tion (the death of one of my patients was due to this cause); collapse of the lungs from sudden though only moderate effusion within the chest—a condition well known to be intimately related, especially in children, to the amount of power possessed by the inspiratory muscles (I have mentioned a death which was due to this accident); and increased liability to convulsion and coma, as plainly evidenced in the chronic forms of uræmic and saturnine poisoning.

The measures to be employed for restoring health are, a nutritious but plain and unstimulating diet, cod-liver oil, and tonics; and of the latter, the preparations of iron are principally indicated by the anæmia which is so prominent a symptom. But, in employing these remedies, especial care is required not to anticipate the period when the stomach is prepared for their reception; relapse during the period of convalescence may be easily caused by an error in this particular. In one of my patients, where recovery seemed fully established, meat was ordered on the fifteenth day, but occasioned vomiting, which immediately ceased by the withdrawal of the offending aliment. In another boy, the symptoms were unusually obstinate, when it was discovered that, through an error, he was taking meat; a more appropriate diet at once ushered in convalescence. In a dispensary patient, recovery was proceeding satisfactorily, when a breakfast on bacon was followed by return of the dropsy, and by fatal convulsions.

The success which attends the tonic treatment will be materially influenced by the rapidity with which the impurities are removed from the blood. Regeneration of blood-cells is always a work of time, especially when their destruction has resulted from poisonous agency. Much perseverance and constant attention to the functions of digestion and secretion will be called for; and recovery will often be slow, even when not disturbed by adverse circumstances. Nor is it merely the general symptoms which continue: a considerable time often elapses before the urine entirely loses its albumen and its bloody tinge; and this even when severe local symptoms have not presented themselves. In a boy, recovery from the general symptoms was slow, but steady; urine averaged fifty-three ounces, specific gravity 1012; albumen ranged from one-third to one-fourth for twenty days, but had not left the urine till the seventy-first day of the dropsy; nor had the urine quite lost its smokiness on that day. In a girl, whose general health had been greatly depressed by the disease, the dropsy was slight; urine averaged fifty-seven ounces, specific gravity 1009 (not including that passed by stool); albumen never exceeded one-sixth (after the seventh day, when she was first seen); but the urine was not perfectly free from blood till the fiftieth day. And in another girl, with an inconsiderable amount of dropsical effusion, but advanced anæmia, it was seventy-eight days before the urine finally regained its normal colour.

First Class Hospital Patients. This, indeed, was fully proved in the course of a discussion at the Royal Medical and Chirurgical Society, a short time since, which followed the reading of a very interesting paper by one of the medical staff of the Hospital for Consumption at Brompton. It was stated that, of those who obtain relief at that institution, there are none of the poor of London; they are, for the most part, of the well-to-do portion of the community, who can afford to remunerate the struggling medical practitioner for his professional services; and to any person who will take the trouble of observing, more than twenty per cent. of the females seeking relief there are expensively dressed in silks and satins; and it is not unusual to observe many driving there in pony phaetons and respectable broughams. (*Observer.*)

Transactions of Branches.

BATH AND BRISTOL BRANCH.

ON THE RELATION OF TEMPERAMENT AND COMPLEXION TO DISEASE.

By John Beddoe, B.A., M.D., Physician to the Bristol Royal Infirmary.

[*Read Feb. 20th*, 1862.]

I find myself in the difficulty, which is, I suppose, felt by everyone who attempts to treat briefly of an extensive subject, which is rather of a speculative than of a practical character. In fact, I have found it impossible to reduce the heads of my subject into regular and logical order, without trespassing more upon your time than I should feel justified in doing, particularly as it is one of my principal objects to draw from some of the experienced practitioners around me some of the results of their observations on the physiognomy of disease, and to learn whether they recognise any measure of truth in the popular doctrine of temperaments, and whether they think much that is useful for the diagnosis or prognosis of disease can be drawn from it.

I will begin, then, with a few words on the complexional characters assigned by ancient and modern writers to the several temperaments; and will thence proceed to discuss the current opinion that persons of certain complexions are more liable than others to particular diseases, and to lay before you some of my own observations on the subject.

In Cullen's opinion, the idea that there existed four principal varieties of temperament was probably gained at first by observation, and subsequently theorised upon, and adapted by the classical physicians to their conceptions of the four elements and the four humours. Dr. Prichard seems to have inclined to the same view: and to it I subscribe. It is favoured, I submit, by the fact that there are some discrepancies in the manner in which they severally reconciled these three orders of ideas. Hippocrates had worked out the connexion between the qualities of heat, dryness, coldness, and moisture, and the superabundance of particular humours, on the mixture of which latter his temperaments were founded. But he ascribes sloth and timidity to people of a bilious constitution, apparently from actual observation, whereas the hot and dry were naturally thought by Galen and his followers likely to be the most courageous of men.

These latter, again, take little notice of the four humours, and base their temperaments on the elementary qualities, the indications of which are followed out by Galen with great ingenuity. Observing, it would seem, that the natives of hot climates were mostly black-haired, while the barbarians of the cold north were light-complexioned, he ascribed black hair to heat and bile, and light to coldness and phlegm. But as heat, and courage, and hairiness, were supposed to go together, he was thus led into a dilemma, from which he extricated himself very ingeniously in the following passage:—

"For the Gauls and Germans, and all the Thracian and Scythian race, have their skins cold and moist, and therefore also soft, white, and hairless; but all their natural heat has betaken itself with the blood into their viscera, where being pent up, and agitated, and seething, it renders them courageous, daring, and rash of counsel; but in the Ethiopians and the Arabians, and all those, in fine, who dwell in the south, the skin is rendered dry, parched, hard, and black, by the fervency of

the air that surrounds them, and by their own natural heat being driven to the surface, their whole body indeed obtaining a very small portion of natural caloric, but being warmed by what is external and acquired."

