

British Medical Journal.

SATURDAY, FEBRUARY 24TH, 1912.

THE MAKER OF MODERN SURGERY.

THERE have been few funerals in Westminster Abbey so impressive as that of Lord Lister, and it is probable that no professor of the art of healing has ever been buried with such signal marks of honour. Those who gathered in that shrine of the illustrious dead included not only representatives of every branch of his own profession and the chief scientific bodies throughout the world, but of crowned heads and of the Governments of nearly every civilized country. It may be doubted whether Lister himself would have cared for the pomp of his obsequies, but it was a spontaneous tribute of respect to a man whose work for the welfare of humanity had made his name a household word far beyond the narrow boundaries of the scientific world in which he lived and toiled. He did not seek for fame, but for truth. The fame that came to him he accepted rather, we imagine, as a public testimony to the value of his work than as a personal compliment. So it was of the honours that were showered upon him. They all set the seal of official recognition upon his achievement and as such they were probably welcome. But for mere titles and decorations in themselves no man ever cared less. To him his work was its own reward exceeding great.

Of the simple dignity of his life, his courtesy, consideration, and kindness to all without regard to social importance, it is needless to speak. Traces of his Quaker origin may be found in his dislike of controversy; like Darwin he left his disciples to do battle against his opponents. Serene and unmoved by the scoffs of ignorance, he continued his work, unshaken in his pursuit of the aim he had set before him. It has been said that genius is naturally self-assertive; this was not so in the case of Lister. "His soul was like a star and dwelt apart." In his work his most marked characteristic was the inexhaustible patience that he brought to the solution of every problem with which he was confronted. He would carry out a series of researches extending over many years, and he thought no detail in the work beneath his notice. Nothing would satisfy him but the fullest demonstration of principles and the utmost attainable perfection in their application. His *Collected Papers* are a record of gropings through the darkness of traditional error and the pitfalls of fallacy that lie about the feet of the investigator. He was ever ready to abandon a method which had proved disappointing, and to begin anew the slow work of research. Of his conscientiousness we ourselves have often had inconvenient proof in his drastic revision of proofs; he would not allow anything to see the light before it had been made to express his meaning with the most meticulous accuracy.

Greater even than Lister's genius was his humanity. In his enthusiasm for the cause he had at heart he never forgot the individual sufferer, and innumerable stories are told of his kindness of heart. Of his

gentleness to his assistants—a quality none too common among great surgeons—we need only mention one instance, which was related to us by the person concerned. At a critical stage in an operation the house-surgeon was guilty of a slight remissness which might have caused disaster. Lister only looked at him with an expression of mild reproach, and said in a low voice: "Oh, Smith!" (that was not his name). The man, who has long been dead, told us that this reproof sank deep into his heart, and made of him a better man as well as a more careful surgeon.

When Napoleon heard the name of any one for the first time, he used to ask: "*Qu'est ce qu'il a fait?*" If any one were to ask this question with regard to Lister, the answer would be that he has been the means of saving more lives than Napoleon's ambition destroyed. And his beneficence will go on, producing ever greater and more far-reaching results, whilst Napoleon's activity has left little or no enduring mark on the world. The name of Lister denotes an era; the history of surgery is divided into two parts—before Lister and after Lister. This single fact indicates the greatness of his achievement.

Of the opponents who, doubtless with honest conviction, decried his work, many lived to be converted by the irresistible logic of facts; the others are forgotten. Lister was not the first to use a form of antiseptic treatment in cases of compound fracture. Percivall Pott says:¹ "The Baron Van Swieten, writing as many others have done—that is, theoretically, on surgery—advises us in the case of very bad compound fractures, which may most probably require amputation, to defer operation until we have tried the force of antiseptic fomentation, and applications of like kind, for two or three days; and this opinion and advice he builds, in some measure, on a remarkable case of La Motte, in a seemingly desperate case of a man's leg smashed by the wheel of a heavy carriage." How little Pott approved of this suggestion may be gathered from his comment on this case: "That La Motte's patient escaped I make no doubt, because he has said so; but the surgeon showed much more rashness in attempting to save such a limb than he would have done in the amputation of it; the operation would have been the more justifiable practice."

Nor was Lister the first to use carbolic acid as a surgical application. Moreover, he at first insisted on an elaborate ritual, which further experience showed him to be as unnecessary as it was clumsy and irksome to the surgeon. But though changes in details were made as knowledge grew, the principles enunciated by Lister remained unaltered. Aseptic surgery is a natural and logical development of the antiseptic system. They are not, as some ill-informed or prejudiced critics contend, two different things, but the outcome of the continuous evolution of a great conception. That Lister found the clue to the nature of the process of healing for which he was looking in Pasteur's discoveries as to micro-organisms does not in the least diminish his originality; these discoveries had been before the world for years, but no one had seen their possible application to surgery. When he learnt of the work of Semmelweis, Lister at once acknowledged the merits of that ill-fated reformer as a pioneer in the same path of discovery that led himself to such great results.

