

such and proof that they are in the right hands before their author can be permitted to lay a further tax on the profession.—I am, Sirs, your obedient servant,

East Sheen, Nov. 20th, 1897. ALEXANDER MCCOOK WEIR.

"THE DISINFECTION OF CLOTHING BY HEAT."

To the Editors of THE LANCET.

SIRS,—Will you kindly give me room for a few lines with regard to the article by Mr. Messiter published in THE LANCET of Nov. 20th, 1897, p. 1305.

Mr. Messiter very properly points out the advantages of current steam and of having some simple and portable form of current steam disinfecter for certain public health purposes. Such a disinfecter would be specially useful in places where no large disinfecting station exists or where it is desirable to carry out the disinfection of clothes, &c., at the houses of patients affected with infectious illnesses. He appears, however, to be quite unaware of the fact that both these desiderata have been met in Manchester for no inconsiderable time by means identical with those he recommends. He will find in Dr. Niven's report for 1895 full reference to this. "It is remarkable that Mr. Messiter should have had constructed an apparatus which corresponds so closely with the one in use in Manchester that even the dimensions of the steam chamber are the same (within a quarter or half an inch). The mode of heating by petroleum furnace was introduced by me in 1894, not only on account of its convenience, cleanness, and cheapness, but also, and more especially, because I could find no other means to obtain rapidly the intense heat required to produce a very rapid ebullition of water, a factor which I consider of very great importance in steam disinfection. Mr. Messiter does not speak in his description of the means he uses for preventing the wetting of clothes by the condensation taking place on the sides of the steam chamber or of the ways in which he prevents the splashing resulting from sharp boiling. The quantity of water he recommends is the same as I have found after many trials to be the best. The method of drying clothes after disinfection is the same which has been taught to the sanitary inspectors in Manchester nearly two years ago.

Coincidences of this kind impress one as indicating the soundness of the method if they come from two absolutely independent sources. In justice, however, to Dr. Niven and myself I think it right to mention the fact that Mr. Messiter recommends methods which we have used in laboratory or public work for at least three years.

I am, Sirs, yours faithfully,

SHERIDAN DELÉPINE,
Professor of Pathology, Owens College,
Manchester.

Nov. 22nd, 1897.

To the Editors of THE LANCET.

SIRS,—Professor Delépine having shown me a letter which he is about to send to you in reference to a paper on "A Mode of Disinfecting Personal Clothing at Home," by Mr. A. F. Messiter, M.R.C.S. Eng., which appeared in THE LANCET of Nov. 20th, 1897, p. 1305, I have to confirm his statement that Mr. Messiter's machine, in its shape and dimensions, in the means of heating, and in the purpose for which it is being introduced, is identical with a disinfecter invented by Professor Delépine. Professor Delépine's disinfecter contains a novel application of physical laws (not to be found in the description of a machine given in Mr. Messiter's article), and its working was demonstrated to the sanitary inspectors of this city over eighteen months ago, by whom it has since been used.

I am, Sirs, yours faithfully,

JAMES NIVEN,
Manchester, Nov. 23rd, 1897. Medical Officer of Health.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 20th, Mr. Messiter, medical officer of health to the Isle of Axholme District Council, illustrates an apparatus for disinfection of clothes by heat. As I had myself long felt the need of a somewhat similar portable apparatus I exhibited a model of one in the Section of State Medicine, Dublin, in April, 1896, a short description of which you were good enough to give in THE LANCET of May 16th, 1896, p. 1359. I afterwards sent

the model to Professor Gairdner, of Glasgow, who forwarded it for exhibit to the medical officer of health of Glasgow. Each medical man in doing battle against the possible conveyance of contagion should be his own detective officer, and should with the most intense energy guard his coming puerperal patient with all the means that lie within his reach against scarlatinal or other poison. Our responsibility in this should make us tremble, as I fear we are indirectly the cause of some deaths. Every man, *paid or unpaid*, ought to be an honest, independent, and courageous sanitary worker.

I am, Sirs, yours faithfully,

Londonderry, Nov. 20th, 1897.

WALTER BERNARD.

LOCALISATION AND MEASUREMENT BY X RAYS.

To the Editors of THE LANCET.