He is at considerable pains in other passages, to show that we must not diagnose the temperament of the entire body from the evidence afforded by a portion of it. Thus, he says, an aquiline nose and small eyes may be marks of a dry temperament, but this dryness need not extend to the entire organism. It is obvious from such passages as these, that his scheme was a much more complex one than that of the moderns, with whom temperament is "a particular state of the *(whole)* organism, characterised by the predominance of one or other system, of one or other species of functional activity." (Racle, *Des Diathèses.*)

I have collected from Paulus Æginetа the following descriptions of the four temperaments of the Galenists. It must be premised that the colour of the hair is mentioned by Paulus in connection with the qualities of the brain, not with those of the whole organism.

"People of the hot and moist temperament have soft, fleshy, rather hairy bodies; their hair is straight and yellowish, and does not soon fall off; they cannot endure long watching; they are prompt to action and to anger, but easily appeased.

"The cold and moist have narrow chests, hairless bodies, soft, white skins, feeble muscles, ill-formed joints, and invisible veins; their hair is lightish, especially in youth, and they do not become bald; the more marked the temperament the lighter is the hair.

"The hot and dry are very shaggy; the hair of their heads is of rapid growth, black, thick, strong, and curly, but they soon become bald; the veins and arteries are large, the pulse strong, the body, firm, muscular, and lean, the skin hard and dark; their excretions are small; they require little sleep; they are active, passionate, and implacable.

"Lastly, the cold and dry have a white skin, slender bodies, fine muscles, not without some fat; they have small joints, and little hair, and what they have is tawney," (here Paulus differs from the moderns, and also from the Arabians, who assign black hair to the fourth temperament.) "These are cowardly, low-spirited, and apprehensive."

The Arabian school acknowledged the existence of the four temperaments, which they based upon the prevalence of one or other of the four humours. Dr. Adams quotes from Rhazes the following concise description of their signs:—

"As for the complexion of the patient—you may know that if he has a white and ruddy colour, well-conditioned flesh, and a thin skin, which quickly reddens when you rub it, the material or humour is indicated to be sanguine. And if the body is fat and white, without ruddiness, and without hairs, with small veins, soft flesh, slender bones, and joints indistinctly marked, and the conformation generally resembles that of women, it appears that the material is phlegmatic. But if the body is lean and hairy, of a yellowish complexion, with large veins, and well marked joints, it shows that the material is choleric; and swarthiness of complexion, hardness of body, roughness and hairiness of skin, are signs that it is melancholic."

From the Arabians, according to Dr. Adams, our modern writers have taken their ideas on this subject. But considerable differences are observable in the accounts even of those who restrict themselves to the four original temperaments, and still greater among those who have attempted to improve upon the original scheme by adding to their number. Dr. Prichard's descriptions seem to me among the best I have met with, and his views have the merit of great distinctness and simplicity. He attributes great importance to the varieties of complexion and external character, of which he acknowledges two principal ones—the fair, or xanthous; and the dark, or melanous. He identifies the sanguine temperament with the former, and the choleric with the latter, considering the phlegmatic to differ from the sanguine "by a less full and perfect development of the structures essential to the vital functions," and the melancholic to be also a constitution "bordering on disease," and bearing an analogous relation to the choleric.

Other authors, again, have constructed systems of temperaments, in which the colour of the hair and eyes is not taken into account, or at least is not considered physiognomic, and not made part of the definitions. Thus, Bostock establishes five:—the sanguine, the nervous, the tonic or fibrous, the muscular, and the relaxed; and in his description of them, does not once allude to the colour of the hair and eyes, or even of the skin. Racle, in his treatise on *Diatheses*, affords a more favourable example of this class of writers. His definitions appear to me pretty clear and accurate, so far as they go. "A man has the sanguine temperament," says he, "when he presents an exaggerated development of the circulatory system, has veins and arteries distinctly marked, and a lively coloration of the skin; when he is plethoric, active, but little disposed to disturbances (exaggerations) of the nervous system."

"A woman has the nervous temperament, on the contrary, when she is mobile, impressible, easily turned to laughter or to weeping; when her powers can in turns be easily depressed, or lend themselves to long and painful labour."

Such a system as that of which I have just given a sample has the disadvantage that it gives little assistance towards diagnosing by the eye alone the temperament of a patient. It is in appealing so directly to visible characters that the more usual system promises to be more profitable to practical medicine. I fear, however, that it would be impossible so to develope it as to render it applicable to the whole human race, so numerous would be the exceptions we should have to make. For certainly, all negroes are not choleric, spite of their black and curly hair, and yellow conjunctivæ; nor are all Chinamen melancholic, nor all American Indians, though in the latter variety of man that temperament is probably the prevailing one. When we come nearer home exceptions to Dr. Prichard's rules are perhaps less common. Thus, the mental, and probably the constitutional characteristics of the melancholic temperament, are more common among the dark-haired Welsh and Irish than in our own comparatively fair race; but on the other hand, some light-complexioned Welshmen are in other respects perfect examples of this type. Some tribes at least of the ancient Gauls and Germans are described as having had the external characteristics of the sanguine temperament, including light hair and blue eyes; and their patience of cold, their impatience of heat and of continuous labour, their levity, their reckless and chivalrous courage, go far to prove that in their case there was a thorough correspondence between the external aspect and the moral and physical constitution. The influences of civilisation have probably tended to degrade the physique of the northern Germans, who are now for the most part lymphatic rather than sanguine in constitution. And accordingly, whereas the sanguineo-xanthous variety of mankind unquestionably bears cold better than any other, it was found by Baron Larrey, that in the campaign of Moscow the Germans and Dutch suffered more severely than the French and Italians.

The numerous tribes of the Finnish stock vary considerably in the colour of their hair, which in some tribes is black, and in others red, but it is always straight, and their complexion is dusky. They appear to have the same temperament everywhere, if we may judge of it

from other indications, namely, melancholic verging towards phlegmatic.

