this was confirmed by *x*-ray examination. The shadow of the heart, besides being smaller, was of much more normal outline. The electro-cardiogram (Fig. 5) showed well-marked T waves

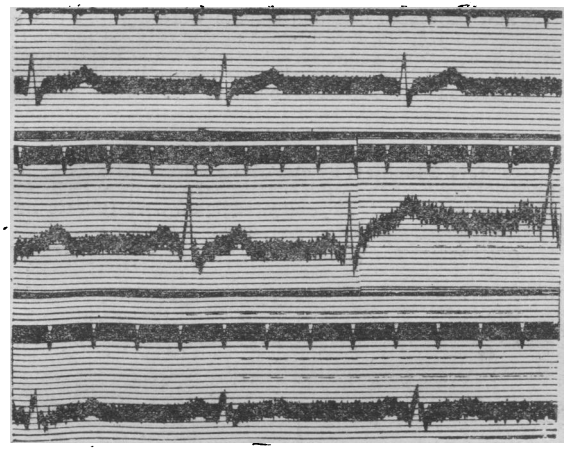

Fig. 5.

in leads 1 and 2 and distinct T waves in lead 3. Unfortunately he moved somewhat when lead 2 was being taken, so the record was not as neat as could be wished.

While it is not contended that these two cases in themselves are conclusive proof that absence of the second ventricular waves in the electro-cardiogram indicate myocardial change, they are certainly suggestive, and tend to confirm many other curves in our possession. It is to be hoped that other observers will put on record their experiences, not only in syphilitic cases but also in other forms of myocardial involvement, since it is only by numerous observations, and above all by electro-cardiographic observations, carefully correlated with the clinical findings at various stages in the history of the same patient over prolonged periods, that anything like certitude can be reached.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TONSILLECTOMY.

As I pointed out in a paper read at the International Congress in 1913, surgeons are prone to debate the merits of this or that technique for tonsillectomy simply from the standpoint of the removal of the tonsil. Some of the remote after-results, elicited by examining a large number of patients from one to eight years later, are of the greatest practical relevance. As regards technique, each man should, of course, use the method and instruments with which he gets the best results. Considered broadly and without detail, operators range themselves into three groups: (1) Those who use nothing but some form of guillotine, claiming that by this method every tonsil is removable in its entirety, capsulated; (2) those who dissect the tonsil out, claiming that with any form of guillotine no one can be certain of entirely removing any tonsil; (3) those who combine partial dissection with the use of a guillotine.

To my mind the existence of this third group is evidence that groups (1) and (2) are both in error, in that they go to unjustifiable extremes. The truth lies between, and I venture to submit that the following view is hardly assailable.

A certain proportion (which I will not here attempt to specify) of tonsils are removable, complete in capsules, by certain guillotine methods. The remainder are not, and have to be removed by some form of dissection, which requires more practice and dexterity than the former. No one, therefore, should claim to be prepared to deal with any and every tonsil with which he is confronted, unless he is practised in enucleation by dissection.

H. Lawson Whale, F.R.C.S.,
No. — General Hospital, B.E.F. Captain R.A.M.C.(T).

POISONING DUE TO BELLADONNA PLASTER.

T. C., aged 37, a strongly-built, muscular labourer, was first seen at 11 a.m. complaining of pain in the back. Nothing abnormal was discovered, and as the pulse and temperature were normal and he was anxious to continue his work, a belladonna plaster about 6 in. by 4½ in. was applied, and he went back to his employment.

At 2 p.m. he was carried in on a stretcher, struggling and being held by two men. The skin was harsh, dry and reddened, pupils dilated, pulse 130, and respirations 40; he was delirious and semi-conscious; the temperature was unobtainable on account of his movements. The plaster was immediately removed and he was admitted to hospital, where he remained more or less in the same condition until 9 p.m., when he became quieter and sank into an uneasy sleep, the pulse then being 115 and respirations 30. The temperature was 97.5°. The following morning he was much better, though the tongue and lips were dry and furred, and he was still slightly incoherent in speech. He had no recollection of what had occurred, and though he declared that he felt quite well he refused solid food, and was with difficulty persuaded to take any nourishment. The bowels responded to an aperient, and the urine passed naturally contained no albumin, blood, or casts.

