examined such student, they, being physicians and surgeons, consider him as qualified to practice the veterinary art.

Perhaps the ingenious Professor may be able to reconcile these apparent contrarieties; but until he does so, the principles of the Professor, and the practice of veterinary surgeon making, must be held to be at variance. The circumstance of the automaton Deputy Professor having been called a member of that Committee does not alter the fact.

The Professor complained that the Veterinary College,—that is, himself,—had been accused of having done nothing for veterinary science.

That he has been accused, and that justly and repeatedly, of having done only a small part of what might reasonably be expected from so wide a field for experiment and observation, and the unbounded patronage conceded to him in the name of the Veterinary College, is perfectly true. To rescue his reputation from this imputation, he stated his intention to enumerate the discoveries there made: but these can have been but very unimportant, or his memory must have failed him; for, at the head of these discoveries, he placed that of navicular disease, by a gentleman, with whom, however, he stated himself to differ as to its nature, and added, that though this cause for foot-lameness might have been known to others, yet this gentleman was the first who published it.* Here, again, the Professor's memory must have deceived him, or he must never have read the able works of La Fosse and Osmer.

At the conclusion of the Lecture, he was addressed by a pupil, who, rising in his place, requested the Professor to inform him to whom the pupils were to apply for anatomical demonstrations? The Professor replied, To Mr. Sewell, as principal, and to Mr. Vines, as assistant. It is, therefore, to be hoped that this duty, which has been so long in abeyance, will be now duly and efficiently discharged.

The same pupil went on to state that he had been reproached by Mr. Sewell, with being at the stables of the College at improper hours, and requested to be informed if any regulations existed on the subject of attendance, that he might comply with them? These inquiries, though made in words, tone, and manner, most respectful, were too much to be tolerated even by the urbanity of the venerable Professor, who cut the matter short by saying, that it was beneath him (the Professor) to answer such questions; that he (the inquirer) was actuated by a spirit to excite discontent; that he would never make a veterinary surgeon; that he had better quit the College; and that he (the Professor) would take care that he (the question-asking pupil) should do so.

Inquiry could not, of course, be pursued, after this rebuke; and the Professor, having for the moment lost his usual self-possession and courteous demeanour, quitted the Theatre with somewhat less clamorous plaudits than usual.

F. C. CHERRY.

Clapham, Nov. 17th, 1828.

* Quere—When and where?—ED.

ON NAVICULAR DISEASE.

BY MR. CHARLES CLARK.

As the term navicular disease has never been very correctly defined, it is necessary to state that what I here mean to express by it, is that lamentable complaint in the fore feet of horses, which passes under the *scientific* appellation of *groggy lameness;* by which Veterinarians in general mean to infer that there is disease of the shuttle bone, in which, also, they unblushingly admit that there is no cure, and usually resort to the expedient of cutting out the nerves going to the feet, in order thereby to destroy the sensation of pain!

Perhaps it might be as intelligibly defined to be that kind of chronic lameness which people usually attribute to hard labour. I propose to show that groggy lameness (for we must use this term to be understood) is uniformly caused by the "inflexible piece of iron called a shoe," and that it may be entirely prevented by the use of a jointed shoe; and also that disease of the shuttle bone does not exist in one half of those cases in which the horse is said to be lame from *navicular disease*, and is *nerved accordingly*.

It is now generally admitted, that the rigid, fixed shoe, by preventing the natural play of the foot, causes pain, inflammation, and *contraction*. Now let us for a moment consider, when the foot is thus confined, what must take place at the articulation of the coronet and foot bones, commonly called the coffin joint. This joint, being the last in the extremity, is, from its situation and structure, peculiarly required to have some degree of yielding in unison with the expansion of the foot; but when that motion is denied, and the foot fixed immoveably by iron and nails, the shock which it receives during fast action, as in galloping, becomes extreme, and the natural consequence is inflammation, more or less severe. This is shown by the state of shod feet on dissection, which appear uniformly red and inflamed, while those that have never been shod (that is, fettered) will be found clear, white, and natural. This inflammation, long continued, must cause a rapid absorption of the synovial fluid: irritation is still kept up, the periosteum becomes inflamed and injured, and nothing is more likely than that disease will ensue.

The most common change to be observed in these parts, is the adhesion of the shuttle bone, which lies transversely across the middle of the foot, with the perforans tendon, which passes expanding beneath it:

the sole becoming too concave and perfectly unyielding, in some contracted feet, may occasion this adhesion by its upward pressure. At other times, small speculæ of bone are thrown out; and in some cases there is ulceration of the bone, usually beginning in the middle; but these are more rare.

Often, indeed, we find the whole contents of the foot,—bones, cartilages, and tendons,—united in one solid mass; this is the result of a tendency to ossification, when once begun, but my inquiry relates to that beginning. How or why it does commence?—And there can be no elucidation so satisfactory as that which ascribes it to the fixed state of the foot induced by shoeing. For it is clear (as Professor Coleman says, most justly), that if a part does not perform its natural functions, it must become diseased! Such are the appearances in certain feet. I have never heard or seen any sufficient cause assigned for them by others, but they are said to constitute navicular disease; and as there can be no effect without a cause, are we not justified in attributing it to the common shoe?

Some are content to consider it as arising *spontaneously*, but I must discard their very weak argument, having so good and sufficient a reason to render. The opinion I have advanced is confirmed by the fact, that horses' feet, shod from the first in expansion shoes, have never been found to ossify, ulcerate, or adhere in the coffin joint: when they shall do so, I give up the question; but it is found, that, with freedom and elasticity, health and vascularity are preserved. Those whose shoeing practice would be condemned by admitting the facts here stated, will doubtless continue to call it a disease *sui generis*.

As to the external or diagnostic symptoms of this complaint, they are of so obscure and ill-defined a character, that no man can declare its existence with certainty, except in the last stages; and it is therefore very common to pronounce a horse lame of navicular disease, when, in reality, he is suffering from simple *contraction*.

This is the primary and general evil: the diseased shuttle bone is merely a concomitant symptom, and comparatively very rare; but not being supposed to be a consequence of the shoe, it has been a favourite subterfuge, and served for ages past to conceal its mischievous effects.

These complaints have no doubt existed ever since iron horse shoes became general, though never to such an extent as now; and the old farriers, when called to such cases, were in the habit of saying that the horse had the coffin-joint lameness, which removed all blame from their shoeing: and in the present enlightened day, this more mysterious term, "navicular disease," which throws no new light on

the subject, and is merely a new name for an old thing, is employed for the same laudable purpose,—to disguise the real evil of contraction, and the baneful effects of the fixed shoe; nothing being easier than to assert the presence of a complaint that can only be certified by dissection of the foot,—one that cannot be shown if it really exists, nor positively denied if it does not. Contraction has ever been the bugbear of the Veterinary profession, which they neither knew how to prevent or to cure; so that lameness was referred to a nominal disease, when it was not easy or politic to explain why a horse at eight years old should be an incurable cripple. It is true that cases of disease in these parts may arise from various definite causes; the puncture of a kennel nail may cause adhesion of the tendon, so may the violent application of corrosives in the cure of thrushes. There are cases of fracture, too, sufficiently obscure to baffle the best judgment.

On the other hand, we find, in the vast majority of contracted feet, on dissection, a perfectly sound state of the shuttle bone; yet, during life, a nerving practitioner may safely predicate the navicular disease, since proof is then impossible. There is a certain class of prejudiced persons who would rather believe the most vague and ill-founded assertions about foot-lameness, than admit the evil influence of their *ne plus ultra*, the common shoe. These have seized on it with avidity, and magnified it into a most important disease,—nay, even have gone so far as to declare that contraction was harmless, and had nothing to do with lameness!

Such *were* the opinions of "Nimrod," expressed in the Sporting Magazine, some years ago: he declares that all that had formerly been obscure to him, respecting the foot, was rendered clear, by *supposing* that this disease really did exist in nearly every case of chronic lameness; and seems to consider it the solution of every difficulty, and the key to foot knowledge. Men readily lend credence to a theory they cannot understand, while the glaring deformity of contraction, and the thousands of feet narrowed to two thirds of their natural width by it, can be seen with unconcern.

The very term, "*groggy lameness*," which even professional men disdain not to use, implies,—if it mean anything,—that the complaint is not well understood. Some call such horses *foundered*; which is incorrect, as the word "founder" is only applicable to a particular state of this organ, in which the coffin bone is sunk and the sole convex below. This is an error from high authority.

Under the new name of "navicular disease," it has been claimed as a new discovery; but even if the old farriers had been ignorant of

it, La Fosse and Osmer, it would appear from their works, were well aware of it.

Respecting the cure of this disease. In former times, the farrier, after informing the unfortunate owner that his horse was lame in the coffin joint, was accustomed to recommend firing, blistering, scoring the hoof, and turning the horse to grass; or, in some cases, to pronounce him incurable. But the modern College Veterinarian takes bolder ground: overlooking contraction and the shoe entirely, he calls it the navicular disease, and advises *Neurotomy*. If ever there was an operation, the frequent performance of which is a reproach to scientific surgery, this is one. It is far more discreditable, when performed without a sufficient cause, than amputation in the human subject, which John Hunter somewhere compares to the executioner's duty: it is, in many instances, like cutting the Gordian knot we have not skill to untie; and rendering the materials useless.