Here I may mention a curious fact relating to the Shetlanders. They are, as is well known, a generally fair race, of Norwegian origin; but among them are many dark-complexioned individuals, who are apt to present the Finnish type of countenance—a flattish face, broad cheek bones, and coarse, lank, dark hair. Now, it is notorious in Edinburgh, that the Shetlanders are very subject to nervous diseases; but Dr. William Robertson, a very acute and accurate observer, once remarked to me that the most numerous and most obstinate hypochondriacs among them were of the dark type; and my own limited observations went to confirm this statement.

On the whole, I think we should be content to forego the use of chromatic characters as pathognomonic signs of temperament; still using them, however, as subordinate aids in forming a diagnosis. We might then describe the sanguine temperament, as it occurs in this country, as accompanied by a clear and ruddy complexion, with eyes and hair generally light, but often of other colours. I have known fine examples of the sanguine temperament who had black eyes and hair, and the combination of hazel eyes with brown hair is very common.

Typical lymphatics have a complexion either pale or sallow, with straight hair, either light, red, or of a dull, dark brown.

In the bilious or fibrous temperament, the skin and hair are most often dark, the eyes dark-grey or brown.

In the melancholic, the complexion is swarthy, yellowish, or pale, with straight hair, usually dark, and often black.

I come now to my own observations on the influence of colour on disease, or rather on the mode of their association. I have been led to make them in order to utilise the facilities I had acquired by having examined the colour of the hair and eyes in the general and in the hospital population of Bristol and other places, for ethnological purposes. I have thus been enabled to prepare tables exhibiting the proportions in which the different hues of the iris and the hair occur—firstly, in the general hospital population of Bristol; secondly, in the hospital population, or in- and out-patients of the hospitals and dispensaries there; thirdly, in cases of phthisis observed by me in the same place; fourthly, in cases of carcinoma observed in several parts of England and Scotland; and fifthly, in the insane population of Morningside Asylum, near Edinburgh.

TABLE EXHIBITING THE COLOUR OF THE EYES AND HAIR IN THE UNDERMENTIONED CLASSES OF PERSONS.

Eyes Light.

	Number observed.	Hair. Red.	Fair.	Brown.	Dark.	Black.
General population (Bristol)	5000 ..	2.5	12.1	28.2	12.7	.6
Hospital population (Bristol)	1600 ..	3.	10.6	24.4	15.	.5
Phthisical (Bristol)	166 ..	3.	12.	21.6	17.	
Cancerous (various places)	66 ..	3.3	6.8	26.5	9.9	3.
Insane (Morningside, near Edinburgh)	156 ..	2.2	12.	37.3	12.2	.3

Eyes Neutral.

	Number observed.	Hair. Red.	Fair.	Brown.	Dark.	Black.
General population (Bristol)	5000 ..	.5	1.3	4.8	5.5	.5
Hospital population (Bristol)	1600 ..	.3	1.5	6.	7.2	.7
Phthisical (Bristol)	166 ..		.6	6.	6.	1.2
Cancerous (various places)	66 ..			2.3	11.3	1.5
Insane (Morningside, near Edinburgh)	156 ..		.6	5.	5.5	.6

Eyes Dark.

	Number observed.	Hair. Red.	Fair.	Brown.	Dark.	Black.
General population (Bristol)	5000 ..	.8	.8	6.4	20.2	3.2
Hospital population (Bristol)	1600 ..	.5	.8	7.2	18.7	3.6
Phthisical (Bristol)	166 ..	.6	.6	3.5	19.5	8.4
Cancerous (various places)	66 ..			.8	25.	7.6
Insane (Morningside, near Edinburgh)	156 ..		.6	4.	13.7	6.

These tables do not tend to bear out the rather widely diffused and popular idea that light-haired and light-eyed people are on the whole more subject to disease than others. In fact, the correspondence observed between the proportions of the several combinations of colour in the general and in the out-patient population, is close enough to provoke the suspicion that further observations might prove them to be identical. I am disposed, however, to believe that the slight advantage which my tables indicate in favour of the combination of blue or grey eyes with brown, or, as the French call it, chestnut hair, is real and substantial. Theoretically, one would be inclined to expect that as a medium temperament is acknowledged to be the best, so a complexion neither dark nor very fair would be preferable to either extreme: and the combination I have mentioned may be allowed this advantage, though of the two it approaches nearer to the fair than to the dark end of the scale. Again, the fact of its being the most common in most parts of the British islands, also affords a presumption in its favour, as the one best adapted to the climate.

It used to be said that struma was a disease of the fair-haired temperaments; but in our times that opinion has been modified by more careful observation. There is more difficulty in deciding the point as to the external forms of scrofulous disease than as to pulmonary tuberculosis, for the obvious reason that the former occur principally in children, who have not yet assumed their permanent complexional characters, and for whom it is more difficult to get a standard of comparison. Rilliet and Barthez found dark hair more common among tuberculous than among healthy children. Mr. Barwell, who, in his recent volume on *Diseases of the Joints*, enters minutely into the physiognomy of scrofula, says that in both of the two usual types the colour may be either dark or light; but that in the second, the torpid or phlegmatic type, the hair is usually either dark or of a disagreeable red. He also says that "as many cases and more intractable forms of struma occur in individuals with thick swarthy complexions and coarse dark hair, as in those with fine light hair and blue eyes." In all these statements I am disposed to agree. It is my impression that red hair is particularly common in strumous children.

As to pulmonary phthisis, I can speak more decidedly. The table I submit confirms my previously published observations on this point, showing that persons with black hair are most liable to consumption, and those with brown hair least so. The most perilous of all combinations appears to me to be that of dark eyes and hair with a thin skin and fine complexion.

Some doubt seems to hang over the relation or antagonism between cancer and scrofula or tubercle. The pathological observations of Dr. Sibley, made in the fertile field of the Middlesex Hospital, go to prove that the coexistence of the two is not so rare as we have been accustomed to believe. Dr. Christison is of opinion that persons of scrofulous diathesis are peculiarly liable to malignant disease in advanced life. My own observations neither confirm nor absolutely contradict this idea. They shew that black-haired people are particularly obnoxious to this frightful form of disease. Next to them come those with dark-brown hair, and then pro-

bably those with red; but the numbers are not large enough to enable me to speak positively. Brown and fair hair enjoy a comparative exemption.