Two days later the only sign remaining was slightly enlarged pupils responding slowly to accommodation; the patient left feeling perfectly well—pulse, respiration, and skin condition being normal. There was no history of any previous fits or similar illness, and I have no doubt that the symptoms were directly due to an overdose of atropine absorbed through the skin from the plaster. The case is of interest in showing the danger which may arise from this cause in susceptible persons.

Chester. B. G. R. Crawford, M.B.

HALAZONE FOR WATER STERILIZATION.

(*Report to the Medical Research Committee.*)

In the British Medical Journal, May 26th, Dakin and Dunham describe a new chlorine compound, *p*-sulphondichloraminobenzoic acid, suitable for sterilizing small individual quantities of drinking water. For convenience they call the new substance halazone. The chief advantage claimed is that it can be put up in tablets, which, when kept in amber glass bottles, lose strength only very slowly. The dose for ordinary water is given as one tablet to an imperial quart, and for heavily polluted water two tablets to a quart, the time of exposure in both instances to be thirty minutes. Samples of halazone tablets supplied by the Medical Research Committee were subjected to various tests.

Weight of Tablets.—From Dakin and Dunham's article it appears that the tablets are intended to weigh approximately 0.1 gram each. The weight of tablets from three lots was found to vary: the weight of tablets from lot K was 0.075 gram each, from lot M 0.098 gram, and from lot N 0.104 gram. The variation in the weight of the tablets is an error which should be corrected.

Solubility.—One or two tablets in 38 oz. of water contained in an aluminium water bottle, carried by a marching soldier, were always found completely dissolved within ten minutes; with an enamelled water bottle holding 40 oz. of water complete solution required twelve minutes.

Taste.—Taste experiments were conducted with tap water only. One tablet to a quart was not detected by any one of three observers. Two tablets to a quart were detected as taste by two observers, and as taste and smell by the third. In respect to taste halazone seems to be identical with chlorine from other sources, and with certain waters would no doubt form chlorine compounds, having an objectionable taste.

Keeping Qualities.—Tablets kept in a bottle under ordinary laboratory conditions were tested at the end of six weeks, and were found quite as effective as usual in sterilizing various types of water, the ordinary doses being used.

Mode of Action.—Water treated with this compound gives the ordinary starch iodide test for free chlorine, and the efficiency of the sterilization may be forecasted from the amount of free chlorine remaining after thirty minutes' exposure, as judged by the depth of blue colour with starch and iodide. Ordinary tap water treated with a double dose smells and tastes of chlorine. Hydrogen sulphide and organic matter interfere with sterilization by halazone as by chlorine from bleaching powder.

From these considerations it seems probable that halazone, when added to water, liberates free chlorine, which

acts for sterilizing purposes in the same way as chlorine from other sources.

Bacteriological Tests.

The efficiency of halazone was tested on soft, moderately hard, and very hard waters, on tap water polluted with urine, fresh sewage, and stale sewage, and on a contaminated surface water, to all of which cultures of *B. coli* and *B. typhosus* were added.

It was found that one tablet of halazone per quart is sufficient to render safe a clear water of low organic content. Two tablets per quart will, in most cases, render safe any water likely to be consumed. Hardness does not appear to interfere with the sterilizing action.

Conclusions.

1. Halazone is a satisfactory chlorine compound for the sterilization of small individual quantities of drinking water. Its mode of action is the same as that of chlorine from other sources.

2. The tablets are readily soluble and do not lose strength rapidly.

FRED. ADAMS, M.B., D.P.H.Toronto,
Captain C.A.M.C., No. 2 Canadian Mobile Laboratory, Folkestone.

Reports of Societies.

MADNESS AND UNSOUNDNESS OF MIND.