SIRS,—With reference to an article on the above subject in THE LANCET of Oct. 16th, of which I was a joint author, and with reference also to other means of localisation which have been suggested before and since, I beg to point out that whether a mechanical or a mathematical method be adopted the necessary apparatus need be only of the very simplest description. The primary requirement is of course a small steady stand to carry the focus tube and allow of horizontal and perpendicular adjustment. This stand may be either of the "Bridge" pattern—i.e., two small perpendicular pillars (with heavy bases) joined by a horizontal bar, the latter capable of being raised and lowered and permitting of lateral displacement of the tube—or it may be the "sliding tube holder" described by Mr. Payne.¹ In any case the horizontal bar must be provided with a knife edge bearing three shallow notches, a central and two lateral ones, the latter equidistant—say, two and a half inches—from this centre. These notches mark respectively a centre and the limit of the lateral displacements of the tube. In the further steps described in the above-named article it is evident that this same stand and these same notches permit of a perpendicular being dropped from the centre one, whilst the two lateral notches now carry the threads which represent the path of the x rays. In other words, the necessity for a second piece of apparatus is avoided—a pair of compasses, a spirit level, and a foot rule complete the equipment. Those who have become accustomed to associate x ray localisation with a formidable arrangement of stands, screws, and spirit levels, reflecting mirrors, cast-iron retouching desks, and yards of millimetre scale, may rest assured that they will lose little in time and nothing in accuracy if at the expense of a few shillings they avail themselves of the simple apparatus I now advocate.

I am, Sirs, yours faithfully,

W. S. HEDLEY, M.D. Edin.
Mansfield-street, Cavendish-square, W., Nov. 23rd, 1897.

"A NOTE ON CYCLING."

To the Editors of THE LANCET.

SIRS,—In the two able and interesting letters that have appeared in THE LANCET of Nov. 13th and 20th the writers make no reference to the two distinct methods of leaning forward: (1) the spine may be bent forward with a stoop of the shoulders; or (2) the pelvis may be rotated and the spine inclined forward without bending and with the shoulders back. Those who have studied river-rowing consider the former method unsightly and injurious while the latter is practised by all skilled oarsmen. To my thinking the same holds true in cycling. The bent back and stooping shoulders are certainly unsightly and the position seems to cramp the chest. On the other hand the body swung forward from the hips, with the back straight and the shoulders back, to my eye is graceful; the position allows freedom to the chest-wall and at the same time the rider gains the mechanical advantage that a forward position certainly gives. There is perhaps more danger of perineal pressure, but this would be avoided if the cycle makers would make a hard saddle with a low peak instead of the very unsatisfactory yielding leather hammock now in use.

I am, Sirs, your obedient servant,

Ottery St. Mary.

O. CLAYTON JONES, M.B. Oxon.

¹ Archives of the Roentgen Ray.

"THE PREHENSILE POWER OF THE HANDS OF THE HUMAN INFANT."

To the Editors of THE LANCET.

SIRS,—Mr. Freeman calls attention in THE LANCET of Nov. 20th (p. 1348) to the absence of sexual differentiation in the young human embryo and adds: "The early embryological sexual attributes to which I have drawn attention most probably point to a hermaphroditic ancestry." I fear I cannot agree with him for the simple reason that the embryo even at that stage is far too highly developed for it to be probable that its prototype in the phylogeny was hermaphroditic. It would be as reasonable to suppose because the human infant cannot easily digest anything but milk that therefore it has descended from ancestors who lived exclusively on that diet. This by the way; but the sentence I have quoted betrays on Mr. Freeman's part so far-reaching a belief in evolution that it is difficult to understand why he has recourse to the "special-creation" hypothesis to explain the presence of the prehensile reflex in the infant hand. Granting the truth of the theory of evolution, it affords a sufficient explanation of the fleeting resemblance which the embryo presents in certain particulars to lower forms of life, and to seek additional explanation of that which is already sufficiently explained is suicidal from a logical point of view.

I am, Sirs, faithfully yours,

Southsea, Nov. 21st, 1897.

G. ARCHDALL REID.

"A TESTIMONIAL TO DR. JOHN T. ARLIDGE."

To the Editors of THE LANCET.

SIRS,—You will much oblige by inserting in THE LANCET the following further list of subscribers to the testimonial to Dr. J. T. Arlidge.—I am, Sirs, yours faithfully.

CHARLES F. MOORE.

10, Upper Merrion-street, Dublin, Nov. 23rd, 1897.

£ s. d.		£ s. d.	
Mr. T. W. Nunn, ...		Mr. Jno. Alcock, J.P. ...	2 2 0
F.R.C.S. Eng. ...	3 3 0	Mr. William Dawkins	
Mr. Lionel Beale, M.B.,		Cramp, H.M.S.I. ...	5 0 0
F.R.C.P. Lond. ...	5 5 0	Lady Manningham	
Mrs. Naomi Daltry ...	1 1 0	Buller ...	10 0 0
Rev. T. W. Daltry ...	2 2 0	Mrs. F. Paddock ...	2 2 0
Mr. J. W. Moore,		Surgeon-Major J. G.	
M.D. Dub. ...	1 1 0	Gibbs, M.D. ...	2 2 0
Mr. J. Gimson ...	1 1 0	Mr. D. Lloyd Roberts,	
Mr. Thomas Oliver,		M.D. St. And. ...	2 2 0
M.D. Glasg. ...	1 1 0		

THE BUYING POWERS OF TEN POUNDS.