Skin-diseases, as a class, select especially children and adults with a thin skin and light complexion; but are more obstinate, *cæteris paribus*, where the skin is thick, coarse, and dark. Lupus, for example, is rare, except in fair complexions.* Erysipelas, eczema, pemphigus, all appear to affect by preference the delicate and thin skin of the sanguine temperament; and I think the same may be said of psoriasis. Whether such diseases as spedalkshed and pellagra evince any such preference, I have not been able to ascertain; perhaps not, as the skin affection plays in them an important part indeed, but does not in itself constitute the disease. But it may be worth mentioning, that the Cagots, a pariah race in the south-west of France, who were for centuries branded as hereditary lepers, are described as of handsome countenance, with fair white skins.

My own observation, which in that department is however of course very circumscribed, would lead me to say that syphilis is disproportionately common among people of sanguine temperament. If this be true, the cause is probably a moral one; viz., the reckless and passionate character that is so prevalent among men of this type. Similarly, an explanation for the supposed prevalence of the arthritic diathesis among them, might be sought in moral and dietetic rather than constitutional failings. Of the few diabetics I have observed, most have been fair, and several red-haired; and I am decidedly of opinion that spirit-drinking is an important predisposing cause of this obscure disease.

I cannot say much as to the connection between the colour of the iris and the diseases of the eye, which one would naturally expect to be manifest. Mr. Wilde has made very extensive observations on this subject; and I hope he will some day favour us with his conclusions. I gather from his statistics, that iritis and cataract are both somewhat more common in eyes that have much pigment than in such as are grey or blue.†

Lastly, I come to mental diseases; and here my comparatively limited opportunities led me independently to the same conclusions which Dr. Prichard based on his extended experience. I will therefore quote his dicta. "The choleric and sanguine," he says, "when affected by disease of the nervous system, have complaints of greater violence and acuteness: mania or raving madness belongs particularly, according to the observations of M. Esquirol and many others, to these constitutions. The melancholic temperament is most prone to monomania, attended with depression and melancholy illusions. Hypochondriasis much more frequently affects the phlegmatic and melancholic; the most severe cases I have observed, and those which approached most nearly to the character of melancholia, have certainly occurred in individuals of a dark leaden complexion, fixed and sullen aspect, and lank coal-black hair."

To this, I have little to add, except that it accords also with the opinions of the superintendent of the large lunatic asylum at Prague, an observant physician, whose name I regret having forgotten.

The connection between epilepsy and melancholia has been acknowledged ever since Hippocrates affirmed it. It seems to extend to the complexion of the sufferers, among whom I have observed lank black hair to be particularly common.

* Professor Hebra, of Vienna, told me that he had seen several cases of discoloration from the internal use of nitrate of silver; but that they were all in people with fair skins and light or red hair.

† In confirmation of this statement, Mr. Prichard informs me that, among his ophthalmic patients, he has observed the dark iris to concur more often comparatively with internal, and the light with external disease.

SOUTH-EASTERN BRANCH: ROCHESTER, MAIDSTONE, GRAVESEND, AND DARTFORD DISTRICT MEETINGS.

ON A PECULIAR CASE OF VARIOLA.

By C. L. Allwork, Esq., Maidstone.

[*Read March 28th*, 1862.]

The following case came under my observation in the month of May, 1855; and, as it possesses interest in showing the effect of mercury in modifying an attack of variola, I have thought it worth recording. I ought to state that I report it from memory; but the circumstances made so great an impression on my mind, that I can vouch for the truthfulness of the narrative. I would premise that small-pox was prevalent in Maidstone at the time when it occurred.

C. T., of middle age, a chemist and druggist, had been unwell some days; and, thinking his indisposition arose from biliary derangement, had taken sufficient mercury to produce ptyalism, from which he was suffering at the time I saw him.

After experiencing the usual premonitory symptoms of variola of forty-eight hours duration—viz., rigors, lassitude, headache, vomiting, pain in the back, and general febrile disturbance—a papular eruption made its appearance, first on the forehead and wrists, and then more or less over the whole body. As soon as this took place, the feverish symptoms subsided, and he felt much relieved. On my opinion being communicated to him that he was suffering from small-pox, he manifested much anxiety, and told me that he had always entertained a great horror of the complaint, and had determined, if ever he should be unfortunate enough to be the subject of it, to have the first advice he could get for his relief. Accordingly, a friend was despatched to London, to secure the services of Dr. Munk, physician to the Small-pox Hospital. This gentleman promptly attended; and, after making a careful examination of the patient, coincided with me as to the nature of the complaint, and expressed his opinion that it would probably be a sharp attack of modified variola (he had been vaccinated, cicatrices being plainly visible). In order that he might have the opportunity of seeing him again the next day, the doctor remained in the town that night; and, on our visit the next morning, we found our patient had passed a tolerable night, that the papulæ were larger, and that he was going on satisfactorily. The same conditions were observed by me on my evening visit, and also the following morning. Towards the afternoon and evening of this day, however, I found the papulæ began to decrease in size, and by the next morning they had degenerated into mere maculæ. With this arose an unfavourable condition of the patient, and Dr. Munk was again summoned; headache, intolerance of light and sound, indisposition to be disturbed, profuse perspiration, and great prostration, being the prominent symptoms. Bark and acid, with support in the shape of wine and beef-tea, were administered. I cannot recall to mind the successive changes from day to day. Suffice it to state that his progress to recovery was slow; the system had evidently received a considerable shock, for which time was required to relieve itself.

I may state that Dr. Munk felt great interest in the case at the time, and searched the records of the Small-pox Hospital, but could find no mention of any analogous case. He believed it to be one of variola, cut short in the papular stage by the system being under the influence of mercury, at the same time protected to a certain extent by the prior vaccination.

