and Dr. Maxwell Williamson thinks that the time has come when the section in the Act referred to should be put in force, even although this would entail the appointment of one or two additional veterinary inspectors, whose business it would be to devote their whole time to the systematic periodical visits of the country premises from which the milk comes and of the cows which supply it. Meantime, the city inspector does the next best thing: he visits the staitions, examines the milk vessels in which the milk arrives, takes samples for bacteriological examination both from the large vats arriving by train and also from the supplies driven into the city by carts, and he takes this examination with the warning of having to have the particular cow identified and dealt with in whatever part of the country it may be situated. This is good in its way, but it is a delayed method of reaching what is wrong, and much mischief may already have been inflicted.

Dr. Maxwell Williamson some time ago made a representation to the local authority suggesting an alteration in the Dairy Regulations which would meet the difficulty arising in connection with the milk from outside sources; he repeats the suggestion now. It is as follows: "That Regulation No. 12 should read:

Every cowkeeper, dairyman, or purveyor of milk in or beyond the city limits, but subject to the city inspectors, shall cause all barrels, butts, cans, or other vessels of whatever kind used to convey, store, or distribute milk, or which contain milk for sale, either wholesale or by retail, and all utensils, cloths, lines, and other apparatus used to be scalded with boiling water or steam under pressure, immediately before and after use, and thereafter to be thoroughly dried.

No person shall employ or allow any boiler, to be used for steam chest, or other receptacle used for scalding or washing milk, or vessels to be employed for any other purposes.

The medical officer also suggests another regulation (No. 13) to follow the above:

Every cowkeeper, dairyman, or purveyor of milk who sends milk to the city, although resident beyond its boundaries, shall cause all barrels, butts, cans, or other vessels of whatever kind used to convey such milk to be, by proper means, by proper padlock, seal, or by such other means as will prevent the opened during the course of transit.

He also points out that the Local Government Board is now making suggestions similar to these which he submitted in December last. Certainly if veterinary inspectors cannot yet be obtained to make visitations to the byres in the county districts from which the milk comes, Dr. Williamson's less radical changes as shown in the above regulations (Nos. 12 and 13) might very profitably be adopted. Two interesting appendices to the medical changes are concerned with the provision of a proper adulterating milk under the Sale of Food and Drugs Act, and with the visitations of the byres and dairies and the resulting withdrawals of licences, etc. In all, 1,022 samples (of which the great majority are samples of cream and milk) were analysed; there were twenty-five convictions (all in connexion with milk), and £255 5s. 6d. were paid. Dr. Williamson states that the invariable practice is to appeal to the court which is, before any proceedings were taken, the result of the city analyst's certificate was communicated to the person in default, and the offer made to visit the byre premises, superintend the milking operations, and take a sample from the mixed milk of the whole herd, on the distinct understanding that if this should, on analysis, show a result contrary to the sample in question, then no prosecution would follow. "It is highly significant," adds Dr. Williamson, "that refusal to entertain this offer was met with in practically every case, the excuses advanced in support of this attitude being the flimsiest nature."

The Treatment of Pulmonary Tuberculosis.

Dr. Maclean, Superintendent of the Seaforth Sanatorium at Maryburgh, which was built and endowed by Colonel Stewart MacKenzie, of Seaforth, and Mrs. Stewart Mackenzie, in his annual report, refers to the limited usefulness of any single institution, where circumstances result in the treatment in one building of all types of cases, from the very first stage to third stage cases, and mental morbid. Owing to the generosity of the founders and managers, the effort has been made, and is continued, to give to all cases recommended for institutional treatment, but as the Seaforth Sanatorium is practically the only building for the segregation of tuberculous cases in Ross, the great majority of cases admitted have no business whatever in a sanatorium, though very much in need of treatment. Many of them, properly supervised, would do equally well with domiciliary treatment, and many could be only adequately treated in a hospital. An experience of six years has convinced Dr. Maclean of the need of a complete system, properly elaborated, in which such a way as to give a complete co-ordination dealing with cases of consumption in all conditions and stages. Following the recent pathological classification of the disease, out of 52 patients, only 15 weeks in the first and second stages expected to benefit in a sanatorium. Of these 15, only 1 died, while the 14 are now doing work of one kind or another. Of the remainder, over 25 are now dead and 4 died within a week of being sent to the sanatorium.

Correspondence.

REPORT OF THE RADIIUM INSTITUTE, LONDON.

Sir,—Pressure of work has prevented us from replying to Mr. Alton's letter on use of capillary glass emanation tubes. Mr. Alton contradicts himself. In his statement in the report of the Radium Institute for 1913 he describes the capillary tube as the latest achievement. He now says that they were described in the previous report of the Radium Institute—that for 1912.

Upon looking up this report we find the "capillary" tubes there referred to are described as "filled with radium sulphate "closely packed." He says, "Further, on account of their small size (they vary from 2 to 4 cm. long, and are no larger than 3 mm. in diameter), they can often be employed in quite small cavities." This is plainly quite another thing to the tubes we describe, and Mr. Alton's claim seems simply based on his peculiar use of the term "capillary." The tubes we use could not be packed with solid radium sulphate by any ingenuity.

