One thing is certain, that no land can be made the most of by the cultivator unless he has perpetuity of possession at a fixed rent, because when land comes to be revalued after the lapse of years—even assuming that a third party could value fairly—it impossible for any man to discriminate how much of the then value of the land is due to the landlord's estate in the land and how much to the tenant's improvements.—*Mr. J. W. Barclay, M.P.*

LAND AT TWOPENCE HALFPENNY PER ACRE.—It is stated in *Land* that Colonel Daniel Murphy, of Hallock Station, Elko County, Nevada, possesses 4,000,000 acres of land lying together in Mexico, 60,000 acres in Nevada, and 23,000 acres in California. The Mexico millions were bought four years ago at twopence halfpenny per acre. This immence estate is 70 miles long, and covers a beautifully diversified stretch of forest and meadow. As a railway station is shortly to be opened within a dozen miles of one extremity of these possessions, Colonel Murphy may ere long confidently anticipate an appreciable increase upon the twopence halfpenny.

TESTIMONIAL TO THE EDUCATIONAL TRAVELLING DAIRY.—We make the subjoined extract from a letter, addressed to the Rev. Canon Bagot; it tells its own tale so admirably that comment is unnecessary:—"Your travelling educational dairy came to this district on the 4th August, and I watched with great interest and attention two churnings, and was struck by the simplicity of the system, which I determined should in future be carried out in my own dairy, the management of which last year was most unsatisfactory. Absence from home prevented my doing so until the 1st September, on which date I took charge of the dairy and *worked the butter myself*, with the result that fourteen days later my butter was 'commended' by the judges at the show at Islington. I may also add that since then a local merchant has given me 1d per lb. above the market price for butter made up in two pound lumps. Higher testimony to the value of the educational dairy, and the lectures given by Mr. Chilton, I can hardly conceive. I should state that I knew nothing whatever of butter-making previous to my visit to your travelling dairy; and I believe the benefit it has conferred on Ireland cannot be over estimated, and every dairy where the system is adopted becomes a fresh centre of education.—R. H. ELLIS, Rash House, Omagh, October 4th, 1881."—Last week we gave a lengthy notice of the meeting of the British Dairy Farmers' Association, which included a notice of what that society is doing towards sending out a travelling Dairy in England. Mr. George Barham, in favour of travelling dairies, writes to the *Times*, and points out that whilst the Royal Agricultural Society has been "erecting at their annual shows a large dairy, with engines and machinery, quite beyond the scope of the ordinary farmer, our brethren across St. George's Channel have been carrying their lessons into the homes of the dairy farmers of Ireland and their 300 exhibits of really splendid butter, at the recent dairy show, compared with the bulk of the English specimens, prove that they have done more during the short time they have been at work to improve the production of butter than our own Royal Society during many years." So long as Dairy Training Schools remain unestablished we gladly hail the advent of a travelling dairy, and hope the British Dairy Farmers' Association may be able to raise the special fund for that purpose.

THE ENGLISH LAND BILL.

In the *Chronicle* of the 8th inst. we gave a full copy of the above Bill, prepared by the Farmers' Alliance, and last week we followed by a long and lucid explanation of the Bill. We now supplement the above by a report of the proceedings at a meeting of the Alliance in London, on Tuesday, for the purpose of fully discussing the clauses of the proposed Bill for England. Mr. Jas. Howard, M.P., presided, and, after his introductory address,

Professor Hunter said the principle of the Bill was "compensation for improvements," to give the tenant a marketable security, so that he would have no difficulty in attracting capital to the land. In framing the Bill they desired to secure not a part only, but the whole of the value of a tenant's improvements to him. At the same time they desired to avoid taking from the landlord that which properly belonged to him. It was provided, also, that one year before the termination of a lease the landlord shall give notice to the tenant if it is desired to raise the rent. A rent having been once decided on, the tenant could *go* into the market and ask what price would be given him for his interest. With regard to deterioration, the fullest and most complete protection was given to the landlord. A cardinal point was to obtain the greatest freedom of cultivation. With regard to the distraint for rent, it was provided that there should be no more distraint for rent, but that the landlord could obtain judgment from the Court for the amount with costs, and that if payment was not made, the tenant should be evicted.