What he accomplished is perhaps best shown by the fact that so late as the mid-Seventies Sir John Erichsen, one of his teachers, said in a public address

¹ Footnote to p. 350 of his *Remarks on Fractures and Dislocations: Surgical Works*, vol. i. London, 1808.

that operative surgery had at that time reached finality. There were, he said, regions in the human body into which the surgeon's knife could never penetrate—the brain, the chest, and the abdomen. All these secret chambers of the house of life have long since been brought within the province of surgery, and this enormous advance of the healing art has been made possible by the work of Lister. And that work will continue to make practicable further extensions to a degree we can only dimly surmise. Vast as is the range of modern surgery, it may be said with Dante Gabriel Rossetti, that "Leagues beyond these leagues there is more sea."

"SANATORIUM BENEFIT."

THERE is little doubt that the introduction of tuberculosis into the Insurance Act, and the promises which seemed to be implied in relation to prevention and treatment, were responsible for not a little of the enthusiasm with which the bill was greeted. It may be feared that this widespread popular sympathy, together with the concentration of criticism on other provisions of the bill, permitted it to be passed into law with less exhaustive examination of the tuberculosis provisions than might have been desirable in the interests of the subject itself.

Now that the measure has been passed and the duty of interpreting and administering its provisions has fallen on the Insurance Commissioners, it is well that we should seek to realize what the provisions really are, and how far they go.

"Sanatorium benefit" is granted, under certain conditions, to certain groups of insured persons and, by extension, to their dependents. What is to be understood by "sanatorium benefit"? For the persons referred to, sanatorium benefit covers treatment in sanatoriums or other institutions or otherwise, when suffering from tuberculosis or such other disease as the Local Government Board, with the approval of the Treasury, may appoint. This is wide enough and elastic enough.

Two points are especially worthy of note. In the first place, it is made possible to construe all the special benefits granted in relation to tuberculosis, in relation to such other diseases as the Local Government Board, in consultation with the Treasury, may determine. The vista of possibilities is immense. There lies in embryo maintenance or municipalization of hospitals, and indeed the establishment of an extensive State service of doctors. There seems to be no limit. It may be hoped that the two final authorities—the Local Government Board and the Treasury—will content themselves for the present with a more restricted experiment.

The other point of far-reaching importance is that the reference to sanatorium benefit is not limited to sanatoriums as such. The benefit may be given in other institutions "or otherwise." This opens up the question of the treatment of tuberculosis in the widest sense. The extraordinary variability of type and clinical manifestation presented by tuberculosis is inadequately realized by the public. Some conditions may be for the moment of relatively slight importance, while others are most grave. Between these limits there is an infinite variety of type.

Yet every case of tuberculous infection is potentially significant. In the early days of infection it is impossible to say which are to be the serious cases and which will abort. From that point of view it is right that all tuberculous disease should be included in the scheme. But what a vast array! We doubt

if Mr. Lloyd George or his advisers have quite appreciated what it means. Evidence is rapidly accumulating which shows that under present conditions of environment the majority of individuals become infected as children. The manifestations in childhood are most various. As sanatorium benefit is to be extended to the dependents of the insured person, the institutions to be provided begin to assume formidable proportions. If the benefit is to be wisely directed, there must be discriminating classification of the patients with suitable adaptation of institutions.

Were the provision of sanatorium benefit limited to cases of pulmonary tuberculosis, the difficulty would still be great, and the possibility of error large. Let us take this simpler aspect first. Even in pulmonary tuberculosis there is a wide diversity of clinical type—from the acute case running its fatal course in eight to twelve weeks, to the chronic case which may last thirty years or more. From the public health standpoint, there is the essential difference between so-called "closed" cases of tuberculosis (that is, without discharge) and "open" cases (that is, with expectoration or other infective excrements). The problem of tuberculosis, as it occurs in persons living or working in more or less crowded quarters, is a different matter, both for the individual himself and for those around him, from that of tuberculosis occurring in the individual who leads a relatively isolated existence.

It is evident that there are many persons suffering from pulmonary tuberculosis who may be treated at home safely and satisfactorily, if only the methods to be followed are fully understood. There are still more who might be treated at home, if the individual were taught to recognize how largely tuberculous disease is influenced by unhealthy environment, and if such unhealthy environment could be corrected. For the latter group, the educational advantages of temporary residence in a sanatorium are great.

On the other hand, there are numerous patients whose best hope of successful treatment lies in prolonged sojourn in a sanatorium. The progress towards recovery is slow and gradual, from the time when perfect rest is needed, through the period of skilfully selected postural and respiratory exercises, up to the highest stages of working activity. If it is to be effective, the long process must be carefully adapted and rearranged from time to time according to the multiform peculiarities of the individual case.

Then there are, unhappily, crowds of patients already on the downhill grade who will ultimately die, the fatal illness being of extremely varying duration. For such persons suitable provision must be made during the whole period of illness, often in their own interest, and still oftener in the interests of others. Lastly, there are those who, having regained health at a sanatorium or otherwise, require much after-care—require perhaps a complete change in mode of life and occupation, if the recovery which has been achieved is to be maintained.