Remarks. That this was a case of variola cannot be doubted. Small-pox was rife in the town. The indisposition he suffered for some days before the premoni-

tory symptoms set in, and which the patient supposed were owing to biliary derangement, were doubtless due to the disease incubating. Then, the nature of the premonitory symptoms—viz., rigors, lassitude, vomiting, headache, pain in the back, and general febrile symptoms, and the relief afforded when the papular eruption made its appearance—clearly show the nature of the malady. Then comes the question, What part did the mercury take in arresting the progress of the eruption? We know very well the effect this mineral has in counteracting the poison of syphilis: why not of variolous poison? We also know that mercury is a depressing agent; and, in this case, that tendency was clearly manifested by the lowered state of the vital powers. Now, supposing we should ever have the opportunity of diagnosing a case of variola in the stage of incubation, should we be justified in administering mercury with a view of arresting the progress of the case in its papular stage? Taking the foregoing example as a precedent, I think, by pursuing such a course, we should be committing a great error. Here was a man in the middle period of life, of temperate habits, of tolerable power, suffering from symptoms of an alarming character, due in a great measure to mercury, and to one placed under less favourable circumstances might have terminated fatally. The subject, however, is one of great interest; and I am anxious to learn of the members present their opinion on the matter.

REMINISCENCES OF THREE FATAL CASES OF TRAUMATIC TETANUS.

By Adam Martin, M.D., Rochester.

[*Read March 28th*, 1862.]

Nov. 27th, 1828. The first case occurred in the person of a baker and confectioner, of middle age, temperate habits, and rather delicate constitution. While he was driving down Chatham Hill on his cart, the wheel slipped suddenly off, and he was thrown with great violence on some flints which had been recently spread on the road. In falling, the palm of both hands was considerably lacerated; the skin over one of the patellæ was cut to the bone; the skin over the chin was also cut and lacerated; and there was a discharge of blood from the left ear. I saw him soon after the accident, and dressed the wounds, after removing several splinters of bone from the one on the chin. All went on satisfactorily until the morning of the ninth day, when he began to feel a degree of stiffness in the muscles of the jaw and neck. The above symptoms, and a peculiarly pitiful expression of countenance, indicated very clearly what was about to happen. I sent for my friend, the late Dr. Smith of Maidstone, who arrived about 4 o'clock, P.M. The poor patient had had several very severe attacks of opisthotonos before the doctor came, after which the paroxysms became more frequent and more severe, until four o'clock on the following morning, when he expired, after being about three hours quite comatose.

The treatment in this case was the warm bath and powerful opiates.

The second case occurred in the person of a young healthy farmer, residing in the neighbourhood of Rainham. In the summer of 1832, while loading a pistol, the powder exploded, and the ramrod entered the palm of the right hand, near the carpus, and tore the flesh and skin open to the tip of the ring-finger. He was attended by a medical gentleman, who dressed the wound soon after the accident, and continued to attend him until the sixteenth day after the injury, when I was called in. I found, on inquiry, that he had been seized with stiffness of the jaw and neck on the twelfth day after the accident; and that these symptoms were soon followed by paroxysms of opisthotonos, which returned every three, four, or five hours. On examination of the wound, I found a piece of the ramrod, about an inch and a half, imbedded in it, and in contact with the tendon. I ordered a hot bath, a poultice to the wound, an opiate at bedtime, and a calomel purgative in the morning. On the following day, he appeared in every respect much in the same state as at my former visit. He had had some sleep, and several very severe paroxysms. The pulse was rapid. The muscles of the jaw, neck, back, and abdomen, felt rigid and hard. I cupped him over the lower cervical and middle dorsal vertebræ, and ordered the anodyne to be repeated, and a tonic mixture to be taken every four hours, and the calomel purgative when necessary. From this date the paroxysms became less frequent and less severe, and ceased on the ninth day of my attendance, and did not return again until the middle of the night of the fourteenth, when he was aroused from his sleep with a most frightful one, which proved fatal in less than an hour. Death took place in this case on the thirtieth day after the accident, and on the eighteenth after the first appearance of the disease.

On a careful examination of the body thirty-four hours after death, I could discover no disease, with the exception of a highly congested state of the lungs, brain, and spinal marrow, especially of the latter.

The third case occurred in the autumn of 1832, at Otterham Quay, in the person of a strong middle aged labourer, who had been employed for some time in unloading wood from a barge. He had enjoyed good health until the evening of the day on which I saw him, when he began to feel a difficulty in opening his mouth, and stiffness in the muscles of the neck, which had been gradually increasing during the day until I visited him in the evening, when I found him walking about before the door, complaining of no pain, only of the stiffness. On examining the hands, I found a very small splinter of wood, surrounded by pus, under one of the thumb-nails. He was not sensible of having received any injury, and therefore could not tell me how long the splinter had been in the thumb. I removed the splinter, and ordered a warm bath, and poultices to the hand, He was seized very soon after I left him with a severe attack of opisthotonos, which returned in quick succession until he died, about three o'clock on the following morning, without having used the warm bath, or taken any medicine.

CASE OF TRAUMATIC TETANUS: RECOVERY.

By Frederick J. Brown, M.D., Rochester.

[*Read March 28th*, 1862.]

The following is the case of Emma C., aged 28, of Chatham, a single woman, seen by me for the first time on July 4th, 1861. On June 22nd, she wounded her left hand by a fork. The wound was in the web of the thumb, on its dorsal aspect, close to the proximal joint of the index finger. The wound healed, and left a soft cicatrix, which was scarcely visible.

Trismus set in on July 2nd, but was lightly regarded by the patient. This was the eleventh day since the accident, counting by the Roman method. Two days later—namely, on July 4th—in the evening, tetanus occurred suddenly in the form of opisthotonos. When I arrived at the house, the patient was in bed, complaining of a suffocating sensation, and pain extending from the pubes to the throat. Speaking induced spasms of the muscles. The mouth could with difficulty be opened half-way. There were red papillæ on the tip of the tongue. The pulse was slow.