The Chairman said there had been an alteration made in the fifth clause of the Bill on the subject of compensation. The clause would now read as follows:—"The amount of such compensation shall be the sum that a person having sufficient means to cultivate the holding, and against whom, in the opinion of the Court, there is no objection on reasonable grounds, offers to give, in consideration of being admitted as tenant of the holding at the rent payable by the outgoing tenant, or at such increased or decreased rent as may have been determined in the manner by this Act provided."

Mr. Grant, M.P., asked whether the landlord would have a previous vote against improvements, or would the tenant be able to make any improvements and compel the landlord to pay for them.

The Chairman said the question was dealt with in the bill, as would be seen when they came to the clause. It was provided that an improvement should mean any improvement which should increase the letting value of the land.

Mr. Grant was of opinion that provision in it had been borrowed from the Irish Land Bill.

The Chairman said the greatest care had been taken to avoid taking any clauses from the Irish Bill.

Professor Hunter said the tenant would not have to ask the leave of the landlord to make improvements, but if the supposed improvements did not increase the value of the land he would not be allowed anything for them. Under Clause 18, however, the landlord could appeal to the Court at any time during a tenancy to restrain the tenant from any act. Clause 6 of the Bill was as follows:—The landlord may discharge his liability in respect to the tenant's improvements in his option: (1) By admitting the person making such offer as tenant of the holding, provided that in this case such person is admitted for a term of not less than seven years at the same rent as was payable by the outgoing tenant, or at the rent determined under the provisions of this Act, and that the incoming tenant is not subject to conditions, agreements, or covenants more onerous than the conditions, agreements, or covenants by which the outgoing tenant was bound; or (2) By paying the amount of compensation offered to the tenant, provided that the landlord shall give notice in writing to the tenant of his intention to pay such compensation within one month after receiving notice from the tenant of the particulars of the offer made to him.

Mr. Bolton thought there should be a provision that if a landlord gave notice to a tenant the former should be compelled to pay compensation for improvements.

Professor Hunter and the Chairman said that the point had been well considered, and it had been decided that it would be unjust to the landlord to compel him to pay for improvements unless an *incoming tenant made an offer* for them.

Clause 14 proposed to abolish the power of the landlord to levy any distress for rent.

Mr. Hughessen was proceeding to speak in opposition to the clause, when the Chairman pointed out that one of the fundamental principles of the Alliance was the abolition of the law of distress.

Mr. Blennerhasset, M.P., said the question as to the abolition of the law of distress was not only decided, as far as the Alliance was concerned, but the House itself had decided that the law must be abolished. The only question which could now be raised was whether the way in which it was proposed to abolish the law was just and equitable. Having had charge of the question in the House of Commons, it appeared to him that the difficulties in the way, and they were many, had been met in the Bill before them with great skill and fairness. It would be just to the farmers, to the business man, and to all classes of persons connected with land. He hoped the next session they would be able to look upon the law of distress as one of the absurd laws which had been put an end to by common sense.

Clauses were then submitted, dealing with the constitution of the Court to decide questions between landlord and tenant. It was proposed that the Court should consist of the Judge of the County Court of the district and of the Assessors. Every Board of Guardians in a district where there was a holding should appoint six persons to act as Assessors to the Judge, two being chosen from the panel in each case.

A discussion followed as to the constitution of the proposed Court, and it was objected that the members of Boards of Guardians would be liable to be too prejudiced to act with fairness as Assessors. An opinion was expressed that if the Bill passed the Government would take upon themselves the appointment of the Court and Assessors.

