

drainage—so far at least as the mechanical conditions are concerned.

We have now arrived at some sort of a general idea as to what would be embraced under the term "Treatment by Physiological Methods," and we have realized that the empirical procedures of the surgeon furnish us with something to work with, and improve upon.

It will be taking a first step to the improvement of these methods if we draw up for ourselves a complete list of desiderata. We shall in setting these out have to bring them into relation with the actual types of wound infection which come up for treatment.

In reality our infected wounds conform, nearly all of them, to one or other of two types: In the *first* type, we have an infection of either the unclothed internal surface of the wound, or of the granulation tissue lining it. Examples of this type of infection are furnished (a) by recent projectile wounds whose walls are implanted with microbes; (b) by suppurating cavities which have just been opened up and evacuated; and (c) by old-standing suppurating wounds which have just been washed out and left clean. In our *second* type of wound we have an infection in a dry and infiltrated wall of an infected cavity and in the tissues contiguous to this.

In the former type of wound infection it would be a desideratum to wash the infecting microbes out of the walls of the wound by means of a powerful outgoing current of lymph; and it would be desirable in connexion with this lymph that it should carry in with it into the infected cavity whatever force of phagocytes might be required; that it should furnish a favourable medium for, and directly assist, phagocytosis; that it should repress bacterial growth; and that it should not suffer any sensible diminution of antitryptic power if, after ineffective phagocytosis, a certain number of leucocytes broke down in it.

In the second type of infection, while everything that applies to the first type would apply, it would probably be desirable, as special measures, to repress further emigration of leucocytes, and to render the lymph incoagulable so as to prevent any stanching of the lymph outflow.

For the complete realization of these desiderata we should require to have at disposition an agency for powerfully increasing the outflow of lymph. (I propose almost immediately to show that we have this at disposal.) Further, it would probably be necessary to have at disposition—but till further research has been carried out it is impossible to speak with certainty on this subject—means for promoting and repressing emigration. And lastly, it would almost certainly be necessary to be in a position to increase at need not only the antibacterial power of the lymph with respect to the infecting microbes but also its general power of repressing the growth of sero-saprophytes. This, however, will come up for consideration in connexion with treatment by vaccine therapy.

As just announced, I pass now to consider what agents we have at disposal for increasing the outflow of lymph. In this connexion we have already seen that the lymph flow from the wound can be increased by the application of hot fomentations. It can be increased also by introducing ether into the wound—the ether, like the hot fomentations, no doubt acting by inducing active hyperaemia.

But I think that better than either of these, because it is more continuous in its action, and because it renders the lymph incoagulable, and also perhaps because it represses emigration, is the lymphagoc application which I have been recommending now these many years back. This consists of a 5 per cent. solution of common salt, mixed with $\frac{1}{2}$ per cent. of sodium citrate. This brings into play osmotic forces, and "draws" the lymph out of the walls of the wound by a *vis a fronte*. The sodium citrate is added with a view to decalcify and render incoagulable the outflowing lymph.

I may perhaps be allowed to say with regard to this lymphagoc solution—or, rather, with regard to the simple 5 per cent. salt solution, which I find works in most cases equally well—that it has in this war proved itself pre-eminently useful. When brought into application upon a dry and infiltrated wound, or a wound that is foul and covered with slough, it resolves the induration, brings back moisture to the surfaces, and cleans up the wound in a way that no other agent does. Applied in

gaseous gangrene in the form of a wet dressing to incisions which have been carried down into infected tissues it causes lymph to pour out of the wounds, and arrests the spread of the infection. And, again, applied in gaseous gangrene to an amputated stump in cases where it has been necessary to leave infected tissues behind, it reverses the lymph stream and draws out the infected lymph—saving life in almost desperate conditions.

What would be the proper culmination and end to the treatment of wound infections by physiological methods?

We have now arrived at a point when it will be proper to keep our eyes somewhat less closely upon the ground, and to ask ourselves what kind of a coping-stone is to be placed upon our edifice of physiological treatment. For it is clearly unthinkable in connexion with such treatment carried out on scientific lines that it should conduct to nothing better, than to that everlasting dressing and redressing of the wound into which all antiseptic treatment seems to run out. I am convinced that, when once we shall have learned exactly how to regulate the outflow of lymph, and to control emigration and phagocytosis, it will be practical policy to make an end once for all to a wound infection, and to close up the wound.