As an occasional resort, in peculiar cases, it is, doubtless, allowable and useful; but the bare necessity for its common practice implies something fundamentally wrong in our treatment of the foot. Why make cripples by shoeing, and relieve their pain only by destroying sensation? But as this operation, after succeeding in some instances, and failing in many more, is now falling into disrepute, less need be said of its injurious tendency; which is decidedly to lead the public to disregard contraction, under the false supposition that its effects might be removed by this (disgraceful) resource of cutting out the nerves. For it is certain, that hundreds of horses have been nerved for pretended navicular disease, whose lameness arose only from simple contraction occasioned by foot fetters,—cases, too, the major part of them, in which the judicious application of expansion shoes would have given permanent relief.

Much has been said respecting this disease, but no explanation given, I believe, of the manner in which it is occasioned: this I have attempted to supply; and in so doing, to show, that having the same baneful cause as contraction,—being, in fact, merely a symptom of that disease—it may be prevented by the same simple means,—by allowing to the foot of the horse that needful expansion which *nature* has not denied to any animal on the face of the earth.

Stamford-street, Nov. 10.

ON THE

APPEARANCE OF THE BLOOD OF ANIMALS UNDER DIFFERENT STATES OF EXCITEMENT.

BY MR. RICHARD VINES,

Veterinary Surgeon, Mr. Coleman's Assistant at the Veterinary College.

(FROM "THE LANCET.")

HAVING stated, in a former communication,* that the blood of the horse or ass, when in perfect health, after being well fed and moderately exercised, assumed a bright red colour; and the blood, which was then abstracted, coagulated quickly into a solid uniform mass, without any separation of the red part; and, on the contrary, if the same animal were exposed to a low degree of temperature, and allowed only a small quantity of food, that the blood, under those circumstances, gradually assumed a darker colour, coagulated slower, and, during its coagulation, separated into two parts, a superior white, or straw-colour, and an inferior dark red, thus constituting what is commonly called buffy, or inflamed blood; and that in proportion to the degree or intensity of cold, and the deprivation from food, so the blood assumed this buffy appearance; and again, in proportion to the increased strength of the animal, when supplied with a due quantity of food, and placed in a more congenial temperature, that the blood recovered its original state.

I likewise stated, that the blood assumed this buffy appearance in healthy horses, from drawing large quantities at short intervals, and also that any cause that debilitated the system would likewise render the blood of this appearance.

On further investigation, and from numerous repeated experiments and observations, I have clearly ascertained and proved, that the blood assumes different appearances, varying according to the circumstances under which the animal is placed. When the animal is in perfect health, and moderately excited, the colour of the blood will become brighter, and the coagulating property will be increased; but, on the contrary, that in both, when under great (as well as diminished) excitement, the colour and coagulating property will be found gradually to diminish.

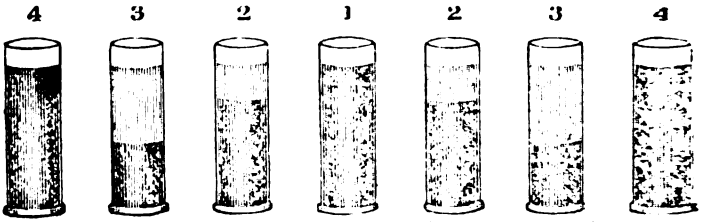
Under the former circumstances, both the venous and arterial blood assume a brighter colour, coagulation takes place quicker, and the consistence will be found to be firmer, without any separation of the red part, and this appearance will be seen, whether a small or large quantity be taken; but if the exertion be carried to a great excess, or if the animal breathe an impure atmosphere, or be exposed to a low degree of temperature, and at the same time not allowed food, or to be exercised, the venous and arterial blood will then gradually appear of a darker colour, coagulation will be slower and weaker, and, during

* *Lancet*, No. 195, Vol. xii.

the coagulation, the red part will separate, at first in a slight degree: but this appearance is only to be observed on drawing a small quantity, but afterwards to a much greater extent, by taking a larger portion; but in the advanced stages, and as the animal becomes more exhausted, it then gradually fails to assume the buffy appearance, from its coagulating property being too far diminished.

From these facts, it becomes evident, as I have previously stated, that the venous and arterial blood assumes different appearances, varying according to the circumstances under which the animal is placed; thus, while in health, and under moderate excitement, its colour and coagulating property gradually increases; but, on the contrary, both when under great as well as diminished excitement, its colour and coagulation will be gradually diminished.

The following table will give a more comprehensive view of the subject:—



The middle portion, *Fig.* 1, is intended to represent the appearance of the blood, either venous or arterial, under moderate excitement, coagulated into an uniform firm mass, without any separation.

The three lateral portions, on each side, are intended to represent the colours and coagulating property, diminishing those on the right side from too great excitement, and those on the left, from diminished excitement.

Fig. 2, on each side, show the blood darker in colour than *Fig.* 1; and, during the coagulation, to have separated into two parts; a superior, which is either white or straw-coloured, and an inferior, or red part.

The two next portions, *Fig.* 3, likewise show the blood coagulated, but still darker in colour, with a larger portion of the white or straw-coloured part, and a smaller of the inferior or red.

The two outside portions, *Fig.* 4, represent the blood of a darker colour than the last, but without any separation of the parts, owing to its weak coagulation.

From this, it appears evident, that the remote causes which increase the colour and coagulating property of the blood, are, pure air of a moderate temperature, good food, and moderate exercise; but, on the contrary, those under which it diminishes, are, violent or long-continued exertion, severe pain, increased temperature, or any of these causes in combination with high feeding: this is very frequently to be observed in the spring of the year, and summer months, while the thermometer is high; when it is very common to find inflammation of the lungs, eyes, and other inflammatory diseases from too great excite-

ment of the system; again, other remote causes also render the blood in this state, by diminishing the action of the various organs of the body, as impure air, long exposure to wet or cold, without food or exercise;* this we find to be the case in the autumn and winter, while the thermometer is low.

It therefore appears, that while the causes which support the functions of the different organs of the body are duly and moderately applied, the colour and coagulating property of the blood gradually increase; but, on the contrary, if these causes are gradually withdrawn, or carried to too great an excess, then the colour and coagulating property will gradually diminish; thus it will be found, that as the animal increases in strength, the blood will coagulate stronger and quicker, from containing a larger portion of animal matter; but as the animal diminishes in strength, and while under great or diminished excitement, the blood coagulates slower and weaker, from containing a smaller portion; its quick coagulation depends on the quantity of animal matter it contains. The blood of strong subjects is always greater in weight, and coagulates stronger and quicker than that of weak ones; thus, as the animal increases in strength, while in health, and under moderate excitement, the blood coagulates stronger and quicker, from containing a larger portion of animal matter; and again, as the animal diminishes in strength, as while under great or diminished excitement, the blood gradually coagulates slower and weaker, from containing a much smaller portion.

This white, or buffy part, commonly called self-coagulable lymph, or fibrin, may therefore be considered as the base of the blood of all animals; it assumes different colours, and possesses coagulating properties, varying in animals, and in different parts of the body of the same animal: in the strong parts it appears red, from possessing a high degree of vital power, while in the weak or finer parts, it appears white, from possessing a much lower degree of vitality; in strong subjects, and in the strong parts of the body, it coagulates strongly and quickly, from containing a large portion of animal matter: hence, it has received the name of fibrin, from a supposed resemblance to muscular or fibrous texture; but, on the contrary, in weak subjects, and in the weak and finer parts of the body, its coagulation is much slower and weaker, from its containing only a much smaller portion. It also assumes different appearances, varying according to the circumstances under which the animal is placed. When in perfect health, and moderately excited, it appears of a bright red colour, and coagulates without any separation; in this state, we may consider it as possessing the highest degree of vital power; but, on the contrary, that is, from too great, as well as from diminished, excitement, in consequence of its vitality being diminished, it then appears darker in colour; coagulation becomes slower and weaker, at first in a slight degree, but afterwards to a much greater extent.

I therefore deny the hypothesis of the blood being a compound fluid,

* The blood has likewise the same appearance, when the horse is under the influence of Digitalis.

while circulating in the living body, and of the lymph, red globules, and serum, but consider it as live animal matter, capable of assuming either a fluid or solid form; and that, while in the state of a fluid, it possesses a higher degree of vital power than when in a solid state; that it assumes different colours, and possesses various degrees of solidity, varying in animals, and in different parts of the same animal, which depends upon the quantity of animal matter it contains previous to its coagulating, or assuming the solid state. I consider its base as originally white, and that it derives its colour and coagulating properties from the combination of atmospheric air, when circulating through the lungs; this appears from the arterial blood being always greater in weight, and coagulating firmer and quicker than either the lymph or chyle; and I consider that its different colours indicate its various degrees of vitality; for, in the strong parts of the body, it appears red, from possessing a high degree of vital power; while, in the weak or finer parts, it is white, from having only a much lower degree of vitality.

The lacteal and lymphatic fluids may, therefore, be considered as venous blood. This appears from their assuming different colours, and possessing coagulating properties, varying according to the different states of the animal. In strong and healthy horses, if destroyed while in perfect health, and under moderate excitement, the lymphatic fluid assumes a white, or straw-colour, in those parts of the lymphatic system situated near the circumference and centre of the circulation; but, on the contrary, in many of those which are destroyed when under great, as well as diminished, excitement, it commonly assumes the same character of dark venous blood in those parts of the lymphatic system, situated nearest the centre of the circulation, as the thoracic duct, and the second order of the lacteals and lymphatics. This we find from the functions of digestion being suspended, from severe pain produced from open joints, punctures in the feet, &c.; also by exposure to severe cold without food.

Royal Veterinary College,
Oct. 15, 1828.

VETERINARY PROFESSION.