All this means exact clinical differentiation. If this be not attained, there will be confusion. So-called sanatoriums will be filled with an indifferent collection of patients in all kinds of stages. The hopeful will be merged with the less hopeful, and even with the hopeless. Prognosis and treatment will be confused. Both the patient and the doctor will suffer from the confusion. Finally, the sanatoriums themselves will be clogged with cases of advanced disease, and the calculated supply and exchange of patients will be jumbled and blocked.

Such considerations give occasion for pause and fresh thought. What are we doing to limit the production of cases? Most of the advanced and dying

cases of to-day were once in the early curable stage. If tuberculosis is, as more recent observations go to show, acquired for the greater part in childhood; if the tuberculosis of the adult is often, or even sometimes, but the efflorescence of a long antecedent inoculation, it ought to be recognized at the seedling stage and the later harvest prevented.

Such thoughts serve to show how wide is the issue before the profession and the nation. We dare not overlook environment as a continuous morbid factor, the baneful influence of which must be annulled if the supply of tuberculous cases is to be stopped. With regard to the cases which already exist, we must determine how to handle them effectively and economically at their several stages, so as to achieve for the individual the *optimum* result of treatment and for the community the *minimum* of disadvantage, on the one hand, from the disturbance of working capacity, and on the other, from the risks of infection.

To meet the vast issue certain moneys have been earmarked. Thus, for the erection of sanatoriums—using the term in the large sense already indicated—a million and a half was voted by the Finance Act of last year out of the Sinking Fund for the year ending March 31st, 1911. That sum stands to-day to the credit of the nation, to be distributed by the Local Government Board between England, Scotland, Wales, and Ireland, in ratio to the population of these countries as ascertained at the census of 1911. The distribution is to be made by the Local Government Board with the consent of the Treasury, which, before giving consent, must have consulted the Finance Commissioners.

For the maintenance of sanatoriums (in the large sense) the provision under the Act would be elastic. The primary source would be (a) the amount paid or credited in respect of sanatorium benefit, at the beginning of each year to the local Insurance Committee concerned, by the Insurance Commissioners out of the National Insurance Fund. Such amount would be the aggregate of 1s. 3d. for each insured person within its area; (b) the amount credited to the local Insurance Committee for the same purpose by the Insurance Commissioners out of the moneys provided by Parliament. Such amount would primarily be the aggregate of 1d. for each insured person within the area in question, but the whole or any part of it might, at the discretion of the Insurance Commissioners, be withheld for purposes of research. A secondary and contingent source would be sums provided in the following way: If in any year the amount available for sanatorium benefit were deemed insufficient to meet anticipated expenditure, the balance required might be provided (with the approval of the Treasury and the county council concerned) half out of moneys provided by Parliament, and half out of the county or borough fund or rate.

It is devoutly to be hoped that before a penny is discharged in the interest of sanatorium benefit, either by the Treasury or by the Local Government Board, or by the Insurance Commissioners, most careful and full consideration will be given to the purposes of the expenditure. It is satisfactory, therefore, to find that the Chancellor of the Exchequer has appointed a large committee, containing a number of experts in the pathology and administrative treatment of the disease, to make a report on tuberculosis, for there is grave danger of rash expenditure, which will not only prove wasteful in high degree, but will neutralize, and even thwart, the benefit which a well-conceived scheme might effect.

If we turn for a moment to the conditions under

which sanatorium benefit is granted, a number of difficulties emerge. As already pointed out, sanatorium benefit would be applicable under the Act to insured persons or the dependents of insured persons. Moreover, the antituberculosis measures, of whatever kind, could be applied to the given individual only on a specific recommendation by the local Insurance Committee that he was a fit person for its application. Those provisos were doubtless needful from the Chancellor's standpoint, which had regard to tuberculosis in a certain number of insured persons as being the most frequent cause of prolonged invalidity. Instead of handing the money to the invalid, the local Insurance Committee would expend it in his interest. The experience of German sanatoriums is in favour of the erection of properly equipped sanatoriums for the treatment of suitable cases, and the Insurance Corporations have found it to their advantage to erect these. But prolonged experience in Germany has emphasized the need of exact discrimination in the selection of cases to be regarded as suitable. The entrance to the sanatorium proper is there barred to several of the groups of cases of tuberculosis to which we have alluded. In other words, the sanatorium proper covers but a small proportion of a large field.

The statement that sanatorium benefit would include the establishment of all or any of the other institutions which might be necessary is somewhat misleading in the absence of guarantee that the necessary institutions will be provided. Unless the Insurance Commissioners be closely guided by skill and experience in this complex and difficult subject, the provisions of the Act may be construed in the limited sense of sanatoriums for a loosely defined group of consumptive patients. In other words, the larger outlook towards the eradication and prevention of tuberculosis will be obscured. This would be an immense pity. The prospect is the more disappointing because, thanks to the foresight and continuous effort of members of the profession, there has been evolved in the course of many years in Great Britain a co-ordinated system of antituberculosis activity which has been adopted as a model in many countries. It was no empty compliment that the great administrator of the antituberculosis movement in New York, Dr. Hermann Biggs, paid when he described the Edinburgh scheme as "directed by an unusually far-seeing and intelligent conception," and as "a comprehensive scheme covering all the phases of the problem, the best and most comprehensive scheme which exists." In that scheme the sanatorium, as such, finds an important, well-defined place. But the scheme includes much more. It includes the tuberculosis dispensary, with its immense possibilities of detection of early cases and of domiciliary investigation and direction, and the hospital for advanced cases, the open-air school for tuberculous children, the farm colony, and the tuberculosis laboratory, the several elements being closely linked to each other and related to the Public Health Department. One who has intimate knowledge of the scheme writes of it: "It cannot be too strongly emphasized that the strength of such a scheme lies especially in its organization and co-ordination. Each factor is, doubtless, of value. Each department has its own sphere of operations. As isolated elements, their possibilities are relatively limited. In proportion as the various departments are intimately connected and co-ordinated they each become more serviceable. The way to complete success in the campaign against consumption lies in the harmonious co-ordination of well-directed measures."