Mr. Alton discoursively infers that we actually saw tubes like our own—or apparatus for making the same—in the Radium Institute. We saw neither the one nor the other. In point of fact, no apparatus beyond the gas flame is required in order to make the tubes. It is really difficult to understand what sort of apparatus Mr. Alton can refer to.

Finally, Mr. Alton refers to a lecture by Mr. A. Hayward Pinch before the Medical Society of London on March 9th. Mr. Alton says the use of "platinum needles" was fully discussed on this occasion. As reported in this Journal (March 21st), Mr. Pinch says that he "wished to bury the tube in a growth to be treated this should be done," and states his preference for a screen of 1 mm. of silver. The "platinum needle" appears nowhere, either in the report of the lecture or in the subsequent discussion.

The technique that is to be inferred, in fact, is quite different in principle from that which we employ, as will be seen in a paper by one of us, which we hope will shortly appear in this Journal.

We have every reason to hope and believe that the method which we have described of securing increased uniformity of illumination by the simultaneous insertion of many radio-active needles, each carrying a very small charge, will, in addition to minimizing the loss due to screening, prove a real advance in the therapeutic application of radio-active substances. No previous record of this method has come to our notice. In its technique the use of capillary tubes, small enough to fit within fine exploring needles, is necessary—and so far as we are aware, for the first time necessitated—in radio-active therapeutics. We are, etc.,

J. JOLLY.

WALTER C. STEVENSON.

Dublin, June 26th.

MORAL INSANITY.

Sir,—The inquiry made on this subject in your issue of June 20th is one which all who have to do with the treatment of mental disorders have been making for years.}
MURMOURS OF DILATED HEARTS AND THEIR EXPLANATION.

Sir,—Dr. Samuel West, in a communication published in the British Medical Journal, of June 20th, has called attention to the murmurs he has observed in acute enteritis, which are peculiar to the dilated condition. These, he believes, must be due to "eddy set up within the dilated arteries."

To produce such eddies, it seems to me, it is almost necessary to suppose that something of the nature of vortices takes place in the ventricular walls, so that the blood becomes locally disturbed by vortexing round it. One would imagine, however, that the ventricle must be in a state of serious breakdown, analogous to the auricle under fibrillation contraction, before such would occur, and not merely dilated.

It is a priori not unlikely that a dilated ventricle having to expel its contents, or a portion of them, through an aortic orifice of fixed dimensions, might produce a murmur analogous to that produced by an undilated ventricle through a stenosed orifice. The relative sizes of orifice and ventricular chamber having varied in either case, the conditions tending to produce a murmur are similar; except that the orifice being changed in cases of simple ventricular dilatation, the murmur is more likely to be soft and blowing, as heard by Dr. Samuel West, than harsh and distinct, as in stenosis. The probable distribution of such a murmur does not seem to correspond, however, with that heard by Dr. West.

It should always be remembered in considering these murmurs, that the aortic orifice does not occupy a fixed position during the heart beat. When the aortic valves open a continuous column of blood fills the aorta and ventricle. The pressure of the end of this column on, or near, the apex of the heart keeps it down, so that when the ventricle contracts it is not the apex which goes up, but the base which comes down. Needles plunged perpendicularly through the body wall of an animal into the apex and base of the heart respectively, would show the apex remains fixed, while the base approaches it during systole. In other words, the pull of the contracting ventricle makes the aorta elongate. It is pulled some distance over the blood in the ventricle, like the finger of a glove. Space is found in the aorta for the ventricular blood by the aorta dilating, and by the aorta lengthening. As the circular dilatation recoils it drives on a wave towards the remote arteries, called the pulse. When the ventricle relaxes and allows the aorta to recoil longitudinally, this recoil, like a catapault, drives on a second wave called the dicrotic. To this method of origin of the dicrotic wave I long ago called attention in the British Medical Journal and elsewhere.

Now when the ventricle dilates, it is probable that this up and down movement of the aortic orifice is disturbed, thus introducing an additional factor into the abnormal conditions under which blood is leaving the ventricle.

The whole problem is very difficult, but Dr. Samuel West's lucid record of his clinical observations is a good start towards its investigation.—I am, etc.

D. W. SAMWAYS.

THE BRITISH MEDICAL ASSOCIATION AND THE MEDICAL PROFESSION.

Sir,—In my enforced leisure I have read with avidity and interest the series of articles headed "The British Medical Association and the Medical Profession," and as they are a lucid statement of facts, I hail them with delight, as "The truth should always be set upon a hill."

What I "hao ma doos" about, however, is, even though we admit the work done by the British Medical Association, was the status of the profession as a whole advanced? I read that a deputation of the Society of Medical Officers of Health told the Chancellor of the Exchequer recently in public that medical officers of health have 'censored their reports, otherwise they might be punished. Surely this is much worse than signing a false certificate, as the latter only involves money, whereas the former may lead to disaster, even death, for the community! It was no doubt a useful argument, and may go a long way to obtain what they sought, but oh! the price. They should...