Even as we stand at present that seems to me to be to some extent a realizable ideal. While it would lead too far to follow up this question in detail, it will, perhaps, not be amiss to direct attention to the following points.

It will always and ever be impossible to sterilize a wound within the space of a few minutes. To wash out microbes from the granulation tissue will always take time. And we shall always have to allow time for the leucocyte to find the microbe; and for phagocytosis; and for the digestion of the microbe in the interior of the phagocyte. And, again, and above all, we shall always have to allow a very large margin of time for the mis-carrying of lymph lavage, emigration, phagocytosis, and the intracellular destruction of the microbes, and for the necessary going back over all these processes.

In view of this it will be clear that when we embark upon physiological treatment we ought to carry it out unremittingly. And our treatment will perhaps best take the form of continuous irrigation or continuous baths.

When by these means we think we have rendered our wound sterile, or nearly sterile, we must, in closing up the wound, or giving it an opportunity of healing up under a scab, always proceed by the method of trial and error and provide for the possibility of the microbes again taking the upper hand.

REFERENCES.

¹ *Drugs and Vaccines in Pneumonia*, Constable, 1914. *Lancet*, January 2nd, 1915, p. 15.

(To be continued.)

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

FOREIGN BODY IN BLADDER.

W. McK., aged 12, was admitted to Auckland Hospital on January 15th, 1915, suffering from pain in the bladder and difficulty in passing urine. There was some blood and pus in the urine. He told me that he had passed a piece of grass up his penis two days previously. No foreign body was felt in his urethra, but when the catheter reached the bladder there was a "gritty" sensation. I opened his bladder suprapubically and extracted a long stalk of rush grass in its entirety. It lay bunched up in his bladder in an angular way. It measured 24½ in. long.

G. GORE GILLON,

London, W.

Consulting Surgeon, Auckland Hospital, N.Z.

SEPTICAEMIA OF OTITIC ORIGIN.

D. R., aged 9, was admitted with pyrexia. She had been operated on elsewhere for mastoiditis, which was considered to be of tuberculous origin, and on admission there was a vertical elliptical wound 2 in. long, exposing the antrum and mastoid cells. There was no otorrhoea; no giddiness, headache, nystagmus, alteration in gait, cervical stiffness, Kernig's sign, or alteration in pupils. The mental condition was clear and not excited; she had not vomited. The chest and abdomen were normal. The temperature

from 98° to 99.4° F. by day, rose at nights, once to 101°, twice to 104.6°, and once to 105°, always without rigor.

On the sixth day I exposed the middle and posterior fossae of the skull by the mastoid route, exposing the whole of the sigmoid sinus and removing the roof and inner wall of the antrum. No extradural pus could be found, and the sinus wall and dura of both fossae appeared so entirely healthy that I did not feel justified in opening either.

While the patient was in the theatre I did a lumbar puncture. The fluid was clear and dropped out at a normal rate. On culture nothing grew. From the time of operation the temperature and other symptoms became and remained normal, and the patient convalesced.

Clinically the case was one of septicaemia. The question is, What relief could have resulted from the operation? And why did she thenceforth recover? It might be thought that the operation relieved pressure by decompression. But there had been no clinical signs of pressure; not only had the temperature run high, but the pulse had ranged from 112 to 160, and respirations from 24 to 32. Moreover, at operation, the dura pulsed without bulging, and lumbar puncture revealed no pressure.

The case seems worthy of report simply because inexplicable.

H. LAWSON WHALE, M.D., F.R.C.S.,
Surgeon for the Ear, Nose, and Throat to the Hampstead
General Hospital, and to the London Temperance
Hospital.