THE CINDERELLA OF THE MEDICAL SERVICES.

THERE can be no two opinions as to the vast strides made during the last thirty years in hospital equipment, to the great benefit of the patients in such institutions. It will doubtless, therefore, be a surprise to many to learn that there still exists an important class of hospitals, namely, those of the great Indian Army, which are practically in the same state in this respect as they were three decades ago, while even then they were far behind the times. That this is not an exaggeration will be clear from the following statement of indisputable facts. The barn-like structures which mainly serve the purpose of regimental hospitals for Indian troops are without a single stick of furniture beyond the bedsteads, there being neither a chair nor a table in the wards, much less bedside lockers, and no operation table is furnished. Even operating rooms have only very recently been provided for 7 out of over 100 hospitals, either the verandah or the open air in dust-laden places having to be used for all operations, however serious. No sheets or pillow-cases are provided, except occasionally out of regimental funds, and no hospital clothing; the sick suffering even from such communicable diseases as dysentery wear their own scanty clothing and take them back with them to their lines. Such a truly lamentable state of affairs is enough to take the heart out of all medical officers in military employ, and leave them no incentive to maintain and extend their professional knowledge, while it also seriously handicaps them in the treatment of the sick under their charge. The shock on first meeting with these conditions of work is not easily forgotten, although long familiarity and fruitless efforts to improve matters in time dull the finer senses.

Such a state of affairs in the twentieth century furnishes an overwhelming case for the introduction of some drastic change in the system which has allowed it to continue for so long. The report of the committee which met in Simla in 1910 under the presidency of Surgeon-General Sir C. P. Lukis, K.C.S.I., to consider the advisability of introducing the station hospital system for the Indian Army is therefore awaited with great interest, although it is understood that it is seriously handicapped in its work by being forbidden to suggest any increased expenditure. Apart altogether from the serious deficiencies already mentioned, the primary reason for the abolition of the present regimental system of distributing the I.M.S. officers in military employment is that the most senior lieutenant-colonel, on the eve of his promotion to the important administrative post of Principal Medical Officer, has precisely the same duties and responsibilities as the last-joined lieutenant, who relieves him of the charge of his regiment. During nearly thirty years' service he may have had none of the opportunities for acquainting himself with the numerous details of administrative work, such as are enjoyed by the more fortunate R.A.M.C. officers in command of a station hospital, or as Senior Medical Officer in a large military station. Again, the numerous more junior I.M.S. officers, who are qualified as specialists in different subjects, comparatively seldom get an opportunity of holding such appointments, owing to being isolated in charge of a regiment in a small station; if they are fortunate enough to obtain a specialist appointment they may lose it on the transfer of their regiment to a new place. In consequence, the officers of the Indian Medical Service do not actually hold nearly the full number of posts they are entitled to. All this would be remedied

by the introduction of the station hospital system. The change will necessitate the introduction of charge allowances for the command of station hospitals and of a fixed grade pay for the junior ranks of not less than they now obtain with the addition of their staff pay. At the present time, in consequence of the charge allowances for the command of station hospitals obtained by R.A.M.C. officers, some of them actually draw higher pay for temporary service in the tropics than equally senior I.M.S. men with continuous service in India; this is an anomaly which requires rectification. It is worthy of note that, although in the eulogistic references to the great reduction during recent years of the death-rate in the British Army in India, the work of the R.A.M.C. officers has rightly been praised, yet little or nothing has been heard of the equally good work done by the military branch of the I.M.S., labouring under the disheartening circumstances already described. Still, as a matter of fact, the reduction in the death-rate of the Indian troops during the last thirty years has actually been greater than among British troops in India. This is most remarkable evidence of the excellent work done by the military branch of the I.M.S., chiefly in the prevention of disease, and the fact deserves to be widely known. One of the principal reasons of the past neglect of this branch of the service is undoubtedly the fact that, although the post of Principal Medical Officer with the Government of India is nominally open to the I.M.S. equally with the R.A.M.C., yet as a matter of practice it is never held by an I.M.S. man; even such a distinguished and experienced officer as the late Surgeon-General Robert Harvey, after several years as Surgeon-General of the Punjab Command, was an unsuccessful candidate for the post. Consequently the officers on the military side of the I.M.S. never have the privilege of serving under a chief of their own service. Under these circumstances it is perhaps not surprising that the necessary expenditure on the R.A.M.C. hospitals leaves but few crumbs for the regimental hospitals of Indian troops.