In a former communication, at page 353 of the "*Farrier and Naturalist,*" I stated certain measures deemed necessary towards the improvement of the Veterinary profession, and the attainment of which Mr. Coleman had undertaken to support by all the means in his power. Those measures having been so lately published, and to be found in the 8th Number, need not be recapitulated here.

But no sooner was the first step to be taken towards giving these engagements effect, than new objections were presented on the part of Mr. Coleman, and restrictions called for that would have neutralized what had already been done; and the hope of obtaining his

support to the measures he had already agreed to, as being necessary, was lost: indeed, it appeared that his principal object was, by a mixture of collusion and evasion, to obtain delay.

That amendment in the existing order of things was necessary, could not, however, be denied; and it was accordingly stated, by Mr. Coleman, that the Medical Committee of Examiners had resolved to recommend to the General Meeting of Subscribers to appoint a Veterinary Examining Committee, consisting of the Professor, the Assistant, and a limited number of Veterinary surgeons: no Veterinary student, in future, to receive a diploma, until examined and approved by both Committees. The duties that were to be performed, or any details respecting its organization and proceedings, were not mentioned.

At length the Annual General Meeting of Governors and Subscribers, for 1827, took place on the 28th of May: the only subscribers who attended, besides gentlemen designated Governors, being Mr. Goodwin and myself.

At that meeting there was a general feeling, on the part of the Governors, towards adding Veterinary surgeons to the existing Committee. There was, indeed, one exception; and the remarks made by that gentleman, afford ample matter for future commentary: it is sufficient here to state, that he alone raised his voice against a mixed Committee.

At the meetings that had previously taken place between Mr. Coleman, at his solicitation, Mr. Goodwin, and myself, Mr. Coleman had declared that the members of the Examining Committee were not averse to a limited number of Veterinary surgeons being added to that Committee; and the proposal to add one Veterinary surgeon to every two physicians and surgeons who might then, or thereafter, be on the Committee, was considered, by Mr. Coleman, so moderate and reasonable, that he expressed his conviction it would be acceded to by the members of the Medical Examining Committee, without opposition or without reluctance; indeed, that they wished some change of that kind to be made.

But when the feeling in favour of adding Veterinary surgeons to the Medical Examining Committee, on the part of the Governors, became manifest, it was met by Mr. Coleman rising, and giving it as his opinion, well knowing the feelings, individually, of every member of the Medical Examining Committee, that they would not sit with Veterinary surgeons; that if such a measure was carried, they would, one by one, withdraw. He did not assert this merely as his belief, but he stated the reasons that would induce them to withdraw; and

these were, among others, that the examinations would be made inconveniently long, and that they could not give time to go through them: but be it remembered, that a fee of three guineas, and, under some circumstances, a fee of five guineas, is paid for such examination; for which fee, however, the pupil is entitled to as many repetitions of examination as the Committee please to give. And here, it may be remarked, that, supposing the assertions of Mr. Coleman to be true, that the Medical Examiners cannot give time to more lengthened examinations, it must follow, of course, that they will be induced to limit the number of examinations, in order, equally, to prevent the consuming of more time. It is evident that this system, supposing it to be truly described, is well calculated to ensure the passing of every pupil who has assurance and perseverance; for any one thus endowed, may, by continuing to present himself to these gentlemen with so little time to spare from their other duties, be sure to pass, for the sake of being got rid of: his fee has been already received; gentlemen have but little time; his presence becomes troublesome; no more money is to come from him; and therefore he must pass, that another fee-payer, and aspirant for a Veterinary diploma, may be admitted in his place. These are the necessary consequences of the opinions of Mr. Coleman, being founded in truth: whether they are or are not so, is a question between him and the members of that Committee for whom he undertook to speak.

But besides these assertions of Mr. Coleman's, or reasons of the Committee already stated, as to their being called on to give too much time to the duties they have undertaken to discharge, another most cogent statement was also made by Mr. Coleman; and this was, that at present, the Examiners came to the Committee in the expectation of meeting friends and enjoying their conversation; and if Veterinary surgeons were admitted, they feared that this enjoyment would cease. It was not, however, distinctly stated, whether such enjoyment was to cease merely from the Veterinary surgeon urging a protracted examination, and therefore, most probably, an efficient one; or whether these Veterinary surgeons, all of whom have been created such by this Committee, are so stupid, illiterate, and narrow-minded, that a selection cannot be made from among them fit for the associates of gentlemen. Judging, however, from the choice they have made, they cannot be very fastidious on this point.

They have selected Mr. Sewell as their colleague. Mr. Sewell, remarkable for secrecy and evasion, is selected as the successor of Mr. Cline, the early, warm, efficient, and effectual promoter of the Veterinary art;—the oldest member of their Board;—their President, Mr.

Cline, a teacher of nearly half a century, with an unsophisticated mind, and giving elucidations as clear as an unclouded meridian sun, is succeeded by Mr. Sewell, a mere Veterinary surgeon, with no more advantages of education than are possessed by many, and with infinitely less advantages than are possessed by some, members of the profession. A grave man, certainly, with powers of communicating what knowledge he does possess naturally defective, and habitually cautious in exposing his opinions, whatever they may be, to the test of scrutiny and examination; whose experience is limited by the walls of the building at St. Pancras, called the College, and whose endeavours have been directed to confine the principles of his Veterinary practice,—if, indeed, his practice is guided by principles,—to the same limited scope. With these disqualifying circumstances attending him, it may be asked, What has pointed him out as being the only Veterinary surgeon fit to sit at the same board with the members of the Medical Examining Committee? Is it that he has a grave, self-important carriage?—Is it that he has an unruffleable temper?—Is it that he has patience under the jests and the ridicule of a superior?—Or is it in his having been the recording clerk of the *fiat* of a Non-veterinary Committee as to the fitness of a man to become a Veterinary practitioner, in which Committee he, a Veterinary surgeon, claiming to be an Assistant-Professor, had not the right to utter a single opinion, or ask a question?

That Mr. Sewell is a respectable practitioner, I admit; but I deny that he possesses qualifications, either natural or acquired, so far above every other Veterinary surgeon in this country, as to warrant his being selected as the first, the only, individual fit for the office of Medical Examiner.

It has been declared, by the Medical Examining Committee, that under their management Veterinary science has not merely advanced, but has eminently flourished for thirty years; but when this flourishing state is looked to for its fruits, the Professor Coleman, professing to speak for this same Committee, declares that this flourishing profession contains but one member that they will condescend to meet and act with in matters purely professional: and, be it always remembered, that this individual can claim nothing beyond the being a mere Veterinary surgeon, with knowledge and experience of the most limited description.

I shall pursue this subject at a future period.

F. C. CHERRY.

Clapham, Oct. 1828.

HORSE CAUSE.

Court of Common Pleas.

EDMONDS *v.* DOBSON.

THIS was an action brought by Mr. Edmonds, a surgeon-dentist, residing in Argyll-street, on a warranty of a horse sold to him by the defendant, late Quarter-Master in the 1st Regiment of Life Guards.

Mr. Sergeant Wilde stated the case. The plaintiff having occasion for a horse for his cabriolet, gave a good price (80*l.*) for the animal in question, upon the representation of his perfect soundness. Shortly after the purchase, however, a suspicion arose that the horse was not quite as sound as he had been warranted, and he was submitted to the examination of Mr. Sewell, at the Veterinary College, upon whose declaration of his unsoundness the animal was sent back to the defendant, but the latter refused to refund, and it became necessary for the plaintiff to seek restitution by legal means.

The payment of the money, and the warranty given by the defendant, were proved.

Mr. Sewell stated, that he examined the horse on the 16th of May last, and found an enlargement of the foot, which, on inspection, discovered a tendency to ossification of the cartilage. The defect was such as to induce him to pronounce the horse decidedly unsound.

It was also proved that the horse had two broken knees, which had occurred by some accident; but this did not constitute unsoundness.

Mr. Sergeant Storks (who was assisted by Mr. Hutchinson) stated the defendant's case, and called witnesses to show that the value of the horse was not affected by the indications described.

Mr. William Percivall, Veterinary surgeon to the defendant's regiment (the 1st Life Guards), stated the result of his examination of the horse. He did not deny that there was a thickening, or ossification, of the cartilage, but it did not amount to unsoundness. He had no doubt that, with such symptoms, a horse could do the same degree of work in the same time, and with as much safety, as if he were free from blemish. The appearances might, or might not, extend beyond what existed at present; if they did not, then the animal was, in his judgment, certainly not unsound.

Thomas Perry, the assistant to Mr. Percivall, gave similar testimony.

Mr. Coleman, of the Veterinary College, stated that he examined the horse about May last, and observed some little deposition of bony matter on the cartilage, but it was not completely ossified. The witness remarked that there was great diversity of opinion as to what con-

stituted unsoundness. His own definition of unsoundness was this: whenever there was such a defect of the structure or functions as to interfere with the duty of a part, and thereby of the whole, the animal must be considered unsound. In this case, although the deposition of bone did not make the horse lame, yet if it went on, and the horse should hereafter become lame from that cause, he should say that it was unsound. When he examined it since, the seeds of the disease then existed.

Another witness, who had the care of the horse, was called to prove that he had never found any appearance of lameness.