AT the seventy-sixth annual meeting of the Medico-Psychological Association of Great Britain and Ireland on July 25th, in the rooms of the Medical Society of London, under the presidency of Lieut.-Colonel DAVID C. THOMSON, M.D., R.A.M.C., Dr. CHARLES MERCIER recalled that it was little more than twenty-five years since he first promulgated the doctrine that madness and unsoundness of mind were not the same thing; that madness included more than unsoundness of mind, and that unsoundness of mind very often occurred in the sane; indeed, that it was one of the most frequent disorders of the sane. It was only about twenty-seven years since he first published this view, and already the Medico-Psychological Association was beginning to grasp it! Yet the remainder of the profession looked upon the alienist branch as obscurantist and unwilling to adopt new ideas, a view that he hoped Dr. Steen's recent paper on hallucinations in the sane would do much to dispel. Dr. Mercier said that the last time he brought his view before the association it was practically laughed out of court; he was told it would mean handing over the treatment of madness to the police. Three years ago, when he brought his view before the Royal Society of Medicine, it met with a similar fate. In spite of the fact that he had clearly defined it at the meeting of the Royal Society of Medicine already referred to, and no worthy argument had been urged against it, in the third edition of Dr. Craig's *Psychological Medicine* the doctrine was not even mentioned, and its author stated that insanity could not be defined. To regard insanity as disorder of mind was an imperfect, inadequate, lopsided, halting, superficial, ignorant, childish, belated, obscurantist, and stupid view to take. Those who contended that madness was a disorder of mind alone did not perceive the difference between mind and conduct, between thinking and feeling on the one hand, and talking and acting on the other. To regard madness as disorder of conduct was as great an advance upon regarding it as disorder of mind, as viewing it as disorder of mind was an advance upon regarding madness as a possession of the devil. Dr. Mercier's next thesis was that there were many disorders of mind which were quite compatible with sanity. Dr. Steen showed in his recent paper that hallucination was a disorder of mind, and could occur in the sane. There were many other disorders of mind which could not be regarded as insanity. One was tinnitus, which was, in fact, an aural hallucination; it was a perception of sound arising in the mind without any justification in the shape of an impression on the organs of sense. Tinnitus was a disorder of the mind. It was true that a physiological basis for it could often be found in disease of the middle or internal ear, but disease of those parts was not tinnitus. Madness was not the same thing as disease of the brain; cerebral tumour and cerebral haemorrhage were diseases of brain, but they did not constitute madness; they might exist without discoverable trace of madness. It was not provable, but it might be that in every case of madness there was disorder or disease of mind, but madness was certainly not the same thing as disorder or disease of mind; even if it were, we could never examine it; but it was proved that in every case of madness there was disorder of conduct. When a man was certified as mad, it was because of something he had said or done, and saying and doing were conduct. In the absence of any failure or defect in conduct, attention was not called to him. Whatever the state of a person's mind might be, he was not considered mad if he behaved in every respect like a sane person. It was upon conduct that the alienist founded his judgement, and behaviour could be directly observed. The alienist put into his certificate "facts observed by ourselves at the time of examination." A disorder of brain or a disorder of mind could not be observed; the delusion a person suffered from could be neither seen nor heard. All that could be done was to hear the utterance of it, and that utterance was conduct.

Sir GEORGE SAVAGE thought the author had one or two obsessions on this subject; for instance, he considered that the association, as a whole, did not agree with him that insanity and unsoundness of mind were not the same thing. But Sir George, in his article in Allbutt's *System of Medicine*, urged the same point. There was much unsoundness of mind which did not seriously affect the relation of the individual to his circumstances. Maudsley, years before, expressed much the same view. Moxon, when asked for a definition of insanity, retorted, "How can you define a negation?" One could define sanity, but not insanity. Hughlings Jackson's writings made one realize that any one of the factors of mind could be disordered without producing a corresponding disorder of conduct, and so long as a modification of the cerebral condition did not interfere with conduct it must be admitted that insanity was not present. Swinburne could scarcely be said to be of sound mind; he was an epileptic, and yet he had a brilliant intellect. Persons with a double personality might be very insane in one of the states.

Dr. HAYES NEWINGTON, though he did not agree with Dr. Mercier, did not feel capable of giving a definition of insanity. In the certificate, insanity and unsoundness of mind were not regarded as convertible terms, as shown by the important word "or," meaning that the person concerned might be suffering from either; there was a choice between them. When the milder term "unsoundness of mind" was used, it was held to mean a state not so advanced as to merit the term "insanity." He preferred the old phraseology, that insanity was a disorder of mind.

Dr. JAMES STEWART agreed that the word "insanity" implied a negation, and thought it was impossible to hope to include the various forms of mental disorder in one definition. Alienists were agreed on the point so strongly emphasized by Dr. Mercier, that a person declared insane was one who showed a disorder of conduct; but the term implied more, and the extent to which it did so was thoroughly well understood by the practitioners of the speciality.