Reports of Societies.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

At a clinical meeting on April 9th, the Past-President, Dr. F. S. PALMER, who was in the chair, showed: (1) A case of *Progressive muscular atrophy*, spinal type, in a male aged 39; (2) a case of *Mongolism* after three years' treatment with thyroid extract and calcium salts, showing much improvement mentally and physically. Mr. W. MCADAM ECCLES showed a case of a *Bullet in the heart muscle*, the patient being at the present time little the worse for its presence. It was shown to the members present by Dr. REGINALD MORTON in the adjoining x-ray department. The object was plainly seen, moving with the heart, just above the diaphragm and slightly to the right of the middle line. The patient was wounded on November 4th, 1914, the bullet striking him on the left shoulder. He walked a mile and a half to the hospital in Ypres, where first aid was given, and within less than forty-eight hours from the time he was wounded he was lying in St. Bartholomew's Hospital, his condition by that time being somewhat critical. The general opinion of the members was that the bullet was in the right heart, close to the septum. Dr. GEORGE PERNET showed a case of late *Congenital scrofulo-syphilide*. Dr. J. M. BERNSTEIN showed a single woman, aged 26, who for four months had suffered from *Spastic paraplegia* affecting both lower extremities. Dr. REGINALD MORTON showed skiagrams of two cases of *Oesophageal pouch*, two cases of *Malignant stricture of the oesophagus*, and a series of radiographs from a case of *Organic hour-glass stomach* taken at hourly intervals. Mr. H. S. SOUTTAR showed (1) a case of *Injury to the circumflex nerve resulting in complete paralysis of the deltoid*. Ultimately the distal end was anastomosed with the posterior cord of the brachial plexus; the muscle had recovered. (2) A *Child of 11 months who had swallowed an open safety pin*, 1 in. long. It had remained stationary in the duodenum for five days. It was removed by pushing the point through the wall, and making a minute incision for the passage of the head. Mr. O. L. ADDISON showed a case of *Fracture of both patellae* after twenty-five years. Skiagrams showed that the union was obviously fibrous; the case had been treated without operation. The patient suffered no inconvenience at the present time. Dr. ARTHUR SAUNDERS showed cases of *Pulmonary tuberculosis*, and one of *Bilateral thickening of the tibial periosteum*. Dr. SYDNEY OWEN showed a case of (?) *Toxaemic jaundice* with hepatic and splenic enlargement. Dr. F. S. PALMER, in opening the subsequent discussion,

referred to the continued and regrettable illness of the President, Mr. Aslett Baldwin, but there was every hope that he would be able to be present at the reception it was proposed to hold on April 23rd. This reception called for the general support of all the members of the Society and their friends, since, after paying expenses, the proceeds of the sale of tickets would be handed over for the benefit of those Belgian doctors and pharmacists who were in such sore straits from the devastation of their homes and country. Referring to Dr. Bernstein's case, he considered it to be one of disseminated sclerosis, and quoted a case supporting this view. Dr. Sydney Owen's case was discussed by Dr. ARTHUR SAUNDERS. Mr. MCADAM ECCLES made some observations on the general question of fractures of the patella, including methods of treatment and some of the difficulties in the way of securing bony union.

Rebuelus.

THE TUBERCULOSIS DISPENSARY, AND THE AFTER-CARE OF CONSUMPTIVES.

THE adoption of the tuberculosis dispensary as the first step in the detection and control of tuberculosis by public bodies has now been generally recognized. Results are beginning to accrue, and there is danger lest hasty conclusions should be drawn from insufficient data.

A critical and analytical work, dealing with the experience gained during the same period of time at a country dispensary at Street in Somersetshire, and in a town dispensary at Portsmouth, has recently appeared from the pen of Dr. HILDA CLARK, who has served as Tuberculosis Medical Officer in that borough. It bears the title, *The Dispensary Treatment of Pulmonary Tuberculosis*,¹ and is a large work dealing with a very considerable number of case records and analytical tables, with especial reference to home conditions and general environment. The writer has been on service in France during the war, and the final revision and publication of the book have been left to others. In some respects it would have gained by compression and the avoidance of overlapping—a defect that may well be excused in the circumstances. Of all diseases which come under the purview of public authority, tuberculosis is the most influenced by the habits and social relations of the people. The series of cases which Miss Clark has examined occurred in the two dispensaries referred to, during the period 1910 to 1913. In neither of them did the social factors of poverty or overcrowding play much part. All the cases appear to have been fairly well-to-do. Owing to the stable conditions of life in both places, no difficulty was experienced in following the cases up or in estimating their capability for work. Treatment consisted for the most part in the administration of tuberculin, and it is upon the results thus obtained under varying conditions of environment that the chief interest of the reader will be centred. The tabulated records of 264 patients are set forth in an appendix, and comparative tables are used very freely throughout the work.