Mr. Sergeant Wilde, in observing upon the evidence, submitted to the Jury, that the whole weight of it was in his client's favour; and that when they exercised their own common sense in considering the case, they would assuredly find the plaintiff entitled to their verdict. Could it be argued, that one of themselves, if affected with an ossification of the cartilage of the ankle, for instance, would be as good, or as sound, or as perfect a man as he was before. If some defect or deterioration of the system were to produce rigidity and the absence of all elasticity in those parts which nature originally endowed with expansive and elastic qualities, the man, to be sure, might limp a little, and might not be able to walk quite so well, but he would, doubtless, be better on the whole than before. Let them apply the same plain reasoning to the case of the horse. That was all he desired.

The Chief Justice recalled Mr. Coleman, and asked him if he considered the horse, when he examined him, in May last, capable of bearing the same labour with the same safety, as if free from all defects. The witness answered in the negative.

The Chief Justice, in summing up, said, that this testimony of Mr. Coleman appeared to him to put the defence out of Court. If the Jury considered it as confirmatory of the evidence for the plaintiff, the latter would be entitled to their verdict.

The Jury immediately found a verdict for the plaintiff—Damages 80*l.*

THE VETERINARY SOCIETY.

Discussion on the subject of Ophthalmia was resumed at the meeting of Nov. 4. The most important question appeared to be, Whether, or not, this disease was attributable chiefly to the exciting causes of heat, bad atmosphere, exertion, &c.; as it was argued, that if this *was* the case, attention in avoiding the access of these, would prevent the further recurrence of the complaint, when the first paroxysm had

been promptly relieved by antiphlogistic treatment. But this was not generally allowed to be the fact; as the majority present appeared to be of opinion, that the first attack of inflammation often left the eye in so weak a state, as to dispose it more readily to take on a diseased action. In proof of this, it was stated that Ophthalmia often occurred in horses that had always run in the open air, and at regular monthly periods, when no particular exciting cause could have existed.

Stimulating applications to the eyes were very generally reprobated; though some gentlemen seemed to be of opinion, that in certain after-stages it was a useful practice to stimulate, and common salt was stated by one to have been used with success.

These facts were agreed to generally;—that there was no *specific poison* influencing this complaint; that it depended more on a predisposing weakness or defectiveness in the organs, than in any particular exciting cause; and also, that our treatment had hitherto not been so successful as might be desired, on account of various good reasons which were adduced.

On the 18th, the Society had a very interesting and satisfactory meeting; a considerable number of visitors were present, and several new members proposed. After the preliminary business was disposed of, a paper on the Blood, and its coagulable properties, was read by Mr. Vines, who demonstrated his laborious experiments by means of coloured diagrams, representing the chyle and blood of the horse; the latter in a state of coagulation, as drawn under different states of increased and diminished irritation or excitement; showing that nearly the same appearances were produced by both,—that is, that it separated in the same manner, when taken from an animal in a certain stage of debility, as from another labouring under excitement; also, that it gave the same appearance on coagulation, in the extremes of excitement and of debility.

To opinions so totally new, of course much opposition was made, so that the principal part of the evening was taken up in explanation, Mr. Vines appearing prepared for every objection. The members were impressed with a deep feeling of the necessity of well understanding this subject; and the important practical application of this gentleman's observations will come forward on the next evening, Tuesday, 2d of December, when, as usual, according to the liberal principles adopted by this Society, Veterinary surgeons and students, and medical gentlemen, are invited to attend and take part in the discussion.

[We have suppressed some part of the report respecting this latter paper, as it will appear more in detail in our pages, and is far too momentous to be so hastily condensed.—Ed. F.]

ON TURKEYS.

The bird which is known in this country by the name of a "turkey," is generally allowed, was not, originally, a native of Europe; but much difference of opinion exists respecting the time of its introduction, and the country from which it was obtained.

The question whether this fowl was known to the ancients, depends upon the definition of the word *meleagris*, which has been commonly supposed to signify the turkey. But it has been justly remarked by naturalists, that all the ancients have related of the *meleagris*, can only be properly applied to the *gallina Africana*, or Guinea-hen, with which there is no doubt of their having been acquainted. In many respects, indeed, these birds bear so close a resemblance to each other, that a common description might apply to either. Thus, the figure of the *gallina Africana*, its drooping tail and naked head, the fleshy excrescence on its bill, its unpleasant cry, and unsocial disposition, as detailed by Clytus, the disciple of Aristotle,* all correspond with the turkey; but the small pearly spots on the feather, the size, and the curved form of the back, mentioned by the same author, are peculiar to the Guinea-hen; and, above all, he has not noticed, in his account of the *meleangrides*, those remarkable distinctions between the male and female—the strut of the cock with his outspread tail, the changeable hue of the membrane that hangs from his bill, and the tuft of hair upon his breast; all of which are too apparent to have escaped observation, and belong exclusively to the turkey. The distinction drawn by Columella and Pliny, between the *meleagris* and the *gallina Africana*, is so immaterial, as scarcely to indicate more than a slight difference in the same species; and it has been supposed, by Professor Pallas, with every appearance of probability, to apply to a variety of the latter, which bears a red crest, and is known as the *Numida mitrata*. Ancient authors assure us, besides, that the *meleagrides* were indigenous in Africa, which is the case with respect to Guinea-fowls, but where our turkey was never yet found wild. It seems clear, therefore, notwithstanding the assertion of the Hon. Daines Barrington, who has maintained a contrary opinion, that this bird was not known to the Greeks and Romans.

This gentleman seems also to think, that the name which has been given to this fowl, designates its origin, and therefore that we should

* *Athenæus*, in Deipnosoph, lib. 14.

consider it a native of Turkey: but the same reasoning would apply to maize, or Turkey-corn, as it is frequently called, although it is well known to have been obtained from America; and they who are conversant in inquiries of this kind, are aware that many new and curious articles formerly acquired their names from countries to which they do not really belong. He has also erroneously adduced the testimony of Leland, the antiquary, in aid of his assertion, that turkeys were known in this country in the fifteenth century; for that author having mentioned, in his Itinerary, that *capons of grease* were served up at an entertainment given to Edward IV., in 1647, he has fancifully insisted that the expression should be read "*capons of Greece*," which, thus converted, would mean turkeys.

It may also be here remarked, that Buffon has fallen into an error respecting the *gallina Africana*, transmitted from the Romans, which, he says, became extinct in Europe in the middle ages; whereas, mention is made of them, in English writers, under the name of *Aves Africana*, about the year 1287.*

The most satisfactory conjecture that has been formed on this subject, ascribes the origin of the turkey to America; in support of which, we have the following proofs:—

The first description that has been given of it, by any modern author, is found in an account of the Western Indies, by Gonzalo di Oviedo, who wrote about the year 1525, that is, within thirty years after the discovery of America by Columbus. He describes it with great minuteness and accuracy, and with all that interest which a rare object might be supposed to excite, but which would have been absurd, had the bird been already common in Europe; and, being even at a loss for a name by which to designate it, he calls it a large species of peacock; the flesh of which, he says, is better than that of the Spanish peacock. Lopez de Gomara, whose history of Mexico was first published in 1553, also mentions it as peculiar to the newly-discovered Continent, and says, that it was termed *Gallo pavo*, from its resemblance both to the peacock and the domestic cock; and there are various passages, to the same effect, in other Spanish authors.

The earliest travellers who visited the northern shores of America, found the turkey there in a wild state.† Kalm, who visited Pensylvania in 1748, says, that they run about there in the woods: and Smyth, who travelled through that country at a later period, assures

* See Kennett's Parochial Antiquities, p. 287.

† A very splendid and well-coloured engraving of the American wild turkey, has been published by Mr. Audubon, F.L.S., &c.

us that they are to be found in the uncultivated wastes at the back of Virginia, in flocks of many thousands. It is also said, that they are larger and better flavoured than those bred in Europe.

As these birds are at present found in both Asia and Africa, and as these quarters of the globe have, by many, been considered as their native countries, it may not be uninteresting to inquire at what period they were carried thither. We are assured, by Du Halde, that turkeys were not indigenous in China; although he erroneously adds, that they were common in the East Indies. There is little doubt that they were carried to Persia by the Americans, and to Batavia by the Dutch. In the time of Chardin, they were, indeed, so scarce, that they were kept as curiosities in the Emperor's menagerie; and he tells us, in his travels, that they were originally brought from Constantinople to Ispahan by some Armenians, who presented them to the King, as rareties. Instead, however, of recommending them, his Majesty, observing that the Persians were ignorant of the proper treatment of the fowls, imposed upon the Armenian donors the further trouble and expense of preserving them. In the kingdom of Congo, on the Gold Coast, and at Senegal, there are none but those belonging to the European factories; and various authors state, that they are equally scarce in other parts of Africa. In the relation of Cavendish's voyage, in 1588, it is particularly mentioned that they found "*Guinea-cocks, which we call turkeys,*" on the island of St. Helena; and Mr. Barrington misapplies this circumstance, in support of his opinion, that these birds were not originally brought from America. But the name of "guiney-cocks," belong to what are now commonly called pintados; and, even admitting that they were turkeys, it would not be surprising that they should have been found there, as the island had been previously visited by the Portuguese, to whom this fowl had been long familiar.

These proofs are, doubtless, of themselves, sufficient to satisfy any naturalist respecting the native country of these birds; but they will be strengthened if we consider the time and manner of their introduction into other places. Had they come from Asia or Africa, many centuries ago, there can be no doubt that they must have been common in Italy, and would thence have been dispersed over the rest of Europe: but it does not appear that they were known there previous to the discovery of America. They are not alluded to before that period, by writers on agriculture who describe domestic poultry; and the earliest mention of them in that country, occurs in an edict issued in 1557,

by the magistrates of Venice, for repressing luxury, in which those tables are enumerated at which alone partridges and turkeys were allowed.