Sir BRYAN DONKIN expressed his agreement with the contention of Dr. Mercier, and did not consider that he regarded disorder of conduct and insanity as convertible terms. Dr. Mercier's contention was that disorder of conduct was a necessary element in the concept of insanity, and that without such disorder of conduct the person could not be pronounced insane.

Dr. E. S. PASMORE contended that the first indication of the advent of insanity was an alteration in the person's conduct; that had been a guiding principle in his own practice as an alienist. It was a matter of comparison—the contrast of present conduct with what was observed at an earlier date. A person with an hallucination of hearing or of sight might lead a quite normal life, and it was not until the hallucination was believed by the person to concern himself intimately that alteration of conduct commenced.

Dr. J. G. SOUTAR said the subject had been debated ever since insanity had been discussed. All alienists were agreed as to what insanity was when they encountered it, but the difficulty was to put into words an adequate

Universities and Colleges.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on July 18th.

The annual report by Dr. E. Mellanby, acting superintendent of the Brown Animal Sanatory Institution, stated that 3,769 animals, including 2,237 dogs, 1,130 cats, and 225 horses, had been brought to the institution during the year. A portion of the assistant superintendent's work on experimental rickets, undertaken at the request of the Medical Research Committee, had been carried out in the laboratory of the institution.

Miss Janet E. Lane-Claypon, M.D., has been appointed a member of the National Council for Domestic Studies.

Dr. S. Russell Wells, Sir Rickman Godlee, and Mr. H. J. Waring, M.S., have been elected Chairman of the Council for External Students, the Brown Animal Sanatory Institution Committee, and the Dixon Fund Committee respectively.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

AT a special meeting of the President, Vice-President, and Council, Lieut.-Colonel William Taylor, President, in the chair, Major Francis Carmichael Purser, M.D., L.R.C.S.I., was unanimously elected Professor of the Theory and Practice of Physic in the Schools of Surgery.

Medical News.

Dr. A. LINNELL of Paulerspury has been elected vice-chairman of the Northamptonshire Insurance Committee.

THE King has granted permission to the following to wear the decorations indicated conferred upon them by the Sultan of Egypt in recognition of valuable services rendered by them:—*Third Class of the Order of the Nile:* Dr. Reginald G. Kirton, P.M.O., Prisons Department, Cairo; Dr. William F. C. MacCarthy Morrogh, President of the Central Medical Commission, Public Health Department, Cairo. *Fourth Class of the Order of the Nile:* Dr. William C. Hayward, Inspector, Public Health Department, Cairo.

THE Rockefeller Foundation is about to build two hospitals in China—one at Peking, the other in Shanghai—at an estimated cost of £600,000. The Foundation has also decided to send a hospital ship to the Moros and allied tribes of the Sulu Archipelago; it will cruise for five years among the islands in the Southern Philippine group. Skin diseases, malaria, hookworm, dysentery, and other affections are rife among the Moros. The Philippine Government is co-operating in the enterprise.

THE annual report for 1916 of the Saint Paul's Hospital for Skin and Genito-Urinary Diseases, Red Lion Square, London, W.C., states that it is one of the approved centres for the treatment of venereal diseases in London. It is one of the four which at the suggestion of the National Council gives free early treatment to soldiers in London. To cope with the increased responsibilities thereby involved, and to be prepared for after-war conditions, the committee has leased, adapted, and equipped part of the adjoining premises, and provided additional beds for venereal patients. An appeal is made for funds to defray the cost of these extensions.

Letters, Notes, and Answers.

THE telegraphic addresses of the BRITISH MEDICAL ASSOCIATION and JOURNAL are: (1) EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand London;* telephone, 2631, Gerrard. (2) FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand London;* telephone, 2630, Gerrard. (3) MEDICAL SECRETARY, *Medisecra, Westrand, London;* telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

The address of the Central Medical War Committee for England and Wales is 429, Strand, London, W.C.2; that of the Reference Committee of the Royal Colleges in London is the Examination Hall, 8, Queen Square, Bloomsbury, W.C.1; and that of the Scottish Medical Service Emergency Committee is Royal College of Physicians, Edinburgh.

QUERIES.

INCOME TAX.