When and how to use tuberculin, and when to refrain from it, are points of the utmost practical importance, but it is clear that from the writer's point of view it may be relied upon to produce an apparently good effect in almost every case in which the clinical features of the disease permit of a reasonable hope of recovery. Criticism of tuberculin generally rests upon the consideration that the patient might have done equally well without it. While recognizing the possible truth of this, Miss Clark holds the opinion that the use of tuberculin will generally hasten such recovery. The very great preponderance of successful cases in her series and the general consensus of opinion in favour of its employment in early cases must be allowed to weigh more heavily than the occasional failure which is bound to occur in a few instances. She maintains that no case has occurred in her experience where an old healed focus has broken down as a result of tuberculin injection. The whole work, interesting as a careful study of well-

¹ *The Dispensary Treatment of Pulmonary Tuberculosis*. By Hilda Clark, M.B., B.S. (Lond.). London: Baillière, Tindall and Cox, 1915. (Roy. 8vo, pp. 279; 20 fold-in tables. 15s. net.)

me of the close clinical resemblance, if not identity, of the effects of kharsivan and salvarsan. The full dose of 0.6 gram of either of these drugs should rarely be employed, otherwise, in every considerable series of cases, some patients will be found who will give evidence of over-dosage.

Just as I have found the toxicity of salvarsan and kharsivan closely comparable, so their curative effects on syphilitic lesions have been indistinguishable. I am, therefore, quite content to be deprived of salvarsan so long as a sufficient supply of kharsivan is available, and I have no hesitation in saying that, so far as my experience carries me, the new brand is not subject to any risks or limitations which do not apply with equal force to the original product.—I am, etc.,

Glasgow, April 17th.

DAVID WATSON.

"TRENCH FOOT."

SIR,—As regards the etiology and pathology of trench gangrene, it appears that the beginning of the trouble is always more or less long-continued exposure to wet; hence its other name of "water-bite." It is also commonly spoken of as "frost-bite," although apparently a temperature below freezing-point is not necessary for its production.

I think it is most likely that, with the legs immersed in water or surrounded with wet garments, the process of osmosis comes into play as soon as the superficial horny layer of the skin is dissolved or rubbed away, the cutaneous and subcutaneous tissues becoming distended with diluted plasma. The pressure thus initiated (if this theory is correct), combined with enfeebled circulation in the parts, caused by vasomotor spasm due to the cold, would in certain cases cause death of the superficial structures through malnutrition and pressure. In this way the functions of sebaceous and sweat glands and ducts would be interfered with. Thus the natural protection of the skin (sebum) would be wanting, and accumulation of excretory poisons would occur in the deeper layers of the skin and subcutaneous tissues, further endangering their existence. Also the pressure, accumulation of toxins, and malnutrition would in severe cases act fatally on sensory, trophic, and vasomotor nerves. In an advanced case, where the vasomotor nerves were thrown out of action, blood pressure—one of the necessities of circulation of the blood—would be absent. This, in its turn, would lead to death and thrombosis of the affected vessels, and therefore of all parts supplied by them. The spread of the thrombotic process would vary in different individuals, and under different conditions. Thus, in a person whose tissues were already below par, due to sapraemia (for example, chronic constipation, badly healed wounds, etc.), or circulation of waste products in excess (due to over-exertion, possibly combined with faulty metabolism—due to bad teeth, etc.), we should expect extensive death of the parts. In arterio-sclerotic cases also we should expect the results of "water-bite" to be severe. In the cases where only one leg is affected it is quite likely that the main vessels of the affected limb are not equal in calibre to those of the unaffected limb, as it is well recognized that corresponding vessels in a person are frequently unequal in size.

As to prophylaxis, I would recommend, besides the adoption of dry, roomy boots and garments whenever possible, the plentiful and frequent use of goose grease well rubbed into the skin. Your research scholar found that this grease penetrated further into the skin than other fats. It would check the rapid and excessive loss of body heat from the parts protected (and indeed it would be well to rub the whole body) and would prevent the process of osmosis occurring, with its disastrous train of consequences.—I am, etc.,

ANDREW S. McNEIL, L.R.C.P.S. Edin.

Liverpool, Feb. 20th.

COLOUR VISION THEORIES.

