British Medical Journal.

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ACUTE OSTEOMYELITIS.

THE pathology and treatment of acute haematogenous osteomyelitis was discussed last week at a well-attended meeting of the Orthopaedic Section of the Royal Society of Medicine. The opener, Mr. Harry Platt of Manchester, reminded his hearers of the change which has come over the practice of surgery during the last generation, since the days when the master surgeons took a keen interest in the treatment of diseases of bone, which the work of Brodie had done so much to illuminate. For the problem of acute osteomyelitis is no new one, but the lure of the abdomen has led the surgeons of to-day to neglect it, so that its treatment is in too many cases left to the resident surgical staffs of hospitals. Its importance has no doubt also been diminished by the fact that the disease has become much less common, so that it seems likely to be included before long in the list of disappearing maladies. Mr. Platt quoted the Registrar-General's report for 1926, which shows that in England and Wales in that year no more than 417 deaths were attributed to this cause, whereas there were in the same period 2,710 deaths from acute appendicitis. Moreover, the average number of deaths from acute osteomyelitis during the six years 1921–26 was only 435. In the great general hospitals of London few surgeons have the opportunity of treating more than two or three cases a year, although an exception must be made in the case of the London Hospital, where, as Mr. Alan Perry told the Section, thirty-five cases were treated in one children's ward in 1925, all under the surgical control of one surgeon. At Ancoats Hospital, Manchester, all the cases admitted come into Mr. Platt's care, and the forty-one cases there treated in the last five years formed the subject of his paper, together with the large experience of Dr. Clarence Starr of Toronto, who has treated 207 cases in twelve years—an average of over seventeen yearly.

According to Mr. Platt, Starr's work, which was first introduced to the surgical public by an article in the *Archives of Surgery* in 1922, must change some of our views of the morbid anatomy, and consequently of the treatment, of the disease. It is generally admitted that in a long bone the most common seat of the primary infective embolus is in the metaphysis—that region of cancellous bone which lies between the medullary cavity and the epiphyseal line—and it is commonly held that from this situation infection and pus formation spread, not only outwards to the subperiosteal space, but deeply into the medullary cavity, and thence rapidly affect the whole shaft of the bone. This last statement Mr. Platt rejects, holding that the facts brought forward by Starr emphatically contradict the direct spread into the medulla through the cancellous bone. More often the medulla is secondarily infected from the subperiosteal space through the Haversian canals. If Starr is right the "gutter" operation, which is based on the old pathology, should be abandoned. It may be necessary to explain that this term is used to mean a proceeding by which the medullary cavity is laid open throughout its length by the removal of the anterior two-thirds of the circumference of the shaft of the bone. The object of this, as of all other operations in the earlier stages of the disease, is the establishment of free drainage and relief of tension thereby. The less common cases in which infection is conveyed to the shaft in the first place by the nutrient artery, as happens more often in the bones of the upper extremity, are in a different category, and obviously require different treatment. Treatment by early extensive removal of bone is attended by the difficulty of deciding how much bone is devascularized beyond hope, for not all devascularized bone is finally extruded in the form of a sequestrum. Portions which may seem dead may be in the end revitalized somewhat after the manner in which a bone-graft becomes part of its bony surroundings.

In the most frequent case of metaphyseal invasion Mr. Platt advocates searching for the infective focus by drilling into the metaphysis and removing a small piece of bone by means of a trephine as soon as the focus is found, so as to allow of free drainage. These measures have given gratifying results when not postponed too long. The essence of successful treatment is early diagnosis and immediate exploration and drainage. Mr. Alexander Mitchell of Aberdeen advocates the removal of a piece of cortical bone for drainage, but when the disease has extensively invaded the shaft of a long bone he has had good results from subperiosteal resection of the diaphysis. He has no fear of failure of regeneration as long as the limb is not unduly constricted and the muscles are allowed some play. These conditions he secures by the use of Thomas's splints and gentle extension. The twenty-nine cases in the Hospital for Sick Children which formed the basis of Mr. Eric Lloyd's contribution to the discussion led him to recommend a kind of compromise between the gutter operation and periosteal incision; obviously the first involves the second. Mr. W. H. Ogilvie's statistics were based on fifty-one cases treated in Guy's Hospital in the five years 1922–26. Like other observers, he found the disease to be diminishing in frequency. He condemned diaphysectomy. Mr. Alan Perry, speaking from his experience at the London Hospital, regarded the usual acute cases as pyaemic from the beginning, and this fact was, in his view, of more importance than the localized foci in the bone.