It has recently been announced that the scheme drawn up by the Simla Committee, recommending the introduction of the station hospital system, has been ignominiously thrown out by the finance department; not because it will cost one penny more than the present effete system, but because it may lead to increased expenditure at some future date! To put the matter quite plainly, this means that an all-important administrative advance is to be indefinitely shelved, because if the station hospital system is once introduced it will be no longer possible to leave the equipment of the hospitals in their present archaic condition. Was ever a more lame and impotent decision arrived at? And this, too, in spite of the well-known fact that both the Director-General of the Indian Medical Service, who was president of the committee, and Surgeon-General Sir F. W. Trevor, K.C.S.I., who has just retired from the headship of the Army Medical Services in India, were both heartily in favour of the scheme, the latter having written strongly in its support in a memorandum issued on the eve of his retirement. Fortunately his successor, Surgeon-General A. T. Sloggett, C.B., C.M.G., is known to be equally in favour of the station hospitals, so that there is every reason to believe that greater attention will in the future be paid to the needs of the hospitals for the Indian Army, and that paltry financial considerations will not much longer be allowed to delay the inevitable adoption of the station hospital system, with the necessary corollary of a very material advance in the medical equipment provided for the needs of our brave Indian troops,

A HOME FOR THE UNIVERSITY OF LONDON.

It will be remembered that just before Christmas the Royal Commission on University Education in London issued an interim report expressing the unanimous opinion of the Commissioners that the University of London should be recognized and accepted as a great public institution, and that it "should have for its head quarters permanent buildings appropriate in design to its dignity and importance, adequate in extent, and specially constructed for its purposes, situated conveniently for the work it has to do, bearing its name, and under its own control." The *Times* announced on Monday that a friend of university education in London has obtained an option from the Duke of Bedford of four plots of land lying immediately north of the extension of the British Museum recently completed. Facing the new north front of the Museum is a street, called British Museum Avenue, running northward to Torrington Square, and the site upon which an option has been obtained is the land extending to about two and a half acres on either side of this street. It is thought that it would provide a suitable site for the erection as detached buildings on either side of the avenue of a university hall, a senate house with offices, lecture rooms and laboratories, as well as quarters for the officers' training corps and common rooms. The site fulfils another of the conditions laid down by the Commissioners, inasmuch as it is a very central position, within easy reach of University College and King's College, and very well served by the means of public conveyances.

LOCAL SUPPORT OF UNIVERSITIES.

THE governors of the University College of South Wales and Monmouthshire on February 15th considered the return of grants made by local education authorities to the various universities and colleges. The document showed that the Treasury grants varied in proportion to the local support, and pointed out that the local authorities had not been as generous as they might have been. The grants made were very largely in the nature of a *quid pro quo* for free places in the college. Furthermore, it was urged that the grants had not been increased since the passing of the Education Act in 1902, although that Act enabled local authorities to grant aid to higher education. The Act also allowed a rate not exceeding 1d. to be made for this purpose. Principal Griffiths stated that the college received less State aid than any other university college in the kingdom, in proportion to the work done. Cardiff would not give a farthing rate, whereas in Liverpool, Bristol, Sheffield, and other towns, there was a penny rate, without the *quid pro quo* of free places. In connexion with this subject we may call attention to the remarks of Lord Haldane at the annual dinner of the Court of the University of Leeds on February 17th. After referring to his recent visit to Berlin, he said that one of the things to be learnt from the German nation was that in the application of science to industry the biggest men were those who could seize rapidly on the ideas which science gave, and transfer them into practice. It would not do for this country merely to copy: it must work out things according to its nationality and individuality, and it was working out to-day some very remarkable lines of its own. In Germany the enormous number of students of the middle classes in the universities and technical institutes was striking, but in this country something else had been done. If it was behind other countries in some respects it was ahead in one, inasmuch as it was bringing the influence of university life to bear upon the best brains in the artisan classes. The system of evening instruction distinctive of the newer British universities fitted in well with the remarkable aptitude of British workmen for producing, if only they got the chance, a quality of goods he thought superior, but at least equal to, the quality produced by any other workman

in the world. Add science to that, and the nation need not be afraid. It was a burden for the universities to carry, but they were doing the greatest service to the State by the splendid part they played in extending the influence of learning to the artisan classes. There can, therefore, be no doubt as to the nature of the advice which Lord Haldane, who is probably the greatest expert on university questions in this country, would give to the councils of the wealthy cities of South Wales.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to the British Medical Benevolent Fund was held on Tuesday, February 20th, when the present officers were re-elected and a committee appointed for the ensuing year. Dr. West, the Treasurer, presented his financial statement for 1911, and stated that subscriptions amounting to £1,980 8s. 6d. and donations amounting to £347 14s. 6d. had been received for the grant department, whilst help had been given to 216 applicants, the sum so disbursed being £2,362 16s. 6d. The annuity department had received an income of £3,048 7s. 2d., derived from investments in trust securities, and the sum of £2,593 15s. had been paid to the pensioners, of whom there are 131 on the books. Legacies received during the year had amounted to £2,380, including £1,000 from the executors of the late Dr. F. W. Pavy, a Vice-President of the Fund, and £1,000 left by Mrs. John Lowe in memory of her husband, who was for many years chairman of the committee of the Fund. After the report of the Committee had been received the meeting was adjourned until 4.30 p.m. on Wednesday, March 13th, when the Lord Mayor will preside at a gathering at the Mansion House in support of the Fund. The adoption of the report will then be moved by the Right Rev. Bishop Boyd Carpenter, the other speakers being the President of the Royal College of Physicians, the President of the Royal College of Surgeons, the Regius Professor of Physic at Cambridge, Sir John Tweedy, and Dr. West.