Mr. Woodward moved "that the Court should consist of the Judge and two Assessors, one to be appointed by the landlord and the other by the tenant," but the proposition was negatived, and the Clauses as framed by the Committee agreed to.

On the question of local rates, the Bill proposed that "It shall be lawful for every tenant of a holding to deduct three-fourths of any rate levied in respect of his holding by any local authority and paid by him, from the rent next due in respect of such holding; provided that this section shall not apply to any contract of tenancy for a term of years made before the passing of this Act; but it shall apply to tenancies *from year to year*, or at will, after the 29th September, 1883."

There was some difference of opinion as to whether a fair apportionment of the rates and taxes as between landlord and tenant would be a moiety each, or as proposed in the Clause.

The Chairman said the Committee had decided on the basis of the amount of capital which would in most cases be invested by landlord and tenant relatively.

A proposition by Mr. Latham, which was seconded by Mr. Bingham, that "one-half" be substituted for "three-fourths" in the clause, was lost, and the original proposal carried, with the exception that "1883" was altered to "1884."

Some suggested new Clauses being rejected, the proceedings closed by the adoption of the Bill as amended.

"DEATH IN THE POT."—The Chinese bestow great labour in *facing* the Teas intended for use in this country, and if this "beautifying" was really harmless few would complain, but consumers should know that this so-called "facing" consists of mineral powder, prussian blue (*a poison*), gypsum, plumbago, &c.; it is thus the old worthless leaves so disguised are palmed off and sold to the English as best tea, a most pernicious system, seriously affecting both health and pocket. For 40 years Horniman's Pure Tea has commanded a preference because it is strong, delicious, and *guaranteed free from all mineral facing*. Supplied in Packets only, by duly appointed Agents, Chemists, &c. Horniman's Pure Tea is sold in Preston by Simpson, 50, Fishergate; by Leece, Market-place, and by J. Sharples, 7, Fishergate; in Blackpool, by Harrison; in South Shore, by Carter; in Lancaster, by Hughes and Mawdsley; in Southport, by Walker; in Over Darwen, by Hargreaves; in Lytham by Bannerman, Chemist; in Chorley by Oakes, Chemist, Co-operative Society; in Blackburn by Boyle and Co., Confectioners; Rishton, Co-operative Society: 3,428 Agents. Prices: 2s 4d., 2s. 8d., 3s., 3s. 4d., and 3s. 8d. per lb.—[Advt.]

OUR LADIES' COLUMN.

BY ONE OF THEMSELVES.

SHOPS AS GOOD AS SIGHTS.—WHITELY'S NEW PLACE.—A TEMPTING DINNER TABLE.—FURNISHED ROOMS IN CRYSTAL PALACE.—A FRIENDLY CHAIR.—BOOKS FOR WINTER READING.—AN UNGALLANT FRENCHMAN.—WHY ARE WOMEN INFERIOR TO MEN?—THE WAR OF THE SEXES.—HIGH HEELS COMING DOWN.—MR. DARWIN'S NEW BOOK.—WORMS AS MOULD MAKERS.—A CHEMICAL LUNG.—FRIENDLY GERMS.—A GOOD NOVEL.—LIFE OF C. J. FOX.—THE PRICE OF A ROYAL WIFE IN THE ROCKY MOUNTAINS.—HOW TO WASH A SHETLAND SHAWL.