Acute osteomyelitis is a dangerous and crippling disease chiefly affecting children. Those who suffer from it, if they survive, too often do so only after long suffering and prolonged suppuration, with its attendant risks. It is most often caused by transmission through the circulation of the *Staphylococcus aureus* from a superficial lesion, such as a sore on the skin, to the focus in the bone; and, bearing in mind this fact, some surgeons maintain that in all cases, by the time that bone symptoms are detected, we have to deal, not with a local bone disease, but with an acute general toxaemia. This may be true, but local treatment is none the less sound, more especially seeing that most of the speakers in this discussion declared themselves pessimistic about the value of blood transfusion, or intravenous medication, or other methods of attempted attack on the general condition. It is generally agreed that early drainage is most desirable; but early drainage depends upon early diagnosis, and this again depends on recognition of the prodromal stage, which, although in a fulminating case it may only be of two or three days' duration, yet in most severe cases lasts at least seven days, and may be prolonged to four weeks.

The teaching of Sir James Mackenzie on the importance of recognizing the beginnings of disease, and of the role of the general practitioner in their detection, is generally accepted. In the case of acute osteomyelitis we must look to the general practitioner to be on the alert to notice the occurrence of fixed pain and tenderness at the end of a long bone, especially when accompanied by intermittent limping and culminating in swelling at the site of pain and tenderness. It is common knowledge that in the past the early stage of acute osteomyelitis was too often mistaken for acute rheumatism; but acute monarticular rheumatism in a child is not very common, and, remembering the paramount importance of early diagnosis and treatment in this disease, it would be well if osteomyelitis were given the benefit of the doubt, and if every practitioner confronted with the above-mentioned signs and symptoms had osteomyelitis in his mind instead of acute rheumatism. The postponement of surgical intervention in a case of arthritis is of little moment, whereas it may be of the gravest import if the case prove to be one of osteomyelitis. In this connexion it would be advantageous to ascertain the relative frequency of monarticular acute rheumatic arthritis in children between the ages of 7 and 15 years.

"THE REALITY OF DELUSIONS."

THE realm of mental pathology affords few problems at once so obscure and so fascinating as those which concern the origin and manifestation of hallucinations and delusions. The relationship of these two phenomena is close, as every medical practitioner who has had to fill up a lunacy certificate is only too well aware. An hallucination is a percept without sensory foundation in the environment. It is not a true percept, because something is perceived where nothing is; but it partakes of the qualities of a percept inasmuch as the victim of an hallucination has an immediate belief in its outward reality. A delusion is less easily defined, if, indeed, it be at all definable. A delusion has been described as a false conception and persistent belief, impregnable to reason, of what has no existence in fact; but such a definition is inadequate from the point of view of psychiatry, for the delusions of the insane are based upon realities of a kind, realities whose nature it should be the duty of the psychiatrist to discover. It is to this task that Dr. Henry Devine addressed himself in the Long Fox Memorial Lecture delivered recently before the University of Bristol, and its title, "The reality of delusions," indicates the paradox.

Dr. Devine has chosen a topic upon which his wide psychiatric experience entitles him to speak with authority, and all the more because that experience has been deeply tinctured with rare philosophical insight and enriched with wide scientific knowledge. In a singularly lucid exposition of an intricate subject he accepts a wider formulation for the interpretation of these psychotic manifestations than any purely psychogenetic or biogenetic hypothesis. Many years' clinical experience of all types of mental disorder has led him to the view that, in their ultimate analysis, the psychoses are no more than obscure forms of organic disease. Such a view is not necessarily antagonistic to a psychological theory of causation. The two—as it seems to him, and to us—are complementary rather than contradictory. They envisage different aspects of the same reality. "The total reality," says Dr. Devine, "is not revealed by exclusive reference to either the unconscious biological or the conscious psychological process. The total reality is a biopsychic process. We are dealing with the organism as a unity, one and indivisible." He quotes in support of this view the case of a patient who believed that he had the gift of flight. The delusion bore no relation to pre-existing beliefs, to personal interests, or to problems upon which the patient might have pondered. "He will not so much as lift his head to observe an aeroplane. It is evident that no connexion exists in his mind between *that* flying and *his* flying. The delusion is inspired from within, and not suggested from without; and it clearly belongs to an altogether different category of belief than one derived from the social milieu. . . . it is the outward and visible sign of an inward reality—the symbolic expression of endogenous or organic disturbances. It is invested with the same 'reality-feeling' as perceptions stimulated from without, because it is itself an intuitive perception of organic stimulations from within."