The treatment ordered was as follows:—brandy in milk; five minims of Fleming's tincture of aconite, with two grains of iodide of potassium, every two hours; and half a drop of croton oil every four hours; and a tur-

pentine liniment to be rubbed over the spine and front of the body.

July 5th. The report was that the patient had suffered from spasms all night. I found her in a state of collapse—namely, the pulse small, weak, and flickering; skin cold and mahogany-coloured; eyes sunken and fixed. The bowels were loose, and there had been one act of vomiting, which nearly caused suffocation. The respiration was jerking. She had taken three drops of croton oil, and had vomited the last dose. She had only taken two doses of the aconite mixture. She was ordered to omit the croton oil, but to take the mixture, and to have half an ounce of brandy every hour.

Evening report. The skin was warm and perspiring; the pulse full and steady; the respiration was less jerking: the abdominal muscles were hard and tense; there was a sensation of tightness in the hips and in the arms. She had had fewer spasms through the day.

July 6th. Next day, I found that she had passed a quiet night by lying motionless; for the least movement induced spasms. The pulse was steady, 96.

Evening report. There were spasms during the last three or four hours, even when the patient was lying motionless. The eyes were fixed and the forehead corrugated; the skin was cold; the pulse was weak. The muscles of the chest were affected.

July 7th. The patient had passed a quiet night. The aconite mixture was omitted. I ordered chloroform mixture, half a drachm in six ounces of spirit and water; also, of croton oil, one dose (half a drop); also, blue ointment to be applied to the epigastrium.

Evening report. The spasms came on at 4 P.M. There was jerking spasmodic action of the abdominal muscles. The pulse was 80. The bowels had not operated. She vomited some beer that was given her.

July 8th. She passed a very bad night, having had frequent convulsive jerkings. The bowels acted twice through the night.

Evening report. She was quieter during the latter part of the day. Sweating at present.

July 9th. She passed the night as usual, not being at rest for longer than fifteen minutes at one time. The spasms were mostly confined to the abdominal muscles, but there were some in the legs. The patient had taken some beef-tea and arrowroot.

Evening report. The sweating continued; countenance improved. There had been an improvement in the features during the last two days.

July 10th. The spasms were less intense.

July 12th. The patient had improved. The left side of the body was now affected to a greater degree than the opposite. The left thumb and hand (the wounded hand) were affected by tonic contraction.

July 13th. She complained of urgent sense of tiredness. India-rubber plugs were used to save the tongue from being injured by the convulsive movements of the jaw; the tongue was already sore from having been thrust out and bitten.

Evening report. The patient was seized at 4 P.M. with cold sweats, and she appeared to be dying. This was the tenth day, counting from the date of the opisthotonos. The left hand was drawn forcibly to one side. A belladonna plaster was applied to the epigastrium, and a liniment was used to the hand. The liniment consisted of belladonna, morphia, and camphor.

July 14th. She passed a better night, having rallied before midnight. She was better to-day. An addition of chloroform was made to the liniment. She regularly took the chloroform mixture, also the brandy and a small quantity of beef-tea. She took twelve ounces of brandy in the twenty four hours.

July 15th. She passed a better night, sleeping for periods of half an hour, when she would be disturbed by spasms.

July 16th. The patient was better. The pulse had suddenly risen to 116, and had become rod-like and strong.

July 17th. The pulse maintained the same character. There were no general spasms now, but she suffered from cramp. The left hand was better. The patient expressed herself as feeling much better.

July 18th. She had much cramp in the night, but continued to feel well. The cramps had replaced the spasms entirely.

July 20th. The patient was improving.

July 26th. There was considerable improvement.

July 29th. The patient was able to eat fish.

August 5th. The patient was sitting up in her room. This was the thirty-third day, counting from the seizure of the opisthotonos.

The patient at this time and for several days longer suffered from cramp; but her recovery was not retarded by their occurrence.

[N.B.—The father of the patient, when a young man, had lock-jaw after the extraction of a tooth.]

The following is a tabular view of the principal points in this case. The wound in the hand was received on June 22nd; and the trismus appeared on the eleventh day—July 2nd.

Date.	Day of trismus.	Day of general tetanus.	
July 4	3	1	Opisthotonos.
July 5	4	2	Collapse succeeded by sweating.
July 6	5	3	Exacerbation about 4 P.M., which occurred daily more or less.
July 7	6	4	Improvement of the features.
July 12	11	9	Left side of the body markedly affected, and the left or wounded hand drawn forcibly aside.
July 13	12	10	Collapse. Local treatment to the wounded part.
July 14	13	11	Amelioration of symptoms.
July 16	15	13	Pulse 116, and rod-like.
July 17	16	14	Cessation of general spasms.
July 26	25	23	Considerable improvement.
July 29	28	26	Able to eat fish.
Aug. 5	35	33	Sitting up, feeling well, but experiencing cramps.

She suffered from cramps for many days subsequently. Upon this, I would remark that cramp appears to be a minor degree of tetanus, just as the fidgets are a minor degree of chorea, and as the vapours are a minor degree of hypochondriasis.

A FEW REMARKS ON FOREIGN BODIES IN THE WINDPIPE: WITH A CASE.

By JOHN ARMSTRONG, M.D., Gravesend.

[*Read March 28th*, 1862.]