Some writers, indeed, have asserted that turkeys were known at a much earlier period in France; but no proof of that has been adduced. In a description of the duchy of Burgundy, by Messieurs Courtpée and Beguillet, it is very confidently said, that they were brought from Artois to Dijon in 1385; but no authority is assigned. And in the same work it is also asserted, that they were brought from the Levant, in the fifteenth century, by Jacques Cœur, to his estate of Beaumont, in the Gatinois; and by Americus Vespucius, to Portugal. This Jacques Cœur was treasurer to Charles VII., and was, by him, banished the kingdom in 1450. It is true that he then went to reside in the Levant, and M. de la Mare, in his treatise on the Police, repeats this story, of his having brought turkeys to France *on his return from banishment:* unfortunately, however, for its correctness, he never did return, but died in exile, at the island of Chio, in 1456. Another tradition, which, although not proved, appears more probable, is, that they were first brought to France by Admiral Chabot, the discoverer of Newfoundland, in the beginning of the sixteenth century. The prevalent idea in France, that they were introduced by the Jesuits, seems altogether void of foundation. They were so scarce in that country, in 1570, that they were considered a splendid rarity at the wedding dinner of Charles IX. And the same monarch, on passing through the city of Amiens, condescended to accept, from the magistrates, a present of twelve turkeys. Indeed, so late as the reign of Henry IV., we find that some dealers were punished for defrauding the country people of these fowls, under pretence that they were for the use of the Queen.

Several authors assure us, that turkeys were brought to Germany so early as the year 1530; but Gesner, who published his Ornithology in 1555, seems not even to have seen them.

There is no certain account of the period of their introduction into England: they are not mentioned either in the list of Archbishop Nevil's feast, or in the Earl of Northumberland's Household Book, published in 1512; nor in the minute regulations of the royal kitchen, in the early part of the reign of Henry VIII., although all the fowls there used are enumerated. But it is probable that it took place soon after that time: some authors say in 1530, others in 1532; and Baker fixes the period, in his Chronicles, in 1524, about the

fifteenth year of Henry VIII., when, according to the well-known distich—

> "*Turkeys*, carps, hoppes, piccarell, and beere,
> Came into England all in one yeare."

That they had become general towards the latter end of the same century, may be collected from the following lines in *Tusser's Hundred Points of Good Husbandry*, printed in 1585:*

> "Beefe, mutton, and porke, shred pies of the best,
> Pig, veale, goose, and capon, and *turkey well dress'd;*
> Cheese, apples, and nuts, jolie carols to heare,
> As then in the countrie, is counted good cheare."

THE FAULTS AND DEFECTS TO BE AVOIDED IN BUYING HORSES.

[Continued from page 524.]

THE next thing to be regarded in the choosing of a horse, is his feet, that they may be good and durable, for bad feet in a horse is like a house that has a weak foundation, for such a one will do but little service. I shall not here take much notice of the defects of bad shoeing, or other accidents; for these will be treated of in their proper place, but of those chiefly which are natural to some horses that expose them, more than others, to lameness, or, at least, make them unfit for the most common uses, as hunting and travelling.

The knowledge of the feet is reckoned more easy than that of the eyes; and I have seen many guess, pretty well, of the goodness of a horse's feet, without any other examination, than just to view them as he stands or walks. However, I would advise no man to trust to so superficial a judgment; for, though one may see the form and shape of the foot to be fair and promising, yet there are other things to be considered, without which a good horseman may be deceived.

A horse may have a well made foot and well proportioned; and yet, if it chance to be thin and weak, the buyer will be disappointed of his expectations; for such a foot is liable to be spoiled in shoeing, by

* There was an earlier edition of this work printed in 1557; but whether it contained the lines above quoted, has not been ascertained: in later editions they have been altogether omitted.

travelling on hard, stony grounds, by too much drought in hot seasons, or by too much moisture in winter. A thin foot is that where the crust or horn is thin. This may be easily seen when the shoe is taken off, because the verge all round the sole will appear thin, and where it is so, a horse will winch with the least touch of the pincers; but as this trial will seldom be allowed in buying of a horse, the best way, to those who would be acquainted with such things, is to observe the bottom of the crust, which is generally ragged, and where the shoe-nails are clenched and riveted. If these be high, is a token the foot is thin, and that there has not been sufficient hold for the nails without driving them a good way upwards in the crust. In a thin foot, the heels and frog are also apt to be soft and tender to the touch; and, by reason of the weakness natural to such kind of foot, it sometimes turns awry, and one point of the heel will stand higher than the other, though this may be also owing to the crookedness of the pastern-joints, and will sometimes happen where the foot is tolerably strong, but is most common to such as have weak feet; and where it is so, the horse wears his shoes more on one side than the other, and often causes him to cut and go lame in a journey.

As a thin, weak foot is justly reckoned a very great defect in a horse, so a very strong foot is not always the most eligible, but is liable to several accidents. A strong foot has the fibres of the hoof very distinct, and, for the most part, run in a straight line from the coronet to the toe, like the grain of oak, lignum vitæ, or any other hard wood that easily splits; and though some such feet will last very well, and keep free from accidents, where sufficient care is taken to keep them moist and pliable, yet when they happen to be neglected upon a long journey, or much hard riding, especially on dry, stony grounds, they will go lame and tender, at the same time that no defect is to be seen on the foot.

When a horse that has a strong foot takes up a channel-nail, or happens to be cut into the quick with a sharp bone, a sharp flint, or piece of glass, and a flow of humours follow upon such a wound or puncture, the confinement these meet with from the strength of the foot, create much anguish, and for want of vent below, frequently causes an eruption round the coronet, which proves, for the most part, troublesome, and makes the cure tedious and uncertain, especially when such cases happen to fall into bad hands.

I have known some instances where the hoof and the sole have been quite loosened from all their attachments to the foot, the filaments and fibres that unite the horny part to the flesh being all torn and pulled

asunder; and where this happens in any degree, it is apt to leave a tenderness behind it, unless an uncommon care be taken to prevent it.

But the greatest inconvenience in a hard, dry foot, is its being subject to refts and fissures, which cleave the hoof quite through, sometimes from the coronet down to the bottom; and this kind of foot is the more easily exposed to such accidents, that the horny fibres have a more visible, straight direction than where the foot is more soft and pliable; these clefts being, for the most part, in the quarter, seldom admit of any other remedy than extirpating the whole piece that lies next the heel, which defect is, from thence, called a false quarter, wherein the cure is seldom so perfect, especially in the fore feet, as to leave no infirmity or blemish behind it. When the fissure, or cleft, does not penetrate through the horn, but makes a line on the surface, it is called a sand-crack, being very common in some sandy countries, where the horses' hoofs turn dry, and crack with the heat of the sand. These are but little regarded where the lines are superficial and not deep in the horn, and are often cured by rasping them out and keeping the foot cool and moist. However, it is a defect that must lessen the value of a horse in proportion to the degree of goodness or badness of his foot; for when the foot happens to be otherwise bad, these blemishes often degenerate, and are of ill consequence.

The next defect I shall take notice of in the feet, is of those horses that have narrow heels. Some horses' feet are tolerably good, even where the heels are narrow; and when the foot is hot and inclined to rottenness, and the quarters lose the round turn that they ought to have, as they approach the heel, and look as if they were bent and pinched together, insomuch that the heels of some such horses are not above two fingers in breadth, then the foot is bad; and the way that many take to mend these kind of feet, by hollowing on each side the frog, and thinning the quarters to cause them to stretch to a wider shoe, makes them worse.

Another thing that ought carefully to be looked into, is, that both his fore feet be of equal size; for whenever this defect is the least apparent, though it may proceed from the horse's using one leg more than the other, as it happens to working-men who use the right hand and arm more than the left; yet when one foot is smaller than the other it is a blemish, and carries some doubt that such a foot may, in time, fail and perish; even as those do that have been hurt by accidents, or after old lamenesses in the shoulders, legs, and muscular parts, where the foot, at last perishes, in proportion as the muscular and nervous parts shrink and diminish.

Another defect in horses' feet, is when they are flat and without depth. If such a foot happens to be strong, and the hoof smooth, if the sole be also firm, and the frog no ways rotten or fleshy, such a horse will go over the roads tolerably well. But when a flat foot is shaped like an oyster, has many rings or wrinkles, if the sole be soft, and the frog fleshy and spongy, it is a very great defect. Some horses are so remarkably faulty in this respect, that the frog bunches out beyond the bottom crust of the hoof, that their shoes must be made hollow, and the plates so broad as almost to cover the whole bottoms of their feet to keep them from the ground. But, indeed, such horses are only fit for draught, and not for the saddle.

Some horses have tolerably good feet, not only that their heels are low. Horses that have long yielding pasterns, are the most subject to this defect, and also those that have their pasterns very small, short, and standing almost quite upright: these have generally long heels and flat feet, and their fore-legs coming straight down from the shoulder to the foot, without any bending of the pasterns, and, for this reason, are frequently called Goat-legged. Many of the horses bred in the Fens are of this kind, have but an awkward use of their limbs, and make very bad travellers; and those low-heeled horses which have very long, yielding pasterns, are apt to have their heels wear quite to nothing upon a journey, and all the care imaginable, in shoeing, cannot prevent it.

A very high heel is another extreme, which greatly lessens the value of a horse; for even where such a foot happens to be strong and smooth, it is, nevertheless, the cause of unsteadiness in a horse's going, exposes him often to trip and stumble, to sprains in the coffin and pastern-joints, &c.