If all the public amusements in London were closed to strangers and visitors, there would yet remain the infinite diversion of the shops, which seem to lay themselves out more and more every year to attract the public. Being fairly amused and excited by the outside show of every possible article for purchase or hire, an excuse for entering the spider's web is easily found, and one is sure to recollect something that is necessary to be bought to reconcile the fatal step over the threshold to one's pecuniary conscience. To walk along Westbourne Grove, and then to turn round into Queen's-road, is a promenade in a huge bazaar *of itself*, and now that Mr. Whitely has broken out into all possible trades as "Universal Provider," all tastes can be well pleased by gazing through his large squares of plate glass. One department is devoted to the exhibition of goods, which can be hired on the shortest notice, and one window is arranged as a perfect dining room, so that the hungry passenger must feel tempted to go and take his place at once at the table so elegantly arranged and laid for guests. A noble oak sideboard, properly prepared with all table requirements, flowers, and lights, flanks the impromptu apartment, as seen through the window. A dinner wagon, laid out with fruit, wine, and plates: a bright and cosy fire-place, and comfortable chairs, for eight guests, placed round the table, which is covered with spotless damask and arranged with excellent taste, is so unlike what one ever sees when in walking dress, that the sensation is almost that of being an intruder on the preparations for a family dinner party. Not to examine and inspect, however, is impossible for any who delight in a pretty table and well-appointed home; and, at last, it is evident that this complete arrangement is merely intended as a specimen of what can be provided by this universal genius in no time, and transferred to your own house instead of the shop window. The enormous enlargement of Mr. Whitely's premises has resulted in a series of shops, which communicate, that perfectly astonished me, as I walked from the emporium of silks, satins, lace, and ribbons in Westbourne Grove, through a carpeted passage over a sort of bridge, hung with pictures of all kinds for sale, into a series of stores really exceeding the capabilities of any of the Co-operative stores I have entered. Without soiling one's feet or wetting one's bonnet, be the weather what it may, here every possible want for the day or the week may be satisfied, and I am told that to those who live near enough to come and market for provisions every morning the system is perfect. As I proved when not wishing to purchase, there is enough to look at and to admire to wile away a few hours most amusingly in this great magazine for all the necessities of humanity.

Something of the same sort is to be seen at the Crystal Palace, where there are a whole suite of rooms furnished in the latest and most approved style by Messrs. Maple. Lovely pieces of tapestry and rich rugs and carpets are here disposed in appropriate places. The papers, paint and decorations of the rooms are all in excellent taste, and the furniture placed in each is good and elegant. Nothing is forgotten even to the fine linen and frilled sheets on the bed and the large square pillows with their delicate embroidered cases. The very blinds covering the sham windows are special and suitable for each room. It seems to be quite an invention of these later days to furnish by deputy in this manner, and in the desire to get rid of trouble, to get rid *also* of all individuality in one's home, and thus to be taken in and *done for* under every possible circumstance of life. For myself, though I highly estimate the suggestions made by such grouping together of pieces of furniture, and the hints which may thus be obtained, I much prefer to make acquaintance with my chairs and tables, couches and carpets, by themselves, and to introduce them to each other gradually, so as to harmonise them, and not to enter wholesale into relations which may have to last for a lifetime. I think one gets very much attached to a bedstead, a chair, or a couch which has a history in connection with one's own experience, the angles seem to have worn off, and the corners to have accommodated themselves to one's own peculiarities, just as the companionship of an old friend who knows the best and the worst of one is more valuable than that of ever such a grand new acquaintance, before whom "company manners" are requisite.

Comfortable rooms and cosy firesides make one look forward to days when out of door amusements will not be any longer tempting, and when the great resource will be books from Maudie's, the Grosvenor, Smith's, or the nearest library. Well, what shall they *be*? Those who have a *decided* taste for any one sort of literature will, of course, indulge that taste as far as may be; but there are some of us who are omnivorous in the matter of books, and read just what comes in the way—novels, history, biography, or science. Of course such readers only get a very unsatisfactory smattering of anything, and perhaps illustrate M. Delaunay's recent strictures on woman's intellectual position. I advise those who can easily read French to get his little brochure of the French *savant*, and ponder well over his observations on our sex, to find out where and in what respect we women are said to be hopelessly inferior in ability, capacity, and general intelligence to men. He tells us that not only is the brain of a woman less than that of man, but she is altogether in conformation more like a *gorilla*. He says she is more flat-footed, and "less arched" than a man, a sign of inferiority; hence he maintains the preference of women for high-healed boots and shoes. Surely the leader of the French fashions must have seen and resented this imputation, for it is undoubtedly true that heels are coming down and the newest French boots are now made with low heels, placed under the heel of the foot, and not as formerly in the middle of the foot.