To the Editors of THE LANCET.

SIRS,—I beg leave to bring to your notice some remarks that appeared in the *Willesden Chronicle* apropos of the tendency lately displayed by public bodies to get their medical advice for nothing. The late chairman of the Willesden School Board recently invited medical men to attend at the schools and examine the children gratis, and I regret to say that some men have actually accepted the offer. The board of guardians have recently requested their medical officer in future not to perform any more operations for which they are under contract to pay him according to the Local Government Board schedule, but to send all cases to St. Mary's Hospital as they contribute £10 per annum to that institution, for which sum Mr. Ryan has undertaken to meet the surgical requirements of a parish of close upon 100,000 inhabitants. As most of the guardians are retail traders it is not surprising to find that they are under the impression that they are simply paying the market price of the services rendered at St. Mary's Hospital. In fact, one of them expressed the opinion that they would not be doing their duty to the ratepayers if they paid anything for what they could easily obtain for nothing. I think this is very significant and it is not necessary for me to point the moral. The remedy for this state of things is in the hands of the profession itself. When is it going to wake up and seek its own salvation?

I am, Sirs, yours faithfully,

Willesden, Nov. 23rd, 1897.

STRUGGLING PRACTITIONER.

* * We print our correspondent's letter but we doubt if his information as to any undertaking on the part of the hospital named is correct.—ED. L

THE EPIDEMIC OF TYPHOID FEVER AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

THE Belfast epidemic presents itself to the observer under two different and distinct aspects. On the one hand there is a sharp, rapidly developed epidemic extending only over a portion of the suburban district of Ligoniel. Then there is on the other hand a more slowly developed, but more persistent, prevalence of typhoid fever in the town of Belfast itself. As opposed to the experience of Ligoniel typhoid fever in Belfast is not restricted to one particular district or to one particular water-supply but exists in all parts of the town. To judge from the facts at present available we seem to be in the presence of a water-borne epidemic occurring side by side with another epidemic which does not appear to be due to the water-supply. Your Belfast correspondent has already described how Dr. Biggar has traced the Ligoniel epidemic to a contaminated spring. This district has recently been added to the city and it was only on Oct. 23rd that the Belfast Water Commissioner obtained jurisdiction over the Ligoniel water-supply. Dr. Biggar is the medical superintendent officer of health of the Belfast board of guardians; and this board of guardians is the rural sanitary authority for the districts lying outside the boundaries of the borough of Belfast. On Oct. 20th, Dr. Biggar was informed that there had been about forty cases of typhoid fever occurring during the previous five days in the upper end of the village of Ligoniel. These persons derived their milk-supply from ten different sources but their water-supply came from one and the same spring. On the other hand the inhabitants of the lower part of the village, though living if anything under worse sanitary conditions, had a different water-supply and they were not suffering from typhoid fever. The whole district has a population of about 5000, but it is only about half of this population that received the incriminated water and there have been more than a hundred cases of typhoid fever among them. How the water was contaminated has already been described. It is not necessary to go over the details again. I may add, however, that the reservoir which is supposed to have been polluted measures some fourteen by six feet and is about six feet deep. The little stream which passes by a cottage where there has been a case of typhoid fever delivers at this point about 600 to 700 gallons of water daily. A great part of this water sank into the field just above the reservoir and disappeared. The subsoil is of limestone. There may be fissures and the water from this brook may have freely mixed with the water of the spring that supplies the reservoir. As the typhoid dejections were thrown out on the garden of the cottage close at hand it is not difficult to see how the contamination may have occurred. In any case, Dr. Lorrain Smith, of Queen's College Pathological Laboratory, has examined this water and reports that he found it was contaminated and he has been able to isolate the typhoid bacillus.

The first measure was to construct a dam across the stream so that the water flowed down the other side of the hill and could no longer reach the field where it was supposed to have mixed with the water of the spring. But this could not be continued as it affected the riparian rights on the stream which had thus been diverted from its usual course. Iron pipes were therefore laid down to convey the water past the field and below the reservoir. This done it was possible to restore the water to its usual channel. At the same time this water-supply was cut off during the space of twenty-four hours. The water that came into the reservoir from the spring was pumped out as fast as it entered, and the reservoir was carefully cleaned out. There is no longer any means by which the water which now comes into this reservoir can mix with the water from the brook, for the brook water flows past in the iron pipes that have just been provided for that purpose. As a result presumably of these measures the epidemic seems to be decreasing.

On the other hand it is not so easy to account for the numerous cases of typhoid fever which have occurred in the town of Belfast. The water-supply is certainly not above suspicion; but it is, in any case, as safe as, indeed safer than, that of London. Dr. Percy F. Frankland, in