MEDICINE AND THE PUBLIC.

THE *Journal of the American Medical Association* of January 16th gives the results of an interrogatory submitted by the *New York Times* to a number of well known persons as to what they considered the five most notable achievements in 1911. As showing how wide the net was cast, it may be mentioned that among those whom it was sought to catch were the Pope, the King of Italy, "Carmen Sylva," Admiral Peary, besides governors of States, economists, writers of fiction, playwrights, authors of scientific works, and editors. Forty-four groups of answers were received. In only ten of these was any mention made of progress in the sphere of medicine. Among those who thought the work in medical research worthy of notice was President Taft, who gave as the second of his answers "the demonstration of the complete success of the prophylactic in typhoid fever, as shown by the fact that in the mobilization of 15,000 troops in Texas for three months there was only 1 case of typhoid." Senator Williams, of Mississippi, also included the application of vaccination methods to the prevention of typhoid. Count Bernstorff, the German Ambassador at Washington, noted the introduction of salvarsan and Wassermann's progress in cancer research. We presume that President Wheeler, of the University of California, also refers to salvarsan when he speaks of "Ehrlich's discovery in specific chemo-therapy." Ehrlich himself considers that "the greatest achievement of the past decade is knowledge that has been gained incidental to the discovery of radium in regard to the transformation of matter." President Thwing, of Western Reserve University, instanced the growth of medical education and research exhibited in the strengthening of medical schools and research institutes. Mr. Booker T. Washington noted

"the discovery of Dr. Simon Flexner of the serum for the cure of spinal meningitis." Professor Osgood, of Columbia University, places among the world's greatest achievements the year's advance in curative and preventive medicine. Perhaps the weightiest deliverance was that of Mr. James Bryce, the British Ambassador at Washington, who said: "In modern times most of the events of the highest ultimate significance have been discoveries in the realm of Nature or inventions in the realm of industry; and their magnitude is seldom known at first. Little was said of the discovery that mosquitos are the carriers of yellow fever and of the intermittent fevers; yet what immense consequences are already seen to flow from the determination of that fact. In science, when a stone is started down a hill no one can tell how far it will go." The fact that less than one-fourth of the persons who replied made any mention of medicine shows how little the aims of those who devote themselves to research in that sphere are appreciated, and how blind even men who may be presumed to represent the modern mind in its highest development are to achievements which have a more direct bearing than those in any other field of discovery on the well-being of individuals and communities.

A CONTRAST IN HEREDITY.

At the present time, when the question of eugenics is so much debated, it may be interesting to present some curious statistics of heredity in two American families which have lately been published by the Superintendent of the Service of Help to Neglected Infants in the State of Manitoba. Jonathan Edwards, whose name is still well known as one of the most thorough-going advocates of what we may venture to call the hell-fire school of theology, and whose teachings weighed like an incubus on several generations of American youth, was born in Connecticut in 1703. Researches made in 1900 revealed traces of 1,394 descendants of this philanthropic divine. Thirteen of these were presidents, sixty-four were professors in universities, one hundred were clergymen, seventy-five officers of the army or navy, sixty medical practitioners, an equal number authors, one hundred and eighty judges, advocates, or solicitors, eighty functionaries in the civil service, three senators, one vice-president of the United States, one president of a great navigation company, while many were governors of States, members of Congress, mayors, or plenipotentiaries. Thirty-three states of the American Union, and ninety-two cities, besides several foreign countries, profited by the beneficent activity of this family. It is not on record that a single member of it was condemned to any disgraceful penalty. On the other side there is the famous, or infamous, Jukes family, which shows a terrible history of crime and degradation. Max Jukes, of whom we are unable to supply any particulars was born in 1720. He was lazy and drunken. Among his descendants, 310 died in a hospital, 300 died in childhood, 440 suffered from venereal disease, 400 were ill in consequence of their vices, 50 were notoriously immoral, 7 were murderers, 60 spent on an average twelve years in prison, while 130 were condemned for more or less frequent misdemeanours or more or less frequent crimes. As far as can be ascertained, not a single one of Jukes's descendants contributed in any way to the welfare of society, while on the other hand it is estimated that the family as a whole has cost the State about £240,000. Happily it appears to be extinct.

POLIOMYELITIS IN NORWAY DURING 1911.