In illustration of his thesis Dr. Devine draws a contrast between the attitude of a patient towards physical and mental illness respectively. "Both types of malady are the expression of disturbances of the organism; but in the one case the patient realizes he is ill, and can more or less localize and describe his sufferings; while in the other, in most instances, the patient has no sense of illness, and he is unable to furnish any information as to the nature or locality of the stimuli responsible for the morbid psychic products which surge into his conscious life. Thus the morbid state of the organism is not represented in the mind of the patient as physical suffering, but as depression, unappeasable anxiety, a feeling of guilt, delusions of omnipotence or persecution, or in the form of visual, auditory, or conaesthetic hallucinations." We cannot be reminded too often that psychiatry is part and parcel of general medicine, although it has a terminology (and, indeed, in some hands, a jargon) of its own. Dr. Devine is well aware that the living organism "is not quite the same thing to the psychiatrist as it is to the general physician," and that psychological medicine, groping too often at present in the dark, has to find its way by means that are not always too intelligible to the busy family doctor. But his philosophical outlook, and the freshness and clarity of his writing, lead one to hope that the gap between this special branch of practice and medicine at large is narrowing rather than widening. Every step towards integration, whether taken by way of contrast or of comparison, is a move in the right direction.

Dr. Devine compares the evolution of a delusion to the unfolding of an instinct. At first a sense of anxiety, discomfort, and tension—the consciousness of changes in the organic life for which the patient is unable to account; then the crystallizing-out of the delusion, and a new sense of power and purpose. "Just as hunger"—to quote once more from this stimulating essay—"is the echo of normal physiological distress, so a delusion is the echo of morbid physiological distress—the symbol of diffuse and unlocalizable changes occurring in the depths of organic life. Hunger does not originate in the brain, but in the depleted cells of the whole organism. It is thus also with a delusion; it is the conscious symbol of a morbid state of functioning of the whole organism." The delusion is real, for it is the symbol of organic actuality. Once again, then, mental disorder is not a thing apart; its investigation and alleviation are intimately bound up with the science and practice of medicine as a whole.

ASTHMA RESEARCH.

SYSTEMATIC investigation of a morbid process, when well planned, wisely directed, and adequately financed, offers the best hope of advance in treatment. We are glad, therefore, to publish the appeal by the Asthma Research Council at page 468 for the sum of £50,000 to enable this distressing condition to be the subject of co-ordinated research. Breadth of vision has not always been manifest in the study of problems of disease and its treatment, the main clinical objectives being sometimes forgotten in the study of interesting scientific details; from such a danger the present proposal is obviously safeguarded. It may be recalled that towards the end of last year a group of persons suffering from asthma was formed to organize such a research, and we pointed out at the time[1] that such an undertaking required the collection and collation of information already available, team work, and the establishment of out-patient departments where specialists of different kinds could co-operate. One illustration of the importance of such specialist study was immediately forthcoming, for Sir James Dundas-Grant, in our next issue, emphasized the significance of the rhinological element in asthma, and Mr. W. S. Syme later insisted that antral disease could not be overlooked in this connexion. The formation of an advisory medical committee to the council was welcomed in our columns on November 26th, 1927 (p. 997); it was at once apparent that the extent of the field to be cultivated had been fully realized in a practical way by the early appointment of a physician, a laryngologist, a physiologist, a radiologist, a dermatologist, a psychologist, and a biochemist, with the subsequent co-operation of a bacteriologist. Surgeon Rear-Admiral Jeans, who undertook to act as honorary secretary of this medical committee, has since been engaged in laying the foundation of the whole scheme, and the time has now come when it is possible to appeal widely for financial support of a well conceived and skilfully devised plan of research. It is obvious that very much will depend on the response of the lay public, and we therefore commend to medical practitioners the suggestion at the end of the committee's letter that the work of the Asthma Research Council should be brought to the notice of their patients, particularly those afflicted with asthma.

THE PHARMACEUTICAL SOCIETY'S LABORATORIES.