Some writer asks is woman more moral than man? M. Delaunay refers to the many authors who maintain that women are more prone to every kind of wickedness than men, though he acknowledges that they are convicted of proportionably fewer crimes that men. This may only be, however, that they are sharper at *concealment*; and statistics prove that poisoning is more frequent amongst the fair sex than any other form of the same crime. That these sentiments should have issued from a Frenchman, based, he assures us, on scientific examination of all existing data on the subject, is surprising, and we are obliged to allow that such revelations from the home of gallantry and devotion to feminine charms, cannot be thought, as *it* might be from one of this blunter nation, to originate in a determination to assert and uphold male supremacy. Everywhere, according to M. Delaunay, woman is regarded as a minor, incapable of taking care of herself and requiring a guide and director, and she is also more playful, capricious, and less circumspect than man, in proof of which he quotes the fact that the number of women run over in the streets is much greater than that of men. The *Times* reviewer of this amusing little book, obligingly apologises for women's lucklessness in saying "by her training she is more dependent—she does not look out for herself. She is accustomed to a world of which she is the centre, and through which cabs and carts are not continually careering." Altogether the argument is amusing if not profitable; for I have long felt that the question as to the superiority or inferiority of either sex is as futile and impractical as though the two halves of a pair of scissors took to disputing as to which was uppermost. It all depends on how they are placed, and it is quite certain neither can get on very well without the other. Women have usually to educate and fit themselves *for* life, rather than for any single part in it, and they may console themselves that they may continue to be flat-footed or white-blooded, as M. Delaunay says they are; their more arched and red-blooded companions in the other sex will never find it out, but will continue to admire as perfections what it is left to an ungallant Frenchman to expose as shortcomings and inferiorities. When our distinguished countryman, Mr. Darwin, devotes a whole and interesting volume to an explanation of our indebtedness in the world to the natural operations and instinct of the common earth-worm, we may forgive the Frenchman for trying to discover our own feminine place in nature. But Mr. Darwin does not commit himself to a theory till he has devoted many years to constant experimental investigations in order to prove its truth, and now when he tells us that the dispised earth-worm is our greatest agriculturist, and that the vegetable mould which covers the face of the earth is really made from leaves and other *debris* by these little creatures, we are ready to believe him, for he shows us the why and the wherefore. This volume of Mr. Darwin's is by no means the least interesting of his valuable series of works. I am happy to see it completing a long row of them on my book-shelf.

Sanitary suggestions or experiments always arrest my attention, and I read with interest lately of a so-called "Chemical Lung," or "sanitary punkah," invented by some one for the purpose of purifying the air of a sick room, and mentioned as applicable to workrooms or close atmospheres of any kind. It consists of a sort of light moveable frame, fixed on a swinging bar, which oscillates to and fro, and on the frame is stretched a piece of cloth saturated with Condy's fluid or carbolic acid. It can be removed easily, and wet again when dry. The wafting about of Condy's fluid would produce no unpleasant odour, and would certainly refresh a vitiated atmosphere; to the carbolic acid there are many *objections*. If all I have read lately about the germs of disease floating in the atmosphere be true, this is an excellent precaution. But it seems that these germs which we are apt to regard as deadly enemies are oftimes but friends in disguise, and can be so utilised, treated, and modified as to save us from dire disease at the expense of but slight inconvenience, just as the germs of smallpox having passed through the cow or calf become modified and prevent the attacks of the terrible malady itself in its unmitigated form. The experiments of M. Pasteur, supplemented by M. Koch, open a wild field for scientific investigation in this direction, and it is quite possible that not only splenic fever in sheep may be prevented by the proper use of these direful germs, but that some or many of the fevers and plagues to which humanity is subject may be rendered comparatively harmless. Would any one doubt that the fullest facility for experiments like these should be given to men of science who are really the saviours of human life?