SIR,—Those who have studied the trichromatic theory know well that v. Helmholtz dissociated himself from the well-known valency curves; his theory is expressed fully and completely by the colour equation, and by the three-fold functional relationships of the factors expressing the magnitudes of the three standard stimuli, as given by Mr. Major Greenwood on March 27th. The graphic representations of the three standard stimuli found in

all the physiology books are pretty pictures, which give to the unlearned and to the non-mathematician a hint, but only a hint, as to the meaning of v. Helmholtz's equations. Dr. Edridge-Green again and again makes the assertion that what he infers from these diagrams is an integral part of the trichromatic theory.

On April 10th Mr. Major Greenwood referred to p. x of the preface in the second edition of v. Helmholtz's treatise, where it is specifically stated that the revision of the whole of the text up to p. 645 was undertaken by v. Helmholtz himself. Unfortunately the great master died two years before this edition was published. Now the discussion of colour vision theories occupies pp. 341-354. In the face of this explicit statement I hoped that Dr. Edridge-Green would apologize for his mistake; but no; he actually repeats his assertion that the description of the Young-Helmholtz theory, given in the second edition, is an interpolation. Discussion with such a controversialist is impossible.—I am, etc.,

Newcastle-on-Tyne, April 20th.

A. S. PERCIVAL.

* * We cannot continue this correspondence.

AFTER-TREATMENT OF SOLDIERS AT HEALTH RESORTS.

SIR,—Your allusion last week to the facilities for treatment available for soldiers at the various spas is, at any rate, somewhat unfair as far as Bath is concerned.

Four days after war was declared the Royal Mineral Water Hospital, Bath, was placed at the disposal of the War Office, and was accepted for cases needing hydrotherapy, massage, etc. The first soldiers were admitted in September, and since that date they have come here in increasing numbers, the daily average in our wards for some time past exceeding 120.

To meet the special needs of these cases a considerable increase in the staff of masseurs has been made, and additional modes of treatment are being provided.—I am, etc.,

LLEWELLYN JONES, LLEWELLYN,

Senior Physician, Royal Mineral Water Hospital, Bath.

Bath, April 21st.

Universities and Colleges.

UNIVERSITY OF GLASGOW.

GRADUATION CEREMONY.

THE following were among the degrees conferred at the graduation ceremony which took place in the Bute Hall on April 20th:

M.D.—J. B. Alexander, J. Smyth, F. E. Stokes.
M.B., Ch.B.—D. F. Macdonald, J. Anderson, Wm. E. A. Buchanan,
W. Combe, R. Forbes, P. O. Moffat, J. Smith, N. M'G. Smith.
B.Sc. (in Public Health).—D. O. Taylor.

* With commendation.

On the same occasion the following prizes were also presented to the winners: The Arnott Prize for Physiological Physics, J. S. Martin; the Bellahouston gold medals for eminent merit in thesis for M.D., G. H. Clark, J. W. M'Nee, J. B. Orr; the Straits Settlements Gold Medal in Tropical Medicine, Wm. D. H. Stevenson.

CONJOINT BOARD IN ENGLAND.

THE following candidates have been approved at the examinations indicated:

FIRST COLLEGE, *Part I (Chemistry) and Part II (Physics)*.—*F. T. Allen, *W. E. Barnes, J. G. Barrie, L. M. Billingham, K. R. Chapple, B. Y. H. Christmas, C. B. Dix, T. H. Dobrashian, J. E. H. Duckworth, W. C. Faulk, *A. Foster, *W. Girgis, *D. P. Guilfoyle, E. F. J. Jones, F. W. Kemp, *T. D. Llewellyn, *Eva Morton, Elizabeth O'Flynn, A. G. Ord, M. A. Rags, *G. F. Smith, J. H. Sullaiman, *Ina V. Vincent, H. W. M. Williams.
Part III (Elementary Biology).—A. Abelson, F. Barker, W. E. Barnes, W. Beaumont, L. M. Billingham, Frederica M. Bradley, Anna B. Broman, J. F. E. Burns, N. E. D. Cartledge, Marjorie C. Chappel, K. R. Chapple, B. Y. H. Christmas, P. C. Collins, I. J. Corbett, I. J. Cruchley, T. H. Dobrashian, A. Duffy, F. E. Edwards, G. P. Evans, W. C. Faulk, S. Finkelstein, J. E. Fishburn, S. Hazeldine, A. R. Hill, T. James, E. F. J. Jones, F. W. Kemp, J. Kendall, G. B. Kirkland, P. Lindsey, T. D. Llewellyn, Eva Morton, A. R. Neckles, A. G. Ord, P. F. Petersen, Eleanor M. Reece, C. E. Roach-Smith, P. E. Williams, G. B. Withers, S. Wolff.