THE second report of the pharmacological laboratories opened by the Pharmaceutical Society about two years ago deals with the events of 1927. In the course of the year the new vitamin department came into operation, and it has been experiencing an increased demand for its services, while since the beginning of August, when the Therapeutic Substances Act came into force and the laboratory began to take its predestined place in the administration of that measure, much larger numbers of samples of pituitary extract have been received for examination. The main body of the work has consisted, as before, in the prosecution of pharmacological research, with special regard to the investigation of methods of assay, and the examination of manufacturers' products by biological tests. The number of samples received for testing during the year, excluding those received by the vitamin department, was 126, the most numerous being pituitary extract, digitalis, tincture of squill, and liquid extract of ergot, others including strophanthus, cannabis indica, and the oestrus-producing hormone. In testing digitalis the recommendation of the Geneva Conference—that only those samples should be considered satisfactory which did not differ in potency from the international standard by more than 25 per cent.—is no longer followed; owing to the fact that a considerable number of samples submitted exceeded the upper limit of strength recommended, a form of certificate specifying the degree of strength has been adopted to cover tinctures of this character. The vitamin department has completed examinations on behalf of manufacturers of three samples of cod-liver oil for vitamins A and D, and of a number of other preparations for vitamins A, B, C, and D. The results of a series of research operations carried out at the laboratories have already been made generally available through one medium or another, among them being one dealing with the standard adopted for the biological assay of squill, mentioned in a review of the first annual report of the laboratories on May 14th, 1927 (p. 889). A mixture in equal parts of nine tinctures of squill has been taken as standard, and tinctures tested are considered satisfactory which do not differ in potency from this standard by more than 25 per cent. In connexion with clinical investigations into the action of drugs on the uterus—work done in conjunction with Mr. Aleck Bourne of Queen Charlotte's Hospital—an interesting point is raised. Examination of the active principles in ergot has shown that, while the specific alkaloid (ergotamine or ergotoxine) and histamine exert a considerable effect, tyramine is inert. The action of histamine, though powerful, is relatively evanescent, and the evidence, the report states, makes it clear that the traditional value of ergot for promoting prolonged uterine contractions post partum is due to the specific alkaloid alone. It is stated that the amount of histamine in the liquid extract of ergot of the *British Pharmacopoeia* is much too small to have even a temporary effect in the dose employed, and contains none of the specific alkaloid; so that the extract of ergot prepared according to that formula since then can have had no medicinal value. The report argues that since this position arose through the Pharmacopoeial Committee rejecting scientific evidence and basing its action on the general approval of many medical bodies, the demonstration given of the uselessness of the watery extract should be taken to show that in many cases the clinician cannot form any opinion of the value of his remedies, and that the only trustworthy evidence he can offer is represented by a slow formation of opinion which takes many decades to complete.

[1] BRITISH MEDICAL JOURNAL, October 22nd, 1927, p. 746.

HEATING OF LARGE HOUSES.

A REPORT has been issued dealing with an investigation into the merits of that system of warming large buildings known as the "panel system."[1] This name refers to the fact that steel pipes, through which hot water is made to flow, are concealed in the walls or ceilings of rooms behind panels. These panels are surfaces of plaster three-quarters of an inch thick, painted over in cream colour. The internal diameter of the pipes is half an inch. Through the pipes, which are in groups of parallel tubes, the hot water at 135° to 140° F. is pumped, the temperature of the return water being about 120° F. This system of heating is essentially one in which radiant heat is supplied at a low temperature—low as compared with, for instance, a gas fire, where the temperature may be as high as 2,000° F. The actual temperature of a panel may be 99° F. when the temperature of the air nine inches from the edge of the panel is 64° F. Putting on one side coal fires and gas fires as sources of heat quite unsuitable for heating large buildings, Dr. Vernon and his co-workers have studied all of the following methods: (1) The panel system of hot-water tubes concealed in the walls and (or) in the ceiling; (2) under-floor heating by hot-water pipes, after the designs of G. H. Widdows of the Derbyshire County Council; (3) a system of heating by means of electric current sent

[1] *A Physiological Investigation of the Radiant Heating in Various Buildings.* By H. M. Vernon, M.D., and M. D. Vernon, M.A., assisted by Isabel Lorrain-Smith, M.A. Industrial Fatigue Research Board. Medical Research Council Report No. 46. London: H.M. Stationery Office. 1928. 2s. net.