For those who have little time for reading the numberless magazines and reviews supply endless variety of topics for further attention and thought. We find a lady writing an able article on what sort of bread we should eat; another on how to give our children holidays; a third on Government offices for women; and all these articles do but suggest the direction in which we can each one of us act, and reason and develope in our respective spheres. I am delighted with the "Early History of Charles James Fox," by G. O. Trevelyan, M.P., who wrote so charmingly of and about Lord Macaulay in his "Life and Letters." A new and inexpensive edition is now published of this pleasant book, and it is certainly one to buy or borrow for quiet winter reading. It is well sometimes to get hold of a powerful unsentimental novel, and I have read one with the title "Mahalah," during my recent journeys; with much satisfaction. It is as good in its way as "Jane Eyre" was in the days of Charlotte Bronte.

A daring young friend of mine, who writes from the Rocky Mountains, where he is busy shooting bears, tells me that he can undertake to supply any number of wives, princesses of royal blood, to dissatisfied English bachelors, on the receipt of a sufficient cargo of blankets. He believes that a king's daughter may be had in exchange for 200 Witney blankets, but the amount of settlement demanded, varies with the lady's charms and the aristocracy of her blood.

Talking of blankets, and recollecting the difficulty one has in getting them well and fluffily washed, reminds me that Shetland shawls which have done duty through a summer's campaign, are now requiring renewal, and as mine has been cleansed very successfully, I wish my readers to learn and do likewise, for what wrapping is softer and nicer than a good white Shetland? The process is simple. "Make up a thin lattice of boiled soap and water; plunged the shawl in this, and gently strip it through the hand. It must never be rubbed or wrung. When clean rinse through water without any soap, hang it up for about a minute, shake it gently by each side alternately, pin it on a sheet exactly square, and if the shawl be of fine texture it should be lightly sewn down to the sheet by the top of the fringe to prevent it shrinking. Then go over the whole fringe, drawing each thread separate and laying it straight out." If these directions are carefully attended to, the shawls may be washed many times and will always appear as good as new.

London, Thursday. PENELOPE.

WORMS.

MR. DARWIN'S NEW WORK.

