

Hamlet's profound philosophy with which his letter concludes.

Mr. O'Regan seems to think, with some other authorities, that life is a property of matter and argues that "as matter never had a beginning life as a property of matter never had a beginning"; but does not very much matter exist without the property in question? Still though I may not add anything "to our knowledge," I trust I may escape the terrible fate of being taken "round and round the circle for ever," and I hope Mr. O'Regan will treat my vitality with a little more kindness and consideration than he extends to the assumption that matter has "a real existence."

I am, Sirs, yours faithfully,

Oct. 25th, 1898.

LIONEL S. BEALE.

### "WHAT IS 'FIRST AID'?"

To the Editors of THE LANCET.

SIRS,—I quite agree with Mr. Valentine Matthews that it is time that a more definite course was laid down for lecturers and examiners in "first aid." The late Surgeon-Major Shepherd's Handbook has been improved of late, but it is still very unsuitable for a text-book. What good purpose can possibly be served by teaching a class the number of bones in the spine, chest, wrist, and hand, or the total number in the body? The description of the cavities of the heart and its valves is another among the many unnecessary complications. Yet the lecturer dare not omit these details lest a short-sighted examiner fail to pass his class. I once had two large classes of working men "ploughed" almost to a man on the subject of poisons. I confess my teaching had gone little beyond the proper use of an emetic, but for the type of student I am certain it was quite enough.

What is wanted is a book prepared with the greatest care, not one put together in a hurry, as was, confessedly, the present one. In it all that is essential should be printed in large type, with perhaps a few further facts for more ambitious students in a smaller type. The matter should be arranged in logical order. A more complete book could be easily arranged in less than half the space. Examiners should be instructed to examine only on the text-book, or at all events to ground their report on a knowledge of it. A page might be devoted to a list of facts which *must* be learnt and then both lecturer and examiner would be on firm ground.

There are many other details which might be improved in the present course. Thirty is far too many for one man to instruct practically. Paper work should be abolished for all. Such knowledge is often practically useless, and the present distinction between literates and illiterates is illogical. The practical part of a lecture should be the longer. The present direction that half an hour of each lecture should be devoted to practical work is absurd, for with a class of thirty it would mean five minutes' practical work to each student during the course. I try to arrange that each pupil does all the operations at least twice, but of course that means cutting down the "unpractical" part of each lecture to little over half an hour.

I have not much faith in representative committees, and question whether Mr. Matthews's scheme for such would produce a more satisfactory course. I would rather see one able man appointed who should write a new text-book and submit it to all the lecturers and examiners. Those who felt themselves qualified to criticise might apply for, and pay for, a copy, and thus expense to that excellent association the ambulance department of the Order of St. John of Jerusalem might be avoided.

I am, Sirs, yours faithfully,

Ottery St. Mary, Oct. 24th, 1898.

CLAYTON JONES.

### "THE WATER TEST AS APPLIED TO SEWER CONNEXIONS."

To the Editors of THE LANCET.

SIRS,—I think this is a matter which should be publicly noticed as in the course of my experience I have found that the so-called water test as applied by some local authorities to sewer connexions is a farce and I have no doubt many engineers, architects, and builders have had the same experience. As an instance a few weeks ago a client of mine bought a house in one of the suburbs which he decided to have redrained. A deposit of £5 was paid to the local authorities for putting in a new 4-in. connexion from

the sewer to the fence. The house-drains were put in under my supervision, laid on concrete beds, and the joints were properly made with cement and allowed to set for four days before the first water test was applied. The joints successfully resisted a pressure of 5 lb. to the square inch. The pipes were then surrounded with concrete and when it had properly set the trenches were filled and watered in and no ramming was allowed until 2½ ft. of soil covered the pipes. The whole of this work was examined by the local sanitary inspector, who was as particular as I was myself about the soundness of joints, &c. The connexion from the sewer to the fence was put in in a very different manner. The joints were made with cement and tested by the local authorities as soon as they were made, before even the cement was dry, and I noticed a workman ramming the clay into the trench a few inches only above the pipes which had no concrete either below or around them. The drain was filled with water which was run off immediately and this was the water test. Further comment is needless. This is a fair sample of what is constantly going on.

Without going into the legal question as to whether local authorities have any right to make a charge for sewer connexions at all, which I very much doubt, I contend that as my client paid £5 for this connexion he should be allowed the privilege of having it examined by his representative, to see that he got value for his money, which in my opinion he certainly did not. If the house-drains had been laid and tested (?) in this way, they would have been promptly condemned by the local authorities. Why, then, should not the local authorities be compelled to do their portion of the work as thoroughly as they make the house-owner do his? for at present they carry out this work in a most unsatisfactory way. If the water test is to be applied to those connexions at all, why should it not be applied properly, as in the case of the house drains? There is no doubt that the ramming process has shaken off the wet cement from the joints of the pipes. To fill a drain with water when the joints have just been made and to let the water run off immediately is *not* applying the water test. A paper bag will hold water until the paper becomes saturated, and so will a drain until the joints become saturated; but then, if the water is allowed to remain in and the cement joints are not set the pressure of water in the drain will force the cement out of the joints. It should be remembered that a great many sewer connexions are a very few feet below the road surface, and if a stoppage occurs the sewage escapes through the leaking joints and saturates the surrounding ground with results known to every sanitarian.

I think this is a subject that should prove interesting to medical officers of health as there must be many miles of this defective drainage both in London and the suburbs. If it is argued that the trenches in the public roadway cannot remain open long enough to give the pipe-joints sufficient time to set, then why should not heavy iron pipes with caulked lead joints be used for those connexions?

I am, Sirs, yours faithfully,

Wimbledon, Oct. 21st, 1898.

JOHN W. MAYNE.

### "PRACTICAL HINTS ON CYCLING FOR COUNTRY PRACTITIONERS."

To the Editors of THE LANCET.

SIRS,—Your cycling readers will thank Dr. Emmerson for his paper on "Practical Hints on Cycling for Country Practitioners," in THE LANCET of Oct. 22nd. The hints are valuable, not only for medical practitioners, but for all cyclists, whether ladies or gentlemen. The bicycle has made a revolution in travel and is giving health and strength to those who use it in moderation. I see that the machine is much in requisition among the young people of the theatrical profession, who wisely take advantage of it to get as much country air as possible during their provincial tours. It is wonderful the long distances ordinary riders can cover without much fatigue. A young girl of my acquaintance, ten years of age, rode to a watering-place upwards of forty miles from her home and afterwards spent the greater part of the day on the sands playing with her little friends.

But a greater feat than this was performed recently by the Rev. Henry Watney, rector of Canwick, Lincoln, who rode from Lincoln to a place six miles beyond Newbury in Hants, a distance of 165 miles, in one day, and on the following day he did not feel the least fatigued. Mr. Watney strongly