through tubes (1½ inches internal diameter), some of which were above the floor of a room and near to benches which ran across the room, while the others were placed under a skylight that occupied two-thirds of the roof area; (4) warm air from stoves, which was circulated under the floor, as in the new Cathedral at Liverpool. This last method of heating the floor by hot air is practically the old Roman method of heating by the hypocaust, remains of which may be seen in a number of ruined villas belonging to the time of the Roman occupation of Britain. As installed at Liverpool Cathedral, Dr. Vernon found that with air delivered into the ducts at 150° F., and with a floor temperature of about 70° F., the air temperature could be maintained at from 60° to 74° F., according to the spot where the observation was taken. Apparently, for very large stone floors, this system has much to recommend it. In Widdows's system, with a floor temperature of between 71° and 80° F., the air could be maintained at about 57° F. Turning now to the panel system, it is evident that Dr. Vernon finds much that is good in that method of heating. He studied panels placed in the walls of large offices, and also in the ceilings of offices, workshops, hospitals, and schools. By ceiling heating alone the temperature of the air of a schoolroom could be kept at 60° F. in cold weather, when the temperature of the water was 135° F. and that of the ceiling panel 100° F. In the summary we are told that "in offices and other buildings heated by concealed panels in the ceilings or walls there is a remarkable uniformity in the distribution of the heat, and the air temperature may be steady to within 1° F. all over the room and at all levels, except that a few inches below the ceiling (in a ceiling-panel room) there may be a rise of about 2°." "The radiation from gas fires and coal fires differs from that from panels, since it may be a thousand times more intense. . . . With such high temperature radiation rooms felt comfortably warm when 7° cooler than convection-heated rooms. In panel-heated rooms, however, the permissible reduction of air temperature was less than 1°. . . . Under-floor heating, though it produces a very even distribution of heat, is apt to be unpleasant to the feet"; and finally, "Hot-water radiators of the ordinary type cause an uneven distribution of heat and a considerable temperature gradient; but they are valuable for checking the down draughts from large windows, which arise even in panel-heated rooms." The report is illustrated by twenty-six figures, ten tables, and four photographs. These last include one of the thermopile and the standard surfaces used in its calibration, the uncovered pipes of a wall panel, and those of a ceiling panel in the course of construction.

THE LEAGUE OF NATIONS AND THE OPIUM TRAFFIC.

AT the recent meeting of the Council of the League of Nations at Geneva, attention was directed to the numerous international conventions which, though numerously signed, had nevertheless not been ratified or put into operation. A crucial case was that of the International Opium Convention signed at Geneva in February, 1925, but still inoperative because three out of the necessary seven ratifications by members of the Council of the League are still lacking. When the unsatisfactory position of this inoperative convention, signed two years ago but still unratified, was reported to the House of Commons on February 15th, it is not surprising that the question was asked whether the recalcitrant signatories had any intention to ratify. Meanwhile the Hague Opium Convention of 1912 remains in operation. It will be recalled that the Geneva Convention of 1925, while formulating elaborate machinery for supervising the international commerce in manufactured narcotic drugs, did not include the American principles of limitation of production of opium and coca and the suppression of opium smoking. These principles, which the American delegates urged as being implicit in the Hague Convention, were not adopted by the prolonged conferences held at Geneva in the autumn of 1924, and their omission led to the withdrawal of the American delegation, followed by that of the Chinese. At recent meetings of the Council and of the Advisory Committee on the traffic in opium, the Italian delegate has taken an independent line in regard to the relationship which should exist between the proposed Board of Control for the traffic in drugs and the secretariat of the League of Nations; he appeared to hold that with the Hague Convention, and the machinery, now available, of the Council, Assembly, and Advisory Committee of the League, all that was desired and all that was contemplated by the Geneva Convention might be accomplished. As regards India, it is to be noted that the acreage under poppy cultivation is in course of reduction, but the export trade of Indian opium is still very large; in 1926 this amounted to 1,224,140 lb. Much of this is consigned to the Far East, and is used for smoking, but 88,000 lb. was sent to this country as "medical opium." The net revenue of the Government of India from opium amounted in 1925–26, according to a recent statement by Lord Winterton in the Commons, to Rs.2,03,52,437.

A STUDY OF RHEUMATISM IN CHILDREN.

