

REVIEWS.

SKIAGRAPHY IN INJURIES AND DISEASES OF BONES.

WE are reminded by two volumes published recently by Dr. W. B. HOPKINS,¹ of Philadelphia, and by Drs. C. L. SCUDDER and F. J. COTTON,² of Boston, of the great services rendered by American surgeons with regard to our knowledge of the clinical features and the treatment of fractures. The works of Hamilton and Stimson on these injuries may be regarded almost as classical, and many innovations in treatment—extension and suspension, for instance—now widely adopted, were first tried and advocated in the United States. Both books contain able and very useful expositions of some of the most recent developments in the diagnosis and treatment of the lesions with which they deal. The treatise by Dr. Hopkins is put forth as a clinical study of fractures from a modern point of view, the author thinking it desirable to avoid the restatement of traditions which have become obsolete and the description of methods of treatment long ago abandoned. The book on the *Treatment of Fractures* by Dr. Scudder is a second and revised edition of a work originally published about a year ago with the main object of showing the influence of anaesthesia, antiseptics, and skiagraphy in affording greater certainty in diagnosis, and favouring improved and simpler methods of treatment. In each volume the efforts of the author to impart full and practical instruction have been well assisted by both printer and engraver, the type being large and clear, and the illustrations, especially those in Dr. Scudder's book, remarkably distinct. In both works we meet with clear evidence of the great importance attached by modern writers on fractures to the use of the Roentgen rays for purposes of diagnosis. Both Dr. Hopkins and Dr. Scudder have of course made free application of this method, and skiagraphs of different forms of fracture are scattered profusely through their pages. The former author evidently looks upon skiagraphy when practised by experts as a useful help in diagnosis, and deems it unnecessary to point out the difficulties that await, in the practice of this method, less competent or less experienced interpreters than himself. Dr. Scudder, on the other hand, who is convinced that the use of the Roentgen rays has contributed much toward an accurate interpretation of the physical signs of fracture, has, nevertheless, done good service by showing indirectly that this aid to diagnosis should not be implicitly trusted, and that it is in its present stage of development capable of doing positive mischief. He has included in his treatise a chapter by Dr. E. A. Codman on the Roentgen ray and its relation to fractures, which gives important and much-needed information on this question. In this chapter it is pointed out that much of the real value of skiagraphy has been impaired by a premature and impulsive revelation of its uncontrolled results to the general public. He thinks it unfortunate that Roentgen's original article, which is regarded as a model of scientific accuracy, was not so widely published in the first place as the many sensational reports and absurd illustrations that appeared in newspapers. The unfortunate result is not only that it will be years before the public is freed from its first erroneous impression, but that during the process of enlightenment much trouble will be caused both to surgeons and their patients. The chief cause of so much mischief, Dr. Codman states, is the fact that so many people have been led to confuse a Roentgen-ray picture with a photograph, and to forget that it is but a shadow picture in which the shadow is more or less distorted. In many of these pictures he shows that not only may the bones be magnified, but also the interspace between them. It is very necessary to guard against erroneous conclusions in some injuries, especially in those about the elbow. In all articular injuries in young subjects, the presence of cartilage in different stages of ossification presents great and per-

plexing difficulties in interpretation. It is, as Dr. Codman holds, of the utmost importance that every practitioner who uses this means of diagnosis should fully understand the way in which any conclusion should be drawn from one of these pictures. "Though the pictures themselves are inaccurate as pictures of the object, they are accurate pictures of the different parts of the object, and the reasoning of conclusions drawn from them should be exact." Further suggestion of the danger likely to occur from a blind and unscientific confidence in skiagraphy is afforded by the report (an abstract of which was published in the BRITISH MEDICAL JOURNAL at the time of its presentation³) of the conclusions of the American Surgical Association on the medico-legal relations of the Roentgen rays, in which it is stated that the surgeon should not forget the grave possibilities of misinterpretation, as there is evidence that plates may be made that will fail to reveal the presence of existing fractures, or will appear to show a fracture that does not exist.

Dr. CARL BECK, of Philadelphia, has also written a work on *Fractures*.⁴ It is dedicated to Professor Roentgen, and is designed mainly to show the advances in diagnosis and treatment that have resulted from the systematic use of the *x* rays. Of the advantages which have resulted from the use of the Roentgen rays there can be no question, but Dr. Beck, we think, overstates his case. That diagnosis is more certain with less manipulation and an absence of suffering is unquestioned, but those who may be considered as authorities of the first rank do not admit that the statements as to the immense advances in treatment claimed by some are justified. Many of the skiagraphs in this volume are ludicrous in their immaturity. As an instance Fig. 169 may be mentioned, but others are almost equally unsatisfactory. Not a few of the negatives have evidently been "touched up" to an extent which renders them diagrammatic. The teaching is, as a whole, sound and eminently practical. There are some curt and inadequate descriptions of important injuries, as, for example, fractures of the femur; there are some, as in fractures of the lower end of the radius, which are distinctly helpful and authoritative. In the appendix there is an excellent paragraph upon "errors of skiagraphy," in which are pointed out the chief of the many difficulties that hinder a lucid interpretation of the photographic appearances. So far as treatment is concerned, the author advises the use of the plaster-of-paris splint wherever possible. Massage is considered a "splendid adjunct" to the "good old immobilisation treatment." This work contains a certain, not inconsiderable, quantity of original and useful information, and is thereby justified of existence. The author is not quite at home with the English language, as is shown by the use of words which neither custom nor scholarship can sanction.