* Passed in Part I only.

† Passed in Part II only.

SECOND COLLEGE, *Anatomy and Physiology*.—H. D. Abergis, E. H. Bryant, C. H. Carroll, J. C. Collins, E. Croft, G. M. Dominick, N. G. El-Gawly, M. Elias, F. J. Harrington, G. R. Hubbard, J. P. J. Jenkins, Florence M. Kerruish, R. T. McRae, W. H. Maudling, Elizabeth O'Flynn, May Olivera, A. Othman, A. Pastel, E. R. Pearce, W. I. FitzG. Powell, R. E. Rampling, Florence M. Rhodes, K. J. Rustonjee, G. E. Spero, H. B. Troude, R. H. Turner, H. P. Warren, F. E. G. Watson, H. G. Watters.

adapted as infirmaries, with the best effect. Interested onlookers began to learn that it was possible for a patient, when properly guided, to do most of his own repression, in place of looking for it to be done by others.

Then came the need for structural alterations to meet more enlightened treatment. The elaboration of ideas to this end added considerably to the burdens of the superintendent. Finance, in which Clouston was an adept, needed much forethought and some daring; but all difficulties and doubts were borne down by fiery determination, with, as we know, the happiest results.

I cannot speak intimately of the outside work done at that time by Clouston in securing the confidence of the public in consultation work; that he did earn that confidence is a matter of public knowledge. But I can speak intimately of the lectures which formed his passport to academic approval, since I attended officially the early series he delivered to the students at Morningside. I had the advantage of being enabled to compare these with a similar course given by Dr. Laycock in a preceding session at Morningside, for many of which I prepared the clinical material. The difference between the methods of these two great men was indeed marked. Laycock appeared to me to be the most observant and philosophical student of mental error that one could wish to hear, but in spite of much practical instruction given, he was ever the ideal of a professorial academician. He lacked the living forcefulness of Clouston's clinicality, if one may coin such a term. But then for many years the one had been the professor, while the other had lived with his patients. It has sometimes crossed my mind that Kraepelin is a mixture of the two, and this especially with reference to his views on dementia praecox. Clouston led the way by many years with his *Insanity of Adolescence*, and then the academic ways of Kraepelin were grafted on, not with universal acceptance.

As a "chief" Clouston was a good man to serve under. In addition to his intense earnestness he had, as said above, a most liberal view of insanity, which led one to see where risks could be run justifiably. He had a philosophical way of estimating and meeting trouble, while on suitable occasions he could demonstrate the usefulness of righteous wrath. He would never be "done" by anyone. He proved to one the need for ceaseless personal acquaintance with everything relating to his charge. Finally, he was truly loyal to his subalterns. This is not such a simple qualification as it might appear at first sight. It requires, in such places as asylums, a lively sense of altruism to prevent the chief giving his junior away by thoughtless or undue exercise of his prerogative and superior knowledge. Clouston had this sense.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. A. M. Amadou, sometime lecturer on otology at the Harvard Medical School and author of numerous writings on the pathology of the ear, aged 47; Dr. Julius Arnold, retired professor of histology and pathology in the University of Heidelberg, aged 90; Dr. H. C. Baldwin, for many years a member of the staff of the Massachusetts General Hospital in the department of nervous diseases and one of the leading neurologists of New England, aged 55; and Dr. Albert Blum, *professeur agrégé* in the Paris Faculty of Medicine and author of numerous writings on surgical subjects.

WILLIAM THOMAS EDWARDS, M.D., F.R.C.S.,

CONSULTING PHYSICIAN, CARDIFF INFIRMARY; PAST-PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

DR. W. T. EDWARDS, of Cardiff, a brief announcement of whose death appeared last week, was born in 1821 at Caerphilly, where his father practised. His grandfather was a well-known contractor, who designed and constructed the picturesque bridge at Pontypridd.