IN the February issue of the *Archives of Disease in Childhood*[1] Dr. A. P. Thomson describes a study of the distribution of rheumatic infection in some 800 Birmingham children. A rheumatic bureau has been established at the children's hospital of that city, and cases notified by the school medical service and from the children's hospital are included in his statistics. From a consideration of the influence of density of population on rheumatism Dr. Thomson's conclusion is that, broadly speaking, the more dense the population the greater the incidence of the disease. Nevertheless, there is a high incidence in many districts which are sparsely populated. There seems no clear association between poverty, scarlet fever, measles, or diphtheria and the incidence of rheumatism. A map of Birmingham and its suburbs in relation to water supply is given, and on the whole this appears to be the most significant factor elicited by Dr. Thomson's study. Dr. Robert Marshall of Belfast in the same issue, reviews 180 children suffering from rheumatism, chorea, and carditis. He arranges them into five groups, according to the symptoms and the severity of the lesions. The condition of the heart was studied by means of the electro-cardiogram, and in 33 of the 72 cases examined there was a normal record. Of the 119 children observed only two had sinus arrhythmia, and the author thinks this bears out Sir James Mackenzie's dictum that sinus arrhythmia is a sign of a healthy heart muscle. As treatment he gives salicylates for many months. He pleads for further work on the prevention of rheumatic heart disease, and for the supervision and care of the rheumatic child.

SEGMENTAL RESECTION OF THE COLON.

AT a meeting of the Surgical Section of the Royal Society of Medicine, held on March 7th under the chairmanship of Mr. Warren Low, Dr. de Martel of Paris read an interesting paper in which he described the general principles governing the treatment of cancer of the large bowel. He emphasized the difficulties occasioned by the infected condition of the intestinal wall above the obstructive lesion, and put forward a strong plea for the performance of a preliminary caecostomy prior to the carrying out of any operation of a radical character. In the course of his remarks, which were illustrated by admirable coloured

[1] Issued by the British Medical Association. London: B.M.A. House, Tavistock Square, W.C.1. Yearly subscription (6 numbers), 25s.; single number, 4s. 6d.

diagrams, Dr. de Martel paid a high tribute to the operative methods he had had the opportunity of witnessing in London, and in particular referred to the value of Mummery's suggestion for the oblique division of the bowel when effecting an end-to-end anastomosis. During the subsequent discussion it became clear that French practice and British practice in relation to segmental resection for cancer and other conditions of the colon are almost identical. Mr. Mummery made the encouraging statement that cases of cancer of the colon appear to be coming to the surgeon for treatment at an earlier stage of the disease than heretofore, and in the course of his remarks he referred to the value of a transverse incision in dealing with growths at the splenic angle. Mr. Rowntree also referred to the help he had derived from this type of incision, and in connexion with the question of diagnosis he entered a plea for the more routine use of the barium enema, which he had found to be of infinitely greater use than the more tedious process of tracing a bismuth meal in its course through the large bowel. Sir Charles Gordon-Watson referred to the interest and value of these international discussions, and expressed his complete agreement with the general principles outlined by Dr. de Martel.

TYPOGRAPHICAL USAGE.