The clinical *Atlas*⁵ of skiagraphy compiled by Professor VON EISELSBERG and Dr. LUDLOFF contains a record of the more important work achieved in this department during the last three years in the clinic at Königsberg. A very wide range of subjects is covered. There are skiagraphs of foreign bodies in the oesophagus, of Murphy's button in the large intestine, of hydatid, and of stone in the kidney, of foreign bodies in joints, of arterio-sclerosis, of disease of bones and of fractures and dislocations. The illustrations throughout are quite admirable, and afford an ample proof of the enormous improvements which have been effected in the process of skiagraphy. A stone in the ureter is shown with perfect clearness. A stone in the bladder is almost diagrammatic in its precision. An example of tuberculous disease of the carpus, metacarpus, and phalanges is as perfect as a skiagraph can be. Each plate is an illustration attached to a full clinical history of the case; the help afforded by the *x*-ray photograph in the diagnosis or treatment is stated and defined. An atlas of this kind is a considerable help in practice. The one disadvantage attached to the use of the *x* rays in the first in-

³ BRITISH MEDICAL JOURNAL 1900, VOL. I, p. 1215.

⁴ *Fractures*. By Carl Beck, M.D., Visiting Surgeon to St. Mark's Hospital and to the New York German Policlinic, etc. Philadelphia: W. B. Saunders and Company. 1900. (Royal 8vo, pp. 335, 178 illustrations. 15s.)

⁵ *Atlas klinisch wichtiger Röntgen-photogramme* [Skiagraphic Atlas]. Von Professor Freiherr von Eiselsberg, Director der Königl. Chirurg. Klinik zu Königsberg, und Dr. K. Ludloff, Chem. Ass. Arzt. Berlin: A. Hirschwald. 1900. (Royal 8vo, 36 plates, with letterpress, 37 tables.)

¹ *A Clinical Treatise on Fractures*. By William Barton Hopkins, M.D., Surgeon to the Pennsylvania Hospital. London: J. B. Lippincott Company. 1900. (Roy. 8vo, pp. 268, 126 illustrations. 18s.)

² *The Treatment of Fractures*. By Charles Locke Scudder, M.D., Assistant in Clinical and Operative Surgery, Harvard University Medical School. Assisted by Frederic J. Cotton, M.D. Second edition. London: W. B. Saunders and Company. 1901. (Demy 8vo, pp. 447, 611 illustrations. 19s.)

stance was that the skiagraph spoke to us in a new language, and the dictionary of that language was not compiled. By the careful examination of skiagraphs of such high quality as these we can study the new language, and assess the value and the limitations of the Roentgen method.

RECTORIAL ADDRESSES DELIVERED BEFORE THE UNIVERSITY OF EDINBURGH, 1859-1899. Edited, with an Introduction, by ARCHIBALD STODART-WALKER, M.B., F.R.C.P. Edin. London: Grant Richards. 1900. (Demy 8vo, pp. 337-7s. 6d.)

DR. STODART-WALKER has brought together into a compact volume, which he has dedicated to the present Lord Rector of the University of Edinburgh, the Marquis of Dufferin and Ava, the rectorial addresses delivered by successive Lord Rectors during the last forty years. Although the first Rector of the Edinburgh College was appointed in 1620, yet the office of Lord Rector as at present constituted dates only from the year 1858, when an Act was passed vesting the election in the hands of the undergraduates of the University. By this Act the undergraduate obtained for the first time direct representation on the governing body of the University, the University Court. The first Lord Rector under the new regulations was Mr. Gladstone, who was at the time Chancellor of the Exchequer. Since 1874, at any rate, the elections have been conducted—as we are told in the introduction to the volume—on purely political lines, the only real exception being in the case of the election of Thomas Carlyle. The addresses printed were delivered by Mr. Gladstone, Mr. Carlyle, Lord Moncrieff, Sir William Stirling-Maxwell, the Earl of Derby, the present Duke of Devonshire, the Earl of Rosebery, the late Earl of Iddesleigh, Mr. Goschen, Lord Robertson, and Lord Balfour of Burleigh. All are for different reasons of much interest, and particularly perhaps to Edinburgh men; and in spite of certain looseness of writing in his introduction, with what we cannot help feeling is somewhat too free criticism of the opinions contained in the addresses, Dr. Stodart-Walker has done his work well, and has conferred a favour on all interested in the leaders of our country and in the University of Edinburgh.