The elder Dr. Edwards had an extensive country practice, which he conducted on horseback; he was proud of his stable, and his son had the advantage of an active outdoor life in his boyhood and after his apprenticeship to his father. He pursued his medical studies at University College, London, and took the diplomas of M.R.C.S.Eng. in 1842, and L.S.A. in 1843. In 1844 he graduated M.B.Lond., gaining the gold medals in anatomy and physiology, materia medica, and midwifery. In the same year, after a brief period of practice at Llanfabon, he settled in Cardiff, then a small town with little more than 10,000 inhabitants, possessing neither docks nor railways.

In 1849 he was appointed out-patient medical officer to the infirmary, then a very small institution, admitting 113 in-patients and 2,360 out-patients during the year. In 1851 he became honorary surgeon, a position which he resigned in 1860. Two years later he was appointed physician to the infirmary, and his connexion with the institution was maintained after his retirement from the active list by his appointment as consulting physician. He proceeded to the degree of M.D.Lond. in 1850, and in 1879 he was elected a Fellow of the Royal College of Surgeons of England.

From an early period of his residence in Cardiff Dr. Edwards showed a keen interest in education. Beginning in a small way and assisted by a few friends he, in 1847, built a substantial single-story building known for many years as the British School. It provided elementary education for children of the working classes, the only other school in the town being one maintained by the Church of England. When school boards came into existence he became a member of that for Cardiff, and in 1890 was



WILLIAM THOMAS EDWARDS.
(Photograph by Alfred Freke, Cardiff.)

elected its vice-chairman. He was also governor of the Craddock Wells Charity until it was absorbed under the provisions of the Technical Education Act; Dr. Edwards went on to take as strong an interest in higher education. In 1872, when the question of founding a university college in South Wales was under consideration, he strongly supported the scheme and urged that the college should be established at Cardiff. When this was decided upon he made a donation of £500, and as a life-governor and in other capacities he ever afterwards laboured loyally and unostentatiously for the college, of which he was eventually elected vice-president.

When the British Medical Association accepted the invitation to hold its annual meeting in Cardiff Dr. Edwards was elected president, and he chose that occasion for giving effect to his long-felt desire for the establishment of a medical school in Cardiff. He offered £1,000 to found such a school in connexion with the University College, and his pupil and friend, Dr. William Price, also of Cardiff, made a gift of the same amount. Other contributions followed, and it was one of Dr. Edwards's proudest memories that he had been instrumental in bringing the school into being, as he foresaw that it would be one of the most useful and distinguished parts of the University of Wales.

ment to the Chair of Tropical Medicine at the Royal Army Medical College proved an immense success, and furnished an instance of that rare but admirable combination—a clinical observer of exceptional experience and insight armed with a full practical knowledge of modern laboratory methods. The number of puzzling and difficult cases on which he was able to throw light and initiate a successful treatment must have been a reward itself, but those who benefited by his skill, such as the writer and many another officer and man in the army, have good cause to keep his memory green. It was a hard stroke of fate which denied to him the chance of serving his country at this time, and one which he felt bitterly, but the fortitude and calm courage with which he endured his painful illness and faced the inevitable will not readily be forgotten by those whom he honoured with his friendship.

THE death is announced of Professor FRIEDRICH LOEFFLER, director of the Koch Institute for Infectious Diseases in Berlin. Loeffler was born in Frankfurt-on-the-Oder in 1852 and educated at the universities of Würzburg and Berlin. About 1881 Klebs had noted the presence of a peculiar bacillus in the diphtherial membrane, but it was Loeffler who first isolated and cultivated the organism. His description of what is now known as the Klebs-Loeffler bacillus was published in 1884. He also conducted an investigation into the diseases spoken of as the diphtheria of calves and pigeons, and was one of the earliest investigators of the value of aniline dyes for the staining of bacteria, his methylene blue process being still in general use. In 1888 Loeffler was appointed Professor of Hygiene and Director of the Institute of Hygiene at Greifswald. In 1895 he was appointed to the Koch Institute at Berlin, and with Koch and Gaffky carried out investigations on disinfection by steam. Working with Schutz, he investigated a number of infectious diseases of animals, and showed reason for the belief that the causative organism of foot and mouth disease was a filter passer, then a new idea.