At the September meeting of the Christiania Medical Society¹ Dr. Gram gave a demonstration of the incidence of poliomyelitis in Norway during the year 1911

¹ Förhandlingar i det medicinske selskab, 13de September, 1911, p. 172. *Norsk Mag. for Laegevidenskaben*, Christiania, 1912, No. 2.

Between January and September 12th the number of cases reported was 697, with 65 deaths; about 200 occurred in July, 200 in August, 120 in the first twelve days of September. No doubt a number of abnormal or abortive cases failed to be reported, so that the total number of cases must have exceeded 700. An epidemic of 36 cases (6 fatal) occurred at Trondhjem in the spring; in June the disease spread over the whole of the South-East of Norway, but in such a way that no connexion of any sort could be made out between the separate foci. In July 67 cases occurred at Lesje, with 3 deaths; here the medical officer himself was attacked. In Christiania 46 cases, with 11 deaths, occurred up to September 12th, and at the end of the year 14 more cases and 1 more death had been reported. Dr. Ustvedt gave the society an account of this epidemic; of the 46 patients, 2 were aged 6-12 months, 11 were 1-2 years old, 8 were 3-4, 11 were 5-9, 3 were 10-19, 11 were 20-29. In January there were 2 cases, in March 2, in June 3 (1 fatal), in July 6, in August 22 (6 fatal), in the first twelve days of September 11 (4 fatal). Seven cases came from Ullevaal Hospital; of these, 3 were children and 2 nurses from the epidemic wards, the other 2 were nurses from the medical wards of the hospital. In only one instance did 2 cases occur in one household; here two brothers were taken into hospital, on July 16th and 23rd, with febrile symptoms and a doubtful diagnosis of poliomyelitis. The fever subsided at once, and as no sign of paralysis could be found, the children were sent out on July 25th as not suffering from poliomyelitis. But a month later paresis of both legs, steppage gait, and the reaction of degeneration were found in both the patients. Dr. Ustvedt also reports an interesting isolated case: the patient, a tramp of 24, had been in prison since April, 1910, and on July 7th, 1911, had a typical smart attack of poliomyelitis. No suspicious case occurred in the prison either before or after this; the man had received no visitors nor any parcel, and the source of his infection could not be made out. In discussing the general aspects of the disease, he remarked that it did not seem to be particularly infectious directly from person to person; secondary cases did not occur, though a number of the patients were nursed at home and without particular precaution. As Leegaard pointed out, the country appears to be more dangerous than the town; not a few of the Christiania patients fell sick immediately after returning to the town from the country. It is advised that the patients should be isolated (as being infectious) for the first few weeks, preferably in hospital; the home should be carefully cleansed; contacts should be kept from school for seven days. The incubation period is set at two to three days, with a maximum of four days.

MEDICINE IN THE "ENCYCLOPAEDIA OF RELIGION AND ETHICS."

MEDICINE is well represented in the closely packed pages of the Rev. Dr. Hastings's monumental *Encyclopaedia of Religion and Ethics*.¹ Four large volumes of the work have now appeared, and each volume contains more than nine hundred pages, and each page has about fifteen hundred words. Though, of course, the subjects dealt with limit the references to medical matters, yet the reader cannot turn over the leaves of any of the volumes without being impressed by the frequency with which medical customs, medical history, and medical methods force themselves upon his attention. Thus, in the first three volumes, there are hardly any articles which deal with primitive peoples and their ways of life and thought that do not contain lengthy references to medicine;

¹ *Encyclopaedia of Religion and Ethics*. Edited by James Hastings, M.A., D.D., Fellow of the Royal Anthropological Institute. Vol. IV. Confirmation—Drama. Edinburgh: T. and T. Clark. 1911. (Pp. 908. Price 28s. net.)