"WORMS!" The very word is repulsive; it calls up the hideous, creeping, slimy, objectionable creatures which haunt the under-world of our globe, and fills the ordinary mind with images of horror and disgust. A man is thought superhumanly humane if he refrains, like the poet Cowper, from setting his foot upon a worm. "What is the good of them?" must often have been asked, when the gardener turns up a spadeful of mould which is found full of these wriggling knots. Probably many people incline to believe that they were really created for the express purpose of being bait for anglers, and it is thought an exceptional proof of vivacity, when they are threaded on a hook, to remark "that even the worm will turn." To the horror and loathing, moreover, provoked by the unlovely appearance of the earth-worm is added a certain special dislike. This springs from the absurd and mistaken idea that the ungainly creatures have to do with the decomposition of buried corpses. People hate the obscure animal, popularly said to play undertaker to all flesh, although as a matter of fact worms seldom burrow deeper than a few inches, except to go to sleep. Suddenly, however, the gentle sunbeam of genius has shone into the dark region where these dispised beings dwell and work. A great naturalist, to whose admirable instinct of inquiry nothing is "common or unclean," has brought out into full light the nature and function of earth-worms, with the result of proving that there is almost no creature to which man, as a civilised being, owes more than to this human object. Dr. Darwin has for many years past closely studied these among other neglected denizens of our common planet, and now gives us the fruits of his investigations in a little volume bearing the title of "Vegetable Mould and Earth-worms." At the touch of his transcendently patient intellect a new glory breaks over the degraded, writhing, offensive worm. Instead of being useless, or even harmful, it turns out that we could never do without these humble creatures. They, and they alone, in their countless millions, and by their ceaseless hidden toil, have made the globe what it is, fit for agriculture and the residence of man. The bulk of the humus or vegetable mould of his fields everywhere is mainly of their manufacture, and goes perpetually through and through their organs to be fitted and perfected for fertility. The most assiduous and wealthy farmer does not lavish half as much nourishment upon his crops as the earth-worms, which in many parts of the British Isles make and bring to the surface of each acre of land ten tons or more of rich fine mould yearly. All things considered, Dr. Darwin inclines to rank the earth-worm higher in the scale of constructive agencies than the coral insect itself, though the last named builds atolls, islands, and ocean-kingdoms. It is the worm which, by perpetually consuming decayed leaves and small particles of soil, disintegrates and renews all the face of our earth. Their castings, hardly noticed, alter invisibly the contour of a whole country. Brought up from below, they make stones and rocks gradually sink, covering these by the collapse of their tiny burrows, so that the surface grows smooth for our use by their viewless help. Antiquarians owe to the earth-worm the preservation of almost every ancient pavement and foundation by the soft coat of mould with which they overlay these relics. They remove decaying leaves, facilitate the germination of seeds and the growth of plants, and create for us most of our wide, level, turf-covered expanses. Thus at one stroke our great natural philosopher has raised them to an honourable rank in the vast family of creation. The poor earth-worm is henceforward decorated with the blue ribbon of science. He has got his promotion after long ages of neglect. The concluding words with which the most famous of modern natural philosophers sums up this monograph are as follows:—"It may be doubted whether there are many other animals which have played so important a part in the history of the world as have these lowly organised creatures."

To appreciate the patience, the discernment, and the penetrating genius with which Charles Darwin has thus transformed a repulsive into an attractive topic, his new work must be reverently studied. Ever since 1837 he has quietly applied searching and persistent experiments to the habits and the labours of earth-worms. He has, so to speak, domesticated them, with the result that he can now tell us what they do, why they do it, and how they do it. They are found almost everywhere. Their castings may be seen on the shoulder of lofty Schiehallion, in Perthshire, and on the top of the Nilgherri Mountains. Their numbers are prodigious. An average of fifty-three thousand seven hundred and sixty-seven are calculated to reside in a single acre. The earth-worm is nocturnal in its feeding and activity, and each individual is bisexual. It has a mouth and a most peculiar digestive apparatus; it breathes by the skin, but has no eyes, and is quite deaf. Slightly sensitive to light, it escapes danger by knowing and avoiding the day. Worms hide during a frost, and, though insensible to atmospheric sounds or waves, they feel the vibrations of solids. They have no sense of smell, and yet display strong preference for certain food, such as cabbage and onion. Dr. Darwin pronounces them distinctly intelligent by reason of the way in which they make and line their burrows, and draw in fallen leaves to close them up. These leaves they prepare for digestion by a strange and unique alkaline secretion. Nothing can be more curious or convincing than the experiments by which Dr. Darwin made his tame worms display their mechanical intellect. He has counted many times the leaves which they drag in, observing whether it was by the foot-stalk, the tip, or the middle, and he has found that the worm acts as an intelligent being would. With the specially-shaped rhododendron leaf, which is of late as new a thing to them as Sanskrit Manuscripts have been to this century, they reverse their general practice. Fir-needles, which could not be drawn in by the apex, are always seized by the base. The same method was adopted when the tips of the needles were gummed together, or fastened with fine thread. In the case, however, of the petioles of the ash-tree, the pointed extremities were drawn in first, contrary to habit, and this because that portion serves for food. It was proved, by furnishing them with triangles of greased paper, that the worm chose sixty-two in a hundred times the easiest point by which to draw in the plug for its hole. Of course this might be mainly instinct, but when we see it applied to the leaves of foreign and unknown plants, and objects so peculiar, we must agree with Dr. Darwin that it looks like positive intelligence. Small as are the cerebral ganglia of the poor earth-worm our brilliant author well reminds us that tiny grey particle which makes the brain of a workerant is, nevertheless, a mass of inherited knowledge and adaptative means.