Medical News.

MR. M. E. MACGREGOR will give a demonstration at the Wellcome Bureau of Scientific Research, 10, Henrietta Street, Cavendish Square, W., on lice and their prevention on Tuesday next between 3 and 5 p.m. All interested are invited.

AT a meeting of medical practitioners on Glasgow and West of Scotland panels held last week it was proposed to form a Glasgow branch of the Medico-Political Union. The proposal, which was supported by Dr. Salter of London, was strongly opposed, but eventually carried by 15 votes to 10.

THE new buildings of the College of Domestic Science, Glasgow, now nearly completed, will by arrangement with the War Office and the Board of Education be taken over by the Scottish Branch of the British Red Cross Society for the purpose of a relief military hospital. The work of the college will be carried on at the temporary premises it now occupies.

MILITARY medical officers, among whose duties it may be to address the men in their units on antityphoid inoculation, may be glad to be reminded that copies of the address, entitled *Bacilli and Bullets*, delivered by Sir William Osler to the officers and men in the camp at Churn last September, can be obtained from the Oxford University Press, Amen Corner, London, E.C., price one penny each, postage extra. The address was published in the BRITISH MEDICAL JOURNAL of October 3rd, 1914, p. 569.

ON April 18th there was a large attendance at the Greek Church in the Rue Daru, Paris, to witness the blessing of a new fleet of automobiles for the transport of sick and wounded, which has been organized under the patronage of the Empress Alexandra. Among those present were the principal members of the Russian Embassy, and delegates of the sanitary service and of the British and French Red Cross Societies. Immediately after the ceremony, which was very impressive, the motors started for their various destinations.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

THE telegraphic addresses of the BRITISH MEDICAL ASSOCIATION and JOURNAL are: (1) EDITOR of the BRITISH MEDICAL JOURNAL, *Attilology, 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.

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL are devoted will be found under their respective headings.

QUERIES.

INCOME TAX.

J. B. T. writes that he has been refused the assessment of hospital fees, under Schedule D, as part of his general practice profits, by the surveyor of taxes, who states that such a course would be contrary to the law.

** Unless there are very exceptional circumstances in the case, the attitude taken up by the surveyor is a distinct departure from a well-recognized practice of some three or four years' standing. If he declines to reconsider the matter, our correspondent might communicate with the Board of Inland Revenue on the subject. In the event of his doing so, we should be glad to learn the result, as it might be of interest to other practitioners.

ANSWERS.

RED CROSS.—Sir Frederick Treves informs us that there can be no question of a regular ration of beer with dinner being discontinued in any Red Cross hospital, because it has never been issued. No part of the money contributed for Red Cross work is expended upon beer.

LETTERS, NOTES, ETC.

COMMON COMFREY IN THE TREATMENT OF STOMACH COUGH. DR. WM. BRAMWELL (Liverpool) writes: A lady of 75 years developed a cough which steadily increased in severity until there appeared to be considerable risk of cardiac and general exhaustion. By process of exclusion I diagnosed stomach cough and prescribed several different stomachics, but neither these nor careful dieting had the desired effect. I accordingly decided to try *Symphytum officinale*, or common comfrey, and ordered a simple infusion of the root to be given in teaspoonful doses every half-hour. The effect was certainly remarkable, the cough beginning to subside in a few hours, and within a week had completely ceased. The cell-proliferating properties of comfrey, which have been investigated by Dr. Macalister, will probably account for the repair of what seems likely to have been a patchy denudation of the gastric or oesophageal epithelium, the point of irritation appearing to indicate the lower extremity of the latter as the chief seat of the lesion; such location probably accounting for the rapid improvement under the influence of the infusion, which would naturally come into immediate contact with the contiguous surfaces of the oesophagus, its beneficial effects being unretarded by any untoward influence of the gastric secretions, as would have happened in the stomach.

THE INSURANCE ESTIMATES.

OWING to an accident in printing, some of the figures in the table published last week (p. 682) are illegible. The following appear to be the most indistinct: In column I, under "England," section F, the amount is £106,900; in the same column, section G, "Medical Benefit," £195,050; in the second column, section J, "Insurance Committees," the amount is £30,250.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Seven lines and under	0 5 0
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All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.