There is one kind of horse, especially among the coach and cart breed, very remarkable for a large deep foot, the horn extremely thick and scaly, the heels broad and mouldering, and are apt to grow so very fast, that the farriers, when they go about to shoe such horses, thinking to ease them of their great load, and to bring their feet into a better size, pare and rasp them to such a degree, that they leave their feet much larger above the coronet and instep than at the bottom; so that they always look as if they went upon pattens, which is not only very ugly, but such horses are seldom good for much.

A very large foot, of any kind, is to be avoided in a horse, even supposing it to be, in itself, firm and good. But when I speak of a large foot, I mean only when it is disproportioned to his other parts; for a large horse must, of course, have a larger foot than a small

one. But when we see the foot large and the limb small, in all such, it must be observed by those who have experience, that the bones and sinews are also slender, which not only denotes weakness, but heaviness and inaptitude to any brisk and vigorous action; and are, therefore, unfit for the coach or saddle, but to draw in a cart or waggon, or to carry a burden.

Some object greatly against white feet, as being generally worse than those of any other colour. Indeed, when a horse has too many of his feet white, they do not always prove the best; yet I have seen white-footed horses have their feet such as the ablest judges could not find fault with. When a foot is smooth and tough, of a middle size, without wrinkles, neither too hard and brittle, nor too soft, and when the heel is firm, open, and no ways spongy or rotten, and the frog horny and dry, and the sole somewhat hollow, like the inside of a dish or bowl, whatever be the colour, such a foot will, for the most part, turn out good; though the dark or black hoof, where it resembles that of a deer, is generally best; and for this reason, those who are the most curious about a horse's feet, do not choose such as have much white upon their legs and pasterns, to avoid their having too many white feet.

[*To be continued.*]

METHOD OF OBTAINING THE FIGURE OF A PLANT.

A PIECE of paper is to be rubbed over with powdered dragon's blood, in the manner practised by engravers, and the small branch or leaf of which the design is required, is to be laid upon it: by means of slight friction it soon takes up a small quantity of the powder, and being then laid upon moistened paper, an impression is to be taken in the manner practised for lithography, without a machine. This process may be usefully employed for preserving certain physiognomical and characteristic features, which cannot be retained by drying the plant.—*Bull. Univ. E. viii.* 339.

THE LION OF SOUTH AFRICA.

[Concluded from p. 503.]

I SHALL conclude these notices of this animal, (which, whether of any value or not to the naturalist, are at least sufficiently well authenticated), with some account of a lion hunt, which I witnessed myself in April, 1822. I was then residing on my farm or location, at Bavian's River; in the neighbourhood of which numerous herds of large game, and consequently beasts of prey are abundant. One night, a lion, who had previously purloined a few sheep out of the kraal, came down and killed my favourite riding horse, about a hundred yards from the door of my cabin. Knowing that the lion, when he does not carry off his prey, usually conceals himself in the vicinity, and is moreover very apt to be dangerous, by prowling about the place in search of more game, I resolved to have him destroyed or dislodged without delay. I therefore sent a messenger round the location to invite all who were willing to assist in the *foray*, to repair to the place of rendezvous as speedily as possible. In an hour every man of the party, (with the exception of two pluckless fellows, who were kept at home by the women), appeared ready mounted and armed. We were also reinforced by about a dozen of the "Bastaard Hottentots," who resided at that time upon our territory as tenants or herdsmen; an active and enterprising, though rather an unsteady race of men. Our friends, the neighbouring Dutch Boors, many of whom are excellent lion-hunters, were all too far distant to assist us—our nearest *neighbours* residing at least 20 miles from the location. We we were, therefore, on account of our own inexperience, obliged to make our Hottentots the leaders of the chase.

The first point was to track the lion to his covert. This was effected by a few of the Hottentots on foot: commencing from the spot where the horse was killed, they followed the *spoor* through grass, and gravel, and brushwood, with astonishing ease and dexterity, where an inexperienced eye could discern neither foot-print nor mark of any kind, until at length we fairly tracked him into a large *bosch*, or straggling thicket of brushwood and evergreens, about a mile distant.

The next object was to drive him out of this retreat, in order to attack him in a close phalanx, and with more safety and effect. The approved mode, in such cases, is to torment him with dogs till he abandons his covert, and stands at bay in the open plain. The whole band of hunters then march forward together, and fire deliberately one by

one. If he does not speedily fall, but grows angry and turns upon his enemies, they must then stand close in a circle, and turn their horses' rear outward; some holding them fast by the bridles, while the others kneel to take a steady aim at the lion as he approaches, sometimes up to the very horses' heels—couching every now and then, as if to measure the distance and the strength of his enemies. This is the moment to shoot him fairly in the forehead, or some other mortal part. If they continue to wound him ineffectually till he waxes furious and desperate, or if the horses, startled by his terrific roar, grow frantic with terror and burst loose, the business becomes rather serious, and may end in mischief—especially if all the party are not men of courage, coolness, and experience. If they stand close and firm, it is alleged that the lion will seldom, if ever, actually burst in upon them; but if they are so infatuated as to take to flight, or get confused and break their ranks, he will infallibly make sad havoc among them. The boors are, however, generally such excellent marksmen, and withal so cool and deliberate, that they seldom fail to shoot him dead as soon as they get within a fair distance.

In the present instance, we did not manage matters quite so scientifically. The Bastaards, after recounting to us all these and other sage laws of lion-hunting, were themselves the first to depart from them. Finding that the few indifferent hounds we had, made little impression on the enemy, they divided themselves into two or three parties, and rode round the jungle, firing into the spot where the dogs were barking round him, but without effect. At length, after some hours spent in thus beating about the bush, the Scottish blood of some of my countrymen began to get impatient, and three of them announced their determination to march in and beard the lion in his den, provided three of the Bastaards (who were superior marksmen) would support them, and follow up their fire, should the enemy venture to give battle. Accordingly in they went, (in spite of the warnings of some more prudent men) to within fifteen or twenty paces of the spot where the animal lay concealed. He was couched among the roots of a large evergreen bush, with a small space of open ground on one side of it; and they fancied, on approaching, that they saw him distinctly, lying glaring at them from under the foliage. Charging the Bastaards to stand firm and level fair should *they* miss, the Scottish champions let fly together, and struck—not the lion, (as it afterwards proved), but a great block of red stone, beyond which he was actually lying. Whether any of the shot grazed him is uncertain; but, with no other warning than a furious growl, forth he bolted from the bush. The rascally Bastaards, in place

of now pouring in their volley upon him, instantly turned, and fled helter skelter, leaving him to do his pleasure upon the defenceless Scots, who, with empty guns, were tumbling over each other in their hurry to escape the clutch of the rampant savage. In a twinkling he was upon them, and with one stroke of his paw dashed the nearest to the ground. The scene was terrific! There stood the lion with his foot upon his prostrate foe, looking round in conscious power and pride upon the bands of his assailants, and with a port the most noble and imposing that can be conceived. It was the most magnificent thing I ever witnessed. The danger of our friends, however, rendered it at the moment too terrible to enjoy either the grand or the ludicrous part of the picture. We expected every instant to see one or more of them torn in pieces; nor, though a band of us were standing within fifty paces with our guns cocked and levelled, durst we fire for their assistance. One was lying under the lion's feet, and the others scrambling towards us in such a way as to intercept our aim upon him. All this passed far more rapidly than I have described it. But, luckily, the lion, after steadily surveying us for a few seconds, seemed willing to be quits on fair terms; and with a fortunate forbearance, (for which he met but an ungrateful recompence) turned calmly away, and driving the snarling dogs like rats from among his heels, bounded over the adjoining thicket, like a cat over a footstool, clearing brakes and bushes 12 or 15 feet high as readily as if they had been tufts of grass; and, abandoning the jungle, retreated towards the mountain.

After ascertaining the state of our rescued comrade, (who fortunately had sustained no other injury than a slight scratch on the back and a severe bruise in the ribs, from the force with which the animal had dashed him to the ground), we renewed the chase with Hottentots and hounds in full cry. In a short time we again came up with the enemy, and found him standing at bay under an old mimosa tree by the side of a mountain stream, which we had distinguished by the name of Douglas Water. The dogs were barking round, but afraid to approach him; for he was now beginning to growl fiercely, and to brandish his tail in a manner that showed he was meditating mischief. The Hottentots, by taking a circuit between him and the mountain, crossed the stream and took a position on the top of a precipice overlooking the spot where he stood. Another party of us occupied a position on the other side of the glen, and, placing the poor fellow thus between two fires, which confused his attention and prevented his retreat, we kept battering away at him, without truce or mercy, till he fell—unable again to grapple with us—covered with wounds and glory.

He proved to be a full grown lion of the yellow variety, about 5 or 6 years of age. He measured nearly 12 feet from the nose to the tip of the tail. His fore leg, just above the knee, was so thick that I could not clasp it with both hands; and his neck, breast, and limbs, appeared, when the skin was taken off, a complete congeries of sinews. His head, which seemed as large and heavy as that of an ordinary ox, I had boiled for the purpose of preserving the skull, and tasted the flesh from curiosity. It resembled very white coarse beef, rather insipid, but without any disagreeable flavour.

Our neighbours, the Nimrods of the Tarka, disapproved highly of our method of attacking this lion in the bush, and said it was a wonder he did not destroy a few of us. They were highly amused with the discomfiture of our three champions; and the story of "Jan Rennie en de Leeuw" still continues to be one of their constant jokes against the Scotchmen. This is all fair; and it forms a just counterpoise in favour of our good humoured neighbours, when the Scottish farmers quiz them too unmercifully about their uncouth agriculture and antediluvian ploughs and harrows.