AMONG the numerous accidents which require decision and skill on the part of the surgeon, probably few more imperatively demand them than those of foreign bodies in the larynx and trachea. Take, for instance, one of the most frequent of these occurrences. A man, while eating his dinner, suddenly becomes wild in his movements, his eyes bolting out of his head; he cannot speak, and, unless relieved, is dead in a few minutes. What has happened? A piece of meat has got under the epiglottis, and partly into the larynx, and suffocated him. Two cases of this kind came under my notice; both were fatal, although in one instance two surgeons arrived; one while the patient was alive, but who did not possess the above qualities; the other after the patient was dead. The *post mortem* examination showed a large lump of meat in the situation named, which a finger would have removed; or, if not, laryngotomy would have saved the man's life. Occasionally the foreign body is smaller in some of its axes than in others, and the patient presents the peculiar characters

of at one moment being in excellent spirits, and the next minute struggling for life. Occasionally the foreign body is fixed in the upper part of the tube, giving rise to symptoms like croup, and so much so as to deceive the medical attendant. I well remember a medical man asking me some years ago to see a case with him, which he said was croup. He had leeched, blistered, etc.; but all to no purpose. I learned, on inquiry, that the distress of breathing had come on suddenly, and that the child (about two years old) had had a piece of earthenware in its mouth, which had disappeared. I suggested that probably this had got into the windpipe; and that under any circumstances, even if it were croup, laryngotomy would give the child the little remaining chance for its life; if it should prove to arise from the presence of a foreign body, it would probably save the child's life. Neither parents nor medical man would hear of the operation, and the child died almost suddenly that night. I examined the windpipe, and took from the upper part of the larynx the veritable piece of earthenware.

The case of the late Mr. Brunel is fresh in our memories, because of its peculiarities and happy termination; and I am desirous of presenting to the Society a case of great interest which has occurred in my practice, and which has also some peculiarities, and ended in complete recovery.

March 8th, 1862, 8 P.M., I was hastily summoned into the country to a boy, W. F., aged 10, supposed to be dying from a bean having entered his windpipe. The history given was, that on the day before he had a bean in his mouth, and he set off to run with another boy, when the bean slipped down, and he appeared as if he would be strangled. This state of things subsided; and he ate, drank, and even sang; so that nothing was done. On the 8th, he was seized with such difficulty of breathing, that they thought he would be dead before I could get to him. I found him greatly distressed; his eyes prominent; countenance livid; and breathing very difficult. His pulse was feeble and slow, and his surface cold. I performed laryngotomy. The body was not expelled, although a violent fit of coughing occurred on the opening of the larynx. The effect of the operation was very satisfactory, and the boy was greatly relieved. A cannula was fixed in the opening. In the night, the cannula escaped from the opening, and, some little time afterwards, the distress of breathing returned. I saw him early next morning, and enlarged the opening, extending it fairly into the trachea. By means of a probe and such means as I possessed, I endeavoured to get hold of the bean, but unsuccessfully. By the kindness of the father's master, a worthy clergyman, Mr. T. B. Curling was requested to meet me; and I requested him to bring any suitable contrivance he had for laying hold of the foreign body. Meantime, the effect of the enlargement of the opening was most satisfactory. The boy's countenance, skin, and feelings were amazingly improved; so much so that, when Mr. Curling, myself, and son arrived, Mr. Curling had obviously some doubts whether I had not made a mistake. The examination of the chest showed that there was little air going into the right side, and that there was a peculiar cooing, whistling sound over the right bronchus. The boy was taken out of bed; and then the difficulty of breathing, with the peculiar cough, returned, removing all doubts as to the presence of a foreign body in the windpipe. Mr. Curling resolved to try and seize the bean, and remove it; and, having obtained from Messrs. Weiss these most ingenious forceps (which I have, through the kindness of Messrs. Weiss, the pleasure of placing before you), proceeded to do so. The opening I had made was found sufficient to admit the forceps; and Mr. Curling, with great expertness, passed them down several times, on each occasion bringing up a portion of bean. At last he brought up the principal part of the outer covering of the bean; a violent cough followed; and through the mouth and opening in the trachea the rest of the bean was expelled. The boy was put to bed; tepid-water dressing used; a little diaphoretic mixture. No bad symptoms arose; the wound healed, the voice returned, and in about ten days the boy was quite well; except a small part of the wound, which was unhealed.

FOREIGN BODY EJECTED FROM THE BRONCHUS TWENTY-THREE WEEKS AFTER ADMISSION.

By S. MONCKTON, M.D., Maidstone.

[*Read March 28th*, 1862.]

J. B., aged 7 years, an artisan's child living in Maidstone, was brought to the West Kent Infirmary on October 3rd, 1862, in a state of extreme dyspnœa, quite unable to stand or speak, blue, cold, and evidently on the very verge of death by suffocation. At the first glance, the child might have been in the last stage of croup, the noise of which was closely simulated; or suffering from urgent reflex or irritative laryngeal spasms. After desiring the tracheotomy trochar to be laid at hand immediately, the next step was to inquire as to what preceded his present state. It appeared that the day before, on returning from an infant school at noon, he told his mother he had swallowed half a nutshell, which "had made him bad" for a few minutes. He seemed, however, all right while narrating the occurrence, and continued so, with the exception of one choking fit in the evening, till next morning at ten, when, being seized with alarming symptoms of cough and suffocation, he was hurried off in a neighbour's arms to the infirmary. By allowing him to lie perfectly still for a few minutes, the child improved a little; and, after two hours perfect rest in bed, the breathing became almost natural. He spoke clearly, and air entered and permeated both lungs. Under such circumstances, and entertaining some doubt as to whether the bygone spasms might not have had an extrabronchial origin (for no one had seen him swallow the nutshell), I declined to open the windpipe. He was put to bed in a small ward, and constantly watched. Next day the breathing was almost natural; he had very slight cough and expectoration; he could eat, drink, and sleep. The senior surgeon practised a few manœuvres to dislodge any foreign body, but without result. He concurred with me in deeming an operation not required.

The boy remained in hospital six weeks. During the first three, he suffered what might have been an attack of idiopathic bronchitis of moderate severity. The râle and respiration were just the same in the two lungs. Commonly, but not always, there was a distinct flapping or vibration to be heard between the scapulæ during expiration and inspiration. At the end of six weeks, though rather thin and not quite right, he was well enough to go home, which he did, with orders to return regularly for inspection once a week. Nothing particular was reported or discovered at these visits; the vibratory sound was heard occasionally, but after another six weeks disappeared, or, at all events, ceased to happen to be detected. It then became difficult, from the absence of illness about the boy, to make him attend regularly; but, on the 15th of March, his mother appeared with the half-nutshell in her hand, which he had suddenly expectorated without difficulty or accident the night before, twenty-three weeks after its introduction.