instances of this are found in Mr. Batchelor's article on the Ainus and in the late Dr. A. H. Keane's article on Australasia. But there are also more directly medical contributions, such as those on Abiogenesis, Abnormalities, Alcohol, Anaesthesia, Anointing, Anthropology, Atavism, Athletics, Atrophy, Automatism, Biogenesis, Biology, Birth, Blindness, Blood, Body, Bones, Brain, Cagots, Childhood, Circumcision, Christian Science, and Climate; and amongst these we may pick out the articles on Birth and Circumcision as valuable monographs of thirty and twenty pages respectively. It is in the recently published fourth volume, however, that the space given to medical or semi-medical articles becomes considerable. The subjects of *consanguinity and bodily development* are discussed by Professor J. Arthur Thomson, those of *degeneration and mental development* by Dr. J. Lewis McIntyre, that of *criminology* by Dr. R. F. Quinton, that of *debauchery* by Dr. John Macpherson, and that of *delusion* by the late Dr. George R. Wilson; and there are articles which touch the boundary lines of medicine on such matters as *consciousness* (by Professor Iverach), *doubles* (by Mr. A. E. Crawley), *Darwinism* (by Mr. Benjamin Kidd), and *double-mindedness* (by Professor E. D. Starbuck). The remarkable series of articles on *crimes and punishments* and on *death and disposal of the dead*, extending to no less than 157 pages, by no fewer than thirty-three authors, constantly remind the reader of the very narrow dividing line which existed between medicine and religion and ethics in early times; indeed, the line is in places no broader now than it was then. In addition, however, to all the subjects already referred to, this fourth volume of Dr. Hastings's *Encyclopaedia* contains eleven contributions dealing with *disease and medicine*, and it is in this series of papers that the medical interest of the work concentrates and culminates. Dr. C. S. Myers, Lecturer on Experimental Psychology in the University of Cambridge, deals interestingly with primitive disease and medicine, beginning his survey with Australia, where disease is commonly regarded as an evil sent by one man to another by means of pointing some such object as a bone or stone, working his way up through Torres Straits, Melanesia, and the Malay Archipelago, to the Malay Peninsula, and then turning to a special consideration of primitive peoples in Africa and in Central and South America. One passage from Dr. Myers's article may be quoted, for it contains a generalization and a comparison between ancient and modern medicine which may perhaps give rise to some heart-searching among the members of the profession at the present day. Here it is: "Among primitive peoples, knowing the name of the evil spirit, using archaic language, summoning medicine men from another tribe, are frequently important factors in effecting a cure. Among ourselves a physician is held of slight account who cannot give a name to his patient's illness; he still writes his remedies in a dead language; and his reputation is apt to be greater abroad than at home. Although the medicinal part of treatment has come more and more to the front, in no part of the world can the magical aspect be said to have altogether disappeared." We may object to the way in which the comparison is stated, but we can hardly deny that there is some truth in the allegation that modern practice is not altogether free from traits as old as the most ancient art. The ten other articles treating of *disease and medicine* are classified either geographically or racially. Thus, Mr. A. F. Chamberlain, of Worcester (U.S.A.), deals with American disease and medicine, and discusses among other things the question of the pre- or post-Columbian origin of syphilis on the American continent; Mr. R. C. Thomson takes Assyro-Babylonian medicine as his subject, and has much to say of exorcism of the demons of disease, and of the serious penalties attaching to the defective practice of surgery in the valley of the Euphrates in early times; Mr. Thomas Barns has a subject of more

general interest in Celtic medicine, and he has much to tell of the ash tree and shrew mouse, of the mistletoe, of the couvade in Ireland, and of the Irish sweat-houses for the cure of rheumatism in use up to the beginning of the nineteenth century; Professor Foucart has Egyptian medicine as his sphere, and makes a valuable contribution to our knowledge of the long list of parasitic affections and cutaneous and ocular troubles which afflicted and still afflict the dwellers by the Nile; and so with Greek and Roman, Hindu, Jewish, Persian, Teutonic, and Vedic medicine, which are all ably handled by such experts as Thraemer, Jolly, Lowe, Casartelli, Sudoff, and Bolling. These are only a few instances of the interest which this book is certain to arouse in the mind of the physician or surgeon, more especially if he have a leaning towards the study of folk-lore; but it may be said in a word that the book contains a mine of curious and recondite information on medical matters which it would puzzle the most learned member of the profession to find easily elsewhere.

DR. JOHNSON AS A TEMPERANCE MAN.

WHEN addressing the business men of London Sir Thomas Barlow and Sir Thomas Clouston referred to Charles Lamb, Edgar Allan Poe, Burns, and Swinburne, whose lives and works were tarnished by intemperate habits. Sir Thomas Barlow, however, was able to set against these victims to self-indulgence the striking self-discipline of Dr. Johnson, who, in an age at once convivial and coarse, became an abstainer from alcoholic liquids. Johnson's shrewd observation, his robust common sense, enabled him to rise superior to his environment. His oft-quoted dictum "Claret for boys, port for men, brandy for heroes," would not suggest teetotalism. But some time between his 54th and 57th year, "having had an illness in which he was advised to leave off wine, he had from that period continued to abstain from it, and drank only water and lemonade." But for a glass of claret he drank when he was 70 he continued teetotal till the age of 72. And he knew from personal experience what it was to be worse for drink. "Drinking," he says, "may be practised with great prudence; a man who exposes himself when he is intoxicated has not the art of getting drunk; a sober man who happens occasionally to get drunk readily enough goes into a new company, which a man who has been drinking should never do. Such a man will undertake anything; he is without skill in inebriation. I used to slink home when I had drunk too much. A man accustomed to self-examination will be conscious when he is drunk, though an habitual drunkard will not be conscious of it." He advised Boswell to drink water only; and to an old college chum who combated his views, and ended by saying: "I am grown old; I am sixty-five." Johnson replied: "I shall be sixty-eight next birthday. Come, sir, drink water, and put in for a hundred." Indeed, the biography glistens with gems of temperance teaching, and teaching more worthy of study than the present-day diatribes of the average temperance extremist. That a man should have strength of character, in such an age as that of Johnson, after more than fifty years of life to become an abstainer adds to one's admiration of the sturdy doctor. And on his deathbed he was still Dr. Johnson the temperance man, for when his physician advised more generous nourishment he replied: "I will take anything but inebriating sustenance."

It is announced that the Lord Provost of Glasgow proposes to convene a conference to consider a proposal to promote an international memorial to Lord Lister in Glasgow.