I imagine the reader has now heard quite enough of the LION, to judge of his character as a neighbour and acquaintance. I was informed by the Bechuana Chiefs, that the lion occasionally surprises the Giraffe or Cameleopard in the manner here described; and that, owing to the amazing strength and fleetness of that magnificent animal, he is sometimes carried away *fifteen* or *twenty* miles before it sinks under him. This fact, I believe, has formerly been mentioned by travellers, and has been ridiculed as absurd by European critics. But the soothfast evidence of my friend, old Teysho, the wise and sagacious Vizier of great Mateebe, Autocrat of all the Bechuanas, is sufficient for me; and will doubtless be allowed its due weight, when the matter is again discussed by the Sçavans of Paris and Edinburgh.

T. P.

HORSES.

"Saddle White Surrey for the field to-morrow."—SHAKSPEARE.

I LOVE horses;—a saddle is my throne: give me but the Bucephalus I esteem, and i'faith I envy not the wealth of princes. Some men have twenty, some fifty horses—I have but one; I never had but three

in my life: the two companions of my youth, alas! are dust. My horse is a friend, I wear him in my heart; there is no place for another of the same species. His eye recognizes me—he bounds with delight at our meeting—his whole soul seems bent on pleasing me. What would he not attempt at my bidding? The least motion suffices—he never demurs, but takes a pleasure in obeying me, and often anticipates my wishes. There is no deceit in this.

Some men use their horses as mere slaves. I never had such an acquaintance. Whip me the fellow who first set the brutal example of depriving thee of thy eloquent ears; they are even more communicative than thy spirit-sparkling eye: how palpably do they express thy sensations,—thy surprise, desire, terror, delight, and emulation; they are speech to thee,—nay better—for theirs is a discourse which men of every tongue, as well as all thy fellows, understand. Nature teaches them the art, or rather "the art itself is nature." Beshrew the tasteless bipeds who rob thee of the flowing honours of thy tail,—thy protection against the infinite tormentors of thy glowing reins, galled in the service of man, who pitilessly despoils thee of the fee of nature—thy very birthright, to bedeck himself with that which he asserts would disfigure thee.

I remember, when I was a mere infant, my grandfather used to place me on the back of one of the most celebrated horses of his day; I never beheld such a high-mettled creature since. He suffered very few persons to approach him, and only one man (his jockey) ever ventured to ride. Restless, fiery, and impatient in the extreme, he subsided into a state of anxious, breathless stillness, the moment I (a puny helpless child) was placed on him;—'twas like shedding oil upon a raging sea.

Horses are as different in their dispositions as in their outward forms. There is your horse mettlesome, and your incorrigible proser; your self-conceited, curvetting palfrey, and your plain-spirited, unsophisticated, unaspiring dobbin; your steed capricious, and your laudable, business-looking horse of application, and many hundred others; besides your right-gallant *cavallo*, the most noble beast in the creation,—a combination of beauty, strength, and activity,—a glorious example of nature's power (I love to meet such a creature in full unrestrained liberty and high spirits, on a wide, race-tempting heath). They all have their faults—even the very best of them; but, in sooth, I am in marvellous good fellowship with the whole race, individually, and in the aggregate; the very dullest rogues have a redeeming spark of good-nature in their compositions.

The most admirable object on earth, is a fair woman gallantly mounted on a beautiful palfrey. A sweet, calm-looking Quakeress, on a demure, milk-white animal, glided by me one evening as I was doting on the last rays of the setting sun. Dost thou think I shall ever forget the beautiful vision, reader? I seldom bestow a thought on Alexander, but Bucephalus, the most chivalric of the race—the *beau idéal* of steeds, occupies the sister niche in my memory, to that which holds the Knight of La Mancha's never-to-be-forgotten creature—Rozinante.

Who has not heard the pathetic song of "The High-mettled Racer?" I should desire no greater glory than to have been the author of that song. I often lament my incapability of turning a tune, merely because I cannot sing it. Didst thou ever notice, gentle reader, the poor Curate's Horse, of Hogarth? Oh! there is more pathos—but he can better tell his own story than I can;—seek him, if, perchance, thou hast him not;—read him well, and thou mayest know his whole life. Look into the natural history of horses; 'tis very interesting: unquestionably, the horse will amply repay thee for studying him.

"Magnificent creature! so stately and bright,
In the pride of thy spirit pursuing thy flight!"

Fain would I apostrophize thee for hours—"Fleet son of the wilderness!"—"Joy of the happy!"—Delight of knight and lady fair in every age!—what would chivalry be without thee?—Thou art associated with every thing that's gay or gallant in its records!—Thou art remembered, with advantages, at the tilt and tourney, with bright eyes beaming around thee, and "*preux chevaliers*," gorgeously bedecked heralds, and faithful 'squires in thy company;—fluttering hearts and ardent spirits breathing love and gallantry all about thee. What limbs elastic!—What energy in every action!—What buoyancy of spirit beaming from thine eye!—Who does not applaud thy gallant bearing? Friend of mankind! I love thee.

CHEVALIER.

CUCKOO KEPT ALIVE IN CONFINEMENT FOR NEARLY A YEAR PAST.

THIS specimen was taken from the nest of a titlark, near the village of Currie, in the end of July 1827. It was then apparently about a fortnight old, and was not fully fledged until six weeks after. At first it was fed with bread and raw eggs made up into a paste. After this, it was fed with roasted meat cut into small pieces; and ultimately with raw meat, which it prefers, but will not take unless perfectly fresh. At present it eats about a pound of meat weekly. It is very fond of insects of all kinds, and in autumn seemed to prefer the larvæ of butterflies. Its first moult commenced in the end of March last. Previous to this, the colour of the upper parts was deep brown, spotted with reddish-brown; the breast and belly greyish-white, with transverse bars of brown. During winter, it was dull through the day, and restless at night,—flapping its wings for hours together. At present, it is active through the day, and quiet at night. About the beginning of March it was first heard to utter its peculiar cry, which it has repeated many times since; and one morning in the end of April it continued crying for a whole hour. Its chirping cry was given up about January. At present * it has a sharp weak scream, which it utters on being frightened or irritated. It did not eat of itself until nearly three months after it was found. It has always been very fond of heat, and is extremely sensible to cold,—shivering intensely when the temperature is low. When the sun shines upon it, it expands all its feathers, especially those of the tail and wings, turning its back to the heat. When eating, it holds the piece of meat about three or four seconds, squeezing it with the points of its mandibles, which is supposed to be an instinctive action, the object of which is to deprive its prey of life, previous to swallowing it. The late Mr. Templeton, of Belfast, succeeded in keeping a cuckoo over winter, but it died in March, when the first moult commenced.

* The specimen was shown at a meeting of the Wernerian Society, 19th April, 1828; but, unfortunately, at the beginning of this month, June 1828, it was choked, in attempting to swallow some moss which chanced to be in its cage.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

As in all probability you are in possession, ere this, of a report of Professor Coleman's Introductory Lecture, I shall not attempt any sketch of it, but confine myself to some occurrences immediately following it.

On the Professor closing his harrangue, and just as the plaudits were commencing, one of the audience stood up, and begged to know of the Professor how a knowledge of anatomy was to be acquired without a Demonstrator; he replied, that Mr. Sewell was the Demonstrator. The querist replied, that Mr. S. denied his holding the appointment; and after some warmth on the part of the Professor, he told the querist that he (the Professor) degraded himself by answering his questions, &c. &c.

When the plaudits were resumed, and the Professor had quitted the Theatre, there succeeded some hissing, with some cries of "Turn him out!" however, the *gentlemen* did not manifest any symptom of putting their "turn him out" into execution: amongst these *brave*, I observed a strait looking fellow, with a forehead villanously low, whom, on inquiry, I learned was a discharged private from the Life Guards.

The scene strongly reminded me of one I witnessed some years since, at Offley's, near Covent Garden, in the box-room, where, in a box by himself, sat a late officer of dragoons, who had, unfortunately, compromised himself, and been obliged to leave his regiment, and in the next box were three *gents*, having a good deal the appearance of mercantile travellers; the latter expressed themselves in very strong terms of disapprobation of any person who had taken the benefit of the Insolvent Act, and finished, by declaring *alto voce*, that if such a man were to attempt to sit in a room with them, they would turn him out. My officer stood up, and, in a rich Irish brogue, sympathized much with their feeling on the subject, but ended by saying, "Such, however, gentlemen, is your unfortunate situation, for I have taken the benefit of the Insolvent Act twice; now, as to turning out, it is very well in theory, but not always easily reduced to practice." With this he sat down, and my travellers, in whom I suppose the organ of combativeness was more prominent than in the Vets, proceeded to extremities; however, with the aid of candlesticks, pots, decanters, &c., the travellers saw fit to sound a retreat, and leave my officer in possession of the field.

I suspect, if the Vets. had had recourse to the same expedient, although there were neither candlesticks nor decanters in the way, that the result would have been similar.