[Dr. Monckton produced the nutshell, which appeared rather less than half of the entire shell of a long filbert-shaped nut, but little changed, except a slight rounding off of the broken edges. He went on to say that the chief interest about the case to the meeting would be found in the contrast it presented, especially in its treatment, to that so ably described to them by

Dr. Armstrong. He did not at all intend to propose for general adoption a merely expectant management in these very urgent cases; but he did suggest that the bare fact of a foreign body being strongly presumed to be within the air-passages need not, as a matter of course, lead on to operative interference. The following points, among others, would tend to justify the expectant system in a given case, supposing that urgency which usually attends their commencement to have passed away. Firstly, the body being tolerably innocent in shape and material; secondly, its being sufficiently loose not to press upon or ulcerate the mucous membrane—not impacted, that is to say; thirdly, not sufficiently light and mobile to be perpetually ascending into the larynx; and fourthly, pretty easy access on the part of the patient to surgical aid in the event of suffocative symptoms coming on.]

Reviews and Notices.

PUBLIC HEALTH IN RELATION TO AIR AND WATER. By W. T. GAIRDNER, M.D.; Fellow of the Royal College of Physicians, Edinburgh, etc. Pp. 369. Edinburgh: 1862.

THE greater part of this book consists of lectures delivered by Dr. GAIRDNER to a mixed professional and popular audience; his objects being to instruct his medical pupils in some of the principles of sanitary science, and to endeavour to establish "a cordial understanding between the medical profession and the public in this matter of public health."

The lectures are seven in number: of them, the first is introductory; the second treats of Air and Water as Sanitary Agents; the third, of Impure Air; the fourth, of Scanty Water; the fifth, of Impure Water; the sixth, of Drainage and Sewerage; and the last, of Sanitary Organisation. Appended to the lectures are copious statistical and other notes, occupying above eighty pages of the book.

Dr. Gairdner has, as would be expected, treated his subject with special reference to the sanitary condition of Edinburgh; but not exclusively so, for the doctrines laid down in his lectures are so expressed as to be capable of general application. We do not propose to enter on a formal analysis of the work; but, *en passant*, we may notice that the author adopts the theory of the diffusion of cholera and other zymotic diseases by means of water, adducing as proof the remarkable observations made by Dr. Snow on the connection of the notorious Broad Street pump with the spread of cholera in 1854.

In the lecture on Sanitary Organisation, Dr. Gairdner pleads for a combination of legislative and voluntary action. We must have, he says (speaking of Scotland), "*an authorised sanitary inspection;* and we must have it, to a certain extent at least, *under medical superintendence.*" That is to say, he would have a measure similar to our Metropolis Management Act introduced into Scotland. At the same time, he does not desire the exclusion of "voluntary and less systematic agencies from this good work." Private and personal influence, directed towards instruction in sanitary matters may, he thinks, be usefully exercised by the official inspectors, by women, and by those engaged in the religious and moral instruction of the people. This combination of the compulsory with the voluntary which he advocates is highly judicious. Let instruction and persuasion do all that they can; and if they can do all that is desired, so much the better: but, until the public mind is thoroughly awakened to the importance of attention to the main facts of sanitary science, means must be taken to preserve men, even against their will, from unnecessary perils and dangers.

The greatest credit is due to Dr. Gairdner for the attempt he has made to indoctrinate his countrymen with the importance of attending to public health, as well as for the manner in which he has so far carried out his endeavours. The fame of the Edinburgh school, in all departments of the healing art, has been deservedly great: and this fame would be by no means diminished, if it assumed a similar eminence in that most noble branch of medicine—the preservation of health and the prevention of disease. We wish Dr. Gairdner all success in the laudable enterprise which he has undertaken.

Progress of Medical Science.

RED SOFTENING OF THE CEREBELLUM. The following case is related by Dr. J. Török. The patient was Œ. Z., a girl aged 7 years and 8 months, fair and with blue eyes, and of small frame, so that she appeared two years younger. At the age of a year and a half, she began to walk on her toes, but was four years old before she could use her heels in standing; her gait, however, was always tottering and insecure. She could not go up and down stairs without creeping; she could not get on a stool, and, if placed on one, would cry out with fear. She had not the perfect power of extending her finger; but nothing abnormal was to be perceived in the corresponding muscles. Her disposition was cheerful. She had very little appetite; but was in the habit of asking others if they had anything to eat, and consequently always had her pocket filled with pieces of bread. She was not afraid of darkness, but dreaded the slightest storm. She had so strong a perception of approaching changes in weather, that she was regarded as a living barometer. When the sky was perfectly cloudless, so that no one would expect rain, she would cower in a corner; and, when asked what was the matter, would reply that it was soon going to rain—which was always the fact. She had no want of desire to learn, but used to be soon seized with headache and general perspiration during her lessons. She could repeat stories, fables, etc., word by word, after hearing them read once; but her arithmetical power was so low, that she could not even count ten. Before she came under Dr. Török's observation, she had had an abscess in the neck; frequent pain in the bowels, with diarrhœa; frequent earache, which, after twelve to sixteen hours, suddenly ended in the discharge of a thin fluid; and five months previously she had had a mild attack of scarlet fever. Her last illness commenced on May 16th. On the previous day, she had taken cold, apparently from having run a long distance in the rain without her hat, and had perspired much. The first symptoms were pain, heat of the head, a very violent pain in the occipital region, causing her to cry out, photophobia, sleeplessness, and delirium on awaking from a partial slumber. Cold was applied to the head, leeches were used, and a purgative was given. On the next day, the fever and headache were less; but she had violent pain in the neck, and along the course of the vertebral column. She was ordered to have a