D. T. W. has been in charge of a military hospital at a salary of £1 1s. a day for two years as a civil medical practitioner, and has included that remuneration in his general income tax return. The local surveyor of taxes says that the special (military) rate of tax does not apply to "D. T. W.'s" remuneration, and he asks what steps should be taken to have this opinion set aside.

*** Seeing that our correspondent is paid by the War Office as a temporary civilian practitioner the point is not free from doubt, though his services would seem to be of a military character. In the circumstances we suggest that the full facts be placed before the Board of Inland Revenue for their ruling on the point before any further steps be taken.

LETTERS, NOTES, ETC.

RINGWORM IN ADULTS.

THE note on small-spored ringworm of the scalp in an adult, by Dr. Henry Waldo, published in the JOURNAL of July 21st, p. 81, has brought us other communications. The interest lies in the occurrence of the condition in an adult, for both the small-spored and the large-spored variety produce a disease which is clinically ringworm. Dr. Norman Walker, in his *Introduction to Dermatology*, states that in Scotland most of the cases are caused by the small-spored variety. In London the proportion is between 80 per cent. and 90 per cent., and in Paris 60 to 70 per cent.; while in Italy nearly all the cases are due to the large-spored variety.

DR. G. H. LANCASHIRE (Manchester) writes to state that four years ago he saw a woman, aged 23, who had on the scalp a typical patch of microsporon ringworm, the size of a shilling; the diagnosis was confirmed by microscopical examination. The only feature distinguishing this case from ordinary juvenile scalp ringworm was the rapidity of the cure, which took place within a few weeks, under oleate of mercury ointment. This being the only case of the kind he had seen amongst multitudinous examples of ringworm, Dr. Lancashire is still of the opinion that, in that district, scalp ringworm might be practically regarded as a disease of childhood.

DR. D. OWEN WILLIAMS (Glandyfi, Cardiganshire) writes that he saw recently a case of ringworm in a seaman aged about 35. There were large patches measuring 5 in. each on the sole of each foot and also lesser patches on the legs. They cleared up rapidly under the treatment for tinea tonsurans which he adopted. He had recently also a case of ringworm of the scalp, at the junction of the skin and the hair, in a youth of 17, which has now cleared up.

A CLINICAL TEST FOR THE ESTIMATION OF THE PERCENTAGE OF GLUCOSE.

DR. J. BARKER SMITH, L.R.C.P. (Herne Hill, S.E.) writes: As a worker using colour methods for quantitative estimation of glucose, ammonia, nitrates, etc., during twenty years, and having for ten years ceased to use my chemical method of delivering definite solution of acid permanganate into weak solution of potassium iodide in favour of coloured glasses, I am interested in Mr. Parnell's letter in the BRITISH MEDICAL JOURNAL of June 23rd, p. 842. I have always felt we required colour standards fixed for the whole profession to use for reference. I began my use of colour glasses regretting that we had no definite standards for colour, especially for the colour of urine—normal, jaundiced, caramelized, etc. Taking a normal of ammonia in urine as 0.03 per cent., I fixed approximately *unit one* of my colour glasses on this normal of ammonia when the urine is diluted to a thousand, using 25 c.cm. of the dilution, 1 c.cm. of Nessler's solution, and waiting one minute. Such unit approximates to the colour of the "pale yellow" of our textbooks on urine, or a pale chip box. I found caramelization afforded means of estimating the minute quantities of sugar in cereals, by colour or by oxidization (*The Miller*, 1894, serial articles). I examined Mr. Parnell's glasses some years ago, and note in my work book that, using the test which he describes, a ½ per cent. of glucose would be nine units on my scale, a 1 per cent. sixteen units. I use a test tube of water as a background for the glasses. We want common standards.

FULLY PROTECTED.

A CORRESPONDENT asserts that the following story is true in fact: A few weeks ago a medical officer made the tour of the large general hospitals in Alexandria in order to determine what percentage of the patients had been inoculated against typhoid fever and against typhoid, paratyphoid A and paratyphoid B (T.A.B.). This information ought to be recorded in each man's pay-book, but one man had no pay-book with him, so he had to be cross-questioned. He said, "Yes, sir, I have been inoculated against pretty well everything—about nine times altogether. The last time, I remember, it was against V.A.D."