On our reaching the court-yard, Mr. Cherry, sen. declared aloud, that the pupils ought to be grateful to the "gentleman, for the manly, fearless, yet respectful manner in which he advocated their cause; and that he was sorry to find that there were in the profession, or likely to be in it, such Sweeps (as he poetically expressed it) as those who hissed. I fully agree with Mr. C., that the *honourable profession* of a chimney sweeper would be much more appropriate for such persons,

than what *ought to be a liberal profession*. At the same time, I must confess, so strong is the force of habit, that had I been witness to an act of parricide, or the appropriation of the communion plate of a church, I could not have been more shocked than I was, on hearing one so daring, as to question the man whom I had been for years in the habit of looking up to as something almost divine. On this occasion I acted as men usually do in such circumstances: I opened my mouth, and stared with all my might at this "bold bad man;" I perceived that he was a mere man with a head on his shoulders. I afterwards found that he was in the habit of *ornamenting* this said head with a most extraordinary shaped old grey hat: so much for this outward man: however, I determined to learn more of him, and, on further inquiry, found that he was a medical man, fond of horses, and that he had devoted many years' attention to their treatment, both in health and disease,—in short, a horse-man; and further, that he had been for some time a pupil at the Veterinary College.

But at length, to come to the point, as the Professor said Mr. Sewell was the Demonstrator—is not the natural question, then, Is Mr. S. competent to fill such a situation? The unanimous answer of the profession would be, *Most certainly not*. I do not think there is scarcely one person that *has passed his examination* sufficiently *bête* to say otherwise. It may be asked, but where find a better? I am certain there are many better, and few worse. What are his qualifications? is he an anatomist? is he a man of either a classical or a general education? is he able to read the works of the continental writers, from whom alone we can obtain any sound veterinary knowledge? finally, is he, as Mr. Cherry emphatically and most properly expresses it, "a horse-man;" that is, a man who is fond of a horse, can ride him, and drive him, and get him into condition?—To each and every of these questions I answer, and the Professor can bear me out in it, *most decidedly and unequivocally*, No! As to his riding, I never see him on horseback that he does not forcibly remind me of an old woman in the act of performing a certain office of nature. I shall not attempt to describe his seat on the bench, or his fingering the ribbons in his *shay*,—for higher I am sure he never got,—but shall only wish from my heart that either Nimrod or Viator, jun., could see him. And as to his knowledge of getting a horse into condition, I shall state one fact.—He has a well bred old horse, that he rides through the town, and of course frequently leaves standing at doors; *last year he had this horse clipped, in the very middle of* WINTER!!! Hoping you will excuse my having trespassed on so much of your valuable space, I beg to subscribe myself,

Your very obedient Servant,

AN OLD PRACTITIONER.

Canterbury, 18*th Nov.* 1828.

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To the Editor of the FARRIER *and* NATURALIST.

SIR,

I have put out my feeble powers in transposing into verse Mr. Sewell's *celebrated Report*. I believe, in the essay, I may lay claim to the merit of having, *verbatim et literatim*, adhered to my text: should the production possess any other merit, you will, probably, give it insertion in your next Number. In which case, I may be induced to attempt *Part Second*.

I am, Sir,

Yours, &c.

HUDIBRAS, Jun.

Report to the Governors of the Veterinary College of London. By WILLIAM SEWELL, Assistant-Professor.

A NEW VERSION.

THE Professor's Assistant, whom the French call a "Swell,"*
The General Meeting commanded
To report his fam'd visits to schools Continental;
Which he did, and the same to us handed.

(Visit to the Veterinary School at Lyons.)

He first went to Lyons, and there saw the Mayor,
Who into the school introduced him;
Where he saw stables paved in the *ordinary* way,
And *ordinary* patients within them.

He saw the Museum, and a subject entire,
For muscles and vessels injected;
A Botanical Garden, and Theatres higher;
But he never once heard how they lectured.

But the best of it all, "in the rear of the school,"
Was—What d'ye think?—Why a paddock,
Which he tells us, *grand homme*, by true logical rule,
Was a place used for lame ones to lag out.

With all this information, and some specimen shoes,
Several tracts and introductory letters,
He set off for Paris to collect some more news;
What a blessing to have such a Pyrrhus!

(Visit to the Veterinary School at Paris.)

Arriving at Paris, and seeing Huzard,
The Veterinary Director at Alfort;
He showed him his school, wherein he observed
All that Lyons possessed of the same sort.

* Vide *Recueil de Médécine Véterinaire.*

Electrics he beheld, and instruments too;
But never once saw them in motion:
Economy rural, and medical too,
Of the use of all which he'd no notion.

He saw ramping stallions, and jack-asses too,
Which the State kept for their propagation;
And informs us they did this *respectively* too:
I wonder if e'er they do not—in what nation?

There was a portable forge, and a field of six acres
Set apart for experiments rural;
But of what sort or what kind, less 'twere for potatoes,
Remains yet to be stated by Sewell.

The royal stables at Paris were well built of brick,
The horses all stood without straw:
There were four or five patients, but none of them sick.
Lack-a-day, Mr. "Swell," what a flaw!

Thus ended "Swell's" visit to France,
From which *he* got "great satisfaction,"
No doubt; for the Subscribers' *argent*
Did he pocket by the *glorious transaction!*

To the Editor of the FARRIER *and* NATURALIST.

SIR,

Feeling sensibly (as I do) my but few attainments in Pathology, it is with no small degree of self-diffidence that I trouble you with the present communication: but as the supply of matter to your truly useful and superior publication ought to be a powerful and influential consideration in the mind of every one who has his profession at heart, I have ventured to solicit the insertion (therein) of a case which, though not an entire rarity, yet is, I trust, sufficiently uncommon to merit a place in your pages for the perusal of any inquiring reader. The case which I am now about to relate, was a Stricture of the Œsophagus. The horse presented, when first attended, every symptom of malignant Catarrh,—the parotid glands were considerably swollen, the membranes of the mouth and fauces were highly inflamed; in consequence of which arose a copious flow of impure, that is to say, fœtid,—saliva: a remarkable degree of laryngeal and tracheal irritation was present, which caused a violent and almost suffocating cough: there was not

much discharge from the nostrils, but the characteristics, taken altogether, were catarrhal in their most malignant form. I bled him to the amount of four quarts; endeavoured to administer medicine, but found it impracticable; gave clysters; blistered his throat and windpipe extensively; ordered a free admission of pure and atmospheric air into the stable; clothed his body well to promote a proper action in the vessels of the skin; directed a gargle of honey and vinegar to be applied to the mouth; and continued this treatment till the violence of the symptoms was, in a measure, abated; but, notwithstanding, there still remained an inability to swallow, though a desire to eat returned, from a cessation of the inflammatory symptoms. At this I was not a little surprised, and began to suspect something of a more serious nature; and upon more minute examination, I discovered, when the horse attempted to swallow, a kind of regurgitative motion in the œsophagus, quite different from that arising from a common "sore throat;" at the detection of which, my father was induced to state to the owner, his firm conviction that a stricture had formed in the œsophagus, and that all hopes of his recovery must banish. The horse was reduced to a skeleton, and in a day or two afterwards died from literal starvation.

Upon "*post mortem*" examination, I found the lower part of the œsophagus, from its entrance into the chest, to the cardiac orifice, so far diminished in its calibre, as to entirely preclude the entrance of the finger into it. The lungs were diseased, the pharynx, or top of the gullet, showed marks of inflammation, and also the larynx and trachea; but these morbid effects *I* should consider as resulting from other causes unconnected with the stricture. But, however, Sir, permit me to observe, that I feel anxious to know what may have been the cause of the *latter;* had it been in the intestinal canal, the sphincter of the bladder, or any other tubular formation whose lining is sensitive and vascular, I should have attributed it to some inflammatory cause; but when it is found in a tube, whose lining is insensible and cuticular, I do not know how to account for it, nor can I conceive what is its most probable and efficient cause. Perhaps the insertion of this letter may induce some of your more able correspondents to consider the subject, and thereby furnish materials for future discussion. If so, the result will be a source of peculiar gratification to,

Sir,

Your obedient Servant,

Huntingdon, Nov. 6th, 1820. VETERINARIUS.

To the Editor of the FARRIER *and* NATURALIST.

SIR,

Seeing in your Number for October, 1828, a letter from a correspondent, signed "G.E.," respecting wens in dogs' necks, I am induced to make the following observation:—I am inclined to think that there is a predisposition, in some breeds of dogs, for these enlargements (more especially greyhounds and pointers), and which, in every appearance, resemble wens. I had two young pointers, from two to three months old, that were affected similarly to what "G. E." describes, and should have had them destroyed, had I not been persuaded, by an old sportsman, to try warm fomentations for a time: I did so; and the result was, that these wens turned out to be nothing more than tumours, which soon came to suppuration and required opening. Should you think this worthy of insertion, you will oblige your constant reader,

F. W. P.

A Pupil at the Vet. College.

P. S. Should "G. E." put the above in practice, a line from him, as to the result, will be deemed a favour.

ROYAL VETERINARY COLLEGE CASE.

A Bay Horse, aged 5,

Belonging to Prince Esterhazy, was admitted Nov. 15th, to be Castrated, in consequence of having committed the unpardonable crime of throwing his Princely master and fracturing his leg. "Poor animal! hadst thou belonged to us, thy fate might have been otherwise."

On the 17th, half an ounce of aloes was given, which operated the next day; and on the

22d, the operation was performed in the new SHED which has been erected in the back paddock; and which, from the strength of its beams, appears to be intended as an enduring monument of the *skill* and *happy* taste of the designer. The conception of this edifice appears to have been taken from the rustic model of a cart shed.

Whether we are to attribute Mr. Sewell's amendment in performing this operation, to the effect of the cold bracing his shaking nerves, or whether the supposition that he was in an operating theatre induced him to exert himself, we cannot say; but it was done in rather less time, if not better, than heretofore.

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END OF VOL. I.

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