These humble creatures, then, have been proved, by their exquisitely patient methods, to perform an extraordinary amount of world-work, although their active period of toil is little more than half the year. On a down in Kent Dr. Darwin found the worms had thrown up digested soil amounting to eighteen tons per acre. On the sandy soil of Leith-hill a similar investigation gave sixteen tons as the annual result. These ejecta not only supply agriculture with new vegetable earth, but as has been said, they cover up stones and level the entire surface for traffic and use, besides helping forward immensely the breaking down of rocks and rough matter. Wherever the damp can come, the earth-worm will live and work, and Dr. Darwin shows how many Roman and ancient buildings they have preserved, both by the process of silent burial and by causing the subsidence of the structure. Our great naturalist does not hesitate to rank the worm with the glaciers, the rains, and the rivers in the task, eternally proceeding, of wearing down for the earth's service the rocks and stones. He calculates the actual weight of soil rendered serviceable for vegetable life in Great Britain alone by the worm since its appearance there at the enormous total of three hundred and twenty billion tons. After these startling figures who again will despise the blind, deaf, and almost organless earth-worm, which has, nevertheless, its life of eminent utility to lead, and which probably enjoys in some darkling and unimaginable way its obscure, existence? For these lowly creatures, perhaps hitherto unregarded or disliked, there remains some reward and some higher development, for there is a sort of virtue among them. There are busy worms and lazy worms. Those which were domesticated by Dr. Darwin, having no fear of frost, became *disgracefully* indifferent to the duty of pulling leaves by the proper end into their burrows, and turning them into humus. Luxury, it seems, can demoralise even a lob-worm, and with this little moral we *close*. It is impossible to pay too warm a tribute of admiration either to the unparalleled gifts possessed by the illustrious philosopher who has made these observations, or to the unsuspected value and vast importance of creatures which hitherto seemed of almost less account than the dust wherein they dwell.—*Daily Telegraph.*

DEATH OF A ROMAN CATHOLIC BISHOP.—Dr. Brown, the Roman Catholic Bishop of Shrewsbury, is dead.

Ask for MARGERISON'S registered White Windsor Soap, Preston, 4½d. pound. "Court Journal" says "Is unrivalled for all household purposes." The "Bazaar," says, "A very good and economical soap, we can strongly recommend it." Sample box of our Elegant Toilet Soap 8 stamps, post free.—[Advt.

ELECTION OF A PRESIDENT OF THE UNITED STATES SENATE.—Mr. David Davis, an Independent politician, has been elected President of the United States Senate pro tem. He was carried against the Democratic candidate by 36 to 34 votes, and declared that had the honour carried with it any party obligation, he would have felt constrained to decline it.

AS THE ELECTRIC LIGHT is superior to all other artificial lights, curative electricity is superior to all other remedies. In a report to the *Bombay Gazette*, published the 14th of June, 1881, occurs the following:—The CHOLERA BELT ordinarily worn is worse than useless but a Pulvermacher Belt is of the highest service. The above report referred to cholera, but this superiority holds good in all morbid affections, such as rheumatic, nervous, muscular and functional disorders, general and local debility and its concomitant evils, in which Pulvermacher's Galvanic Chain Bands and Belts are the cheapest and most speedy remedy. This is a fact confirmed by the numerous cures effected, as witness the testimonials daily arriving, a selection of which are embodied in a pamphlet, "Galvanism, Nature's Chief Restorer of Impaired Vital Energy," post free on application to Pulvermacher's Galvanic Establishment, 194 Regent Street, London, W. The Improved Chain Bands, &c., can be seen in the Medical and Sanitary Exhibition now being held at South Kensington.—[Advt.]