IT is not yet three years since the twenty-seventh edition of *Rules for Compositors and Readers at the Oxford University Press* was reviewed in our columns, and already another edition has been called for.[1] It is quite obvious, therefore, that this little work appeals to a much larger circle than that implied in the title, which, by the way, might be altered in future editions, for it is only necessary to glance at its contents page to realize how useful it must be to all who are engaged in work of a literary character. In our notice of the last edition we gave an account of how the book came to be offered to the general public; those curious to know are referred to the JOURNAL of June 6th, 1925 (p. 1041). The present edition contains a few—very few—additions, otherwise it seems to be identical with its immediate predecessor. It is not necessary to repeat all that has been said in praise of the work or otherwise, but we would like to return to the subject of hyphened and non-hyphened words. Mr. H. W. Fowler, in his *Dictionary of Modern English Usage*, says: "The chaos prevailing among writers or printers or both regarding the use of hyphens is discreditable to English education." This, alas! is but too true, and it is a moot point whether the lists of hyphened and non-hyphened words published in the *Rules* are likely to assist in bringing order out of the chaos to which Mr. Fowler refers. In our last notice we gave a few instances in which the use or non-use of the hyphen seemed anomalous; it would be easy to make considerable additions to those instances. In the list of medical terms (p. 30) "foodstuffs" is printed as one word; in the general list of hyphened words it appears with a hyphen. Quite a number of terms which are generally printed as one word are given a hyphen; on the other hand, some of the hyphened words now commonly appear as two words. Two very accomplished journalists, who might well have claimed to be termed stylists, had a dislike for the too frequent use of the hyphen, and on more than one occasion requested that where possible it should be omitted. After all, its use or non-use is perhaps largely a matter of taste or temperament, and if the lists in the *Rules* were compiled for the first edition, which was published in 1893, it is easy to imagine that present-day taste may differ from that of the compiler. The pity (in this respect only) is that the *Rules*, which were intended especially for compositors and proof readers at the Clarendon Press, should have been adopted by the editors of the *Oxford English Dictionary*, which is likely to be the standard work of reference for generations—and deservedly so. We still think the word printed as "sensorimeter" (p. 32) should be "sensori-motor," and we are quite sure that "manio-depressive" (p. 27) should be "manic-depressive." The list of medical terms may be of use to general printers, who perhaps come across one only now and again; it is, however, not nearly comprehensive enough for those engaged entirely in the production of medical work. Some sections of the book should prove most useful. We have space to refer to one only, and that a short one entitled "Abbreviations used in the metric system of weights and measures" at page 83. This section is chosen because, in dealing with the "copy" sent in by various contributors, it is a comparatively rare event to meet with the abbreviations given here. The following may be quoted as instances: c.c. or cc. is frequently written for cubic centimetre instead of c.cm.; cgm. for centigram, instead of cg.; mgm. or mgr. for milligram, instead of mg.; we sometimes get c.m., and it is only by the context that it is possible to say whether centimetre or cubic millimetre is intended. Then, too, the letter *s* is added for the plural form, and sometimes insisted on by the author. Various abbreviations for gram are given by different writers; we have seen "gr." (generally used for grain), "g," which is rather common, and "gm," which is adopted by the *Rules*. It is perhaps best that both "gram" and "grain" should be spelled out; it is so easy to mistake one for the other, particularly if the dot over the *i* in "grain" is omitted. We remember an instance where "gram" had been set up by the compositor for "grain," and the error was only detected in the final proof. The word was used in connexion with the dosage of a highly poisonous drug, and the consequences might have been disastrous had the mistake gone through. Enough has been said to show the importance of this section; in it we notice that "dekametre, "dekagram," and "dekalitre" are printed as here, with a *k* instead of the more usual *c*; this seems rather pedantic, and Fowler, in his *Modern English Usage*, favours the *c*. In conclusion we should like to say that we have found the book of great service; it has been our companion for years, and comparatively few days pass in which it is not consulted in this office—generally with success. Our experience must be that of others, or the editions would not continue to be issued at such frequent intervals—this is the twenty-eighth, and the fourteenth for publication.

[1] *Rules for Compositors and Readers at the University Press, Oxford.* By Horace Hart, M.A. The English spellings revised by Sir James A. H. Murray, M.A., LL.D., D.Litt., and Henry Bradley, M.A., Ph.D. Twenty-eighth edition (the fourteenth for publication). London: Humphrey Milford. 1928. (5½ × 3½, pp. 135. 2s. net.)

OXFORD OPHTHALMOLOGICAL CONGRESS.

THE eighteenth annual meeting of the Oxford Ophthalmological Congress will be held on July 5th, 6th, and 7th, under the presidency of Mr. Philip H. Adams. The members will assemble at Keble College (where accommodation has again been offered) on the evening of Wednesday, July 4th, and on the following morning a symposium will take place on "The ultra-violet ray," introduced by Professor Leonard Hill and Mr. W. S. Duke-Elder. The Doyne Memorial Lecture will be delivered on the morning of July 6th by Professor Arthur Thomson, his subject being "Observations on the eyes of birds." One afternoon will be devoted to demonstrations in the Scientific and Commercial Museums. The annual dinner of the Congress will be held on July 5th in the Hall of Keble College. The full programme will be issued in June. Mr. Bernard Cridland (Salisbury House, Wolverhampton) is again acting as honorary secretary.

THE KING has appointed Sir Hugh M. Rigby, K.C.V.O., to be Serjeant-Surgeon to His Majesty in succession to Sir R. Havelock Charles, Bt., G.C.V.O., K.C.S.I., who has been appointed Honorary Serjeant-Surgeon.