WILLIAM HUNTER, ANATOMIST, PHYSICIAN, OBSTETRICIAN (1718-1783), WITH NOTICES OF HIS FRIENDS CULLEN, SMELLIE, FOTHERGILL, AND BAILLIE. By R. HINGSTON FOX, M.D., M.R.C.P. London: H. K. Lewis. 1901. (Demy 8vo, pp. 75, illustrated. 4s. 6d.)

WILLIAM HUNTER's fame grows daily, but it does not in any way detract from the admiration which all pathologists must necessarily feel for John Hunter, his youngest brother and his pupil. The first part of the present work formed the oration delivered before the Hunterian Society in London on February 10th, 1897. It is now republished with very considerable additions, and Dr. HINGSTON FOX is to be congratulated very heartily on the result of his labours. He has produced an accurate and scholarly account of William Hunter, which is full of interest. It deals not only with the life and work of Dr. Hunter, but it shows the relation he bore to his contemporaries and to the great anatomical school of which he was the true founder. Dr. Hingston Fox has availed himself of all the sources of information about Hunter, including those which have lately become accessible by the generosity of Miss Hunter-Baillie. The book is illustrated with seven portrait prints, a chronological chart of the life and times of Dr. William Hunter, and a view of Long Calderwood, Hunter's birthplace. All the illustrations are well rendered, and there is a sufficient index.

NOTES ON BOOKS.

RECENT correspondence in the columns of the BRITISH MEDICAL JOURNAL indicates the lamentable possibility of a downward competition in regard to efficiency and sufficiency of the vaccinal operation as practised in England, while the letter by the Local Government Board to a public vaccinator, Dr. Christmas, commented on by us some weeks ago, raises

the fear that, under the present law, the Whitehall authorities will be powerless to prevent any such falling away from a high standard of operative procedure. In these circumstances Dr. GAYTON has done well to reprint his pamphlet on *The Value of Vaccination as shown by an Analysis of 10,408 Cases of Small-pox* (third edition, pp. 20, with table. 1s. London: Gillett and Hendry, Holloway Road, N.) Every one knows that the value of lessons derivable from statistics depends largely on the amount of statistical material. Where the total figures are small they cannot bear minute classification and subdivision into groups, containing in some cases perhaps only a few units, in which a death more or less makes an enormous difference in results stated as percentages. With the huge total of over 10,000 cases of small-pox Dr. Gayton is in no such difficulty, and his subdivisions and classifications are correspondingly reliable. On the important point of efficiency of vaccination he has been able to break up his cases into those with good marks and those with imperfect marks, and these are further grouped according to the number of marks—one, two, three, and four or more, and these figures are stated separately for the two sexes. The total fatality among males and females with imperfect marks was 9.37 per cent., and with good marks 2.6 per cent. Among males with one good mark the fatality was 4.2 per cent., with two good marks 4 per cent., with three good marks 2.3 per cent., and with four good marks 1.9 per cent. The figures in the other subdivisions correspond. Dr. Gayton points out that in an endeavour to meet anticipated objection he has made a separate classification of doubtful cases "said to be vaccinated, but without evidence," so that a critic can see for himself the effect of adding these either to the vaccinated or the unvaccinated groups.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

Gonal (Gonorol).—Under this fancy name a substance has been introduced by F. Williams and Co., 83, Upper Thames Street, E.C., and Wilcox, Jozeau, and Co., 49, Haymarket S.W., which is claimed to represent all the desirable constituents of sandal wood oil. Sandal wood oil consists of santalol (a mixture of two sesquiterpene alcohols) about 95 per cent., with esters and an aldehyde called santalal. The makers of gonal have, on the assumption that the alcoholic constituents represent the action of the drug, patented a process for isolating these constituents, the product being gonal. The process is in most respects the one usually employed for such separations. They have been led to do this because of the variation in the oil of commerce, and point to the empyreumatic products which occur in some oils, and which cannot be satisfactorily removed by rectification. Oils containing such products are, however, rarely met with, and are obtained by inferior methods of preparation. Most of the oil used in this country is distilled in London, and is a fairly uniform substance whose purity is guarded by pharmacopœial tests. In a pamphlet issued by the introducers of this remedy, it is stated that a "well-known specialist" who has prescribed it in fifty cases reports as follows: "In the treatment of urethritis in males, gonal (gonorol) gave results fully equal to those of the pure sandal wood oil. Gonal was administered to patients in daily doses of from 2 to 3 grams for periods ranging from ten to thirty days, and the absence of any discomfort when taking gonal was particularly noticeable, a freedom which is obtained only when an absolutely pure oil is employed." Such a preparation has much to recommend it from the point of view of constancy of composition, but in our opinion it will have to be tried more extensively before we can accept it as possessing all the valuable therapeutic properties of the oil. Gonal is a colourless liquid with the characteristic odour of the oil; like the oil, it is best prescribed in capsules.