

has been paid to the theoretical side of the subject, and detailed explanations are given of just those difficulties which suggest themselves to the optician, and in a lesser degree to the photographer in the beginning of their careers. While, as has been said, parts of the book will inevitably prove obscure to those who come to it without the necessary preliminary training, it contains a quantity of material of very great interest even to the amateur. The special chapter devoted to colour photography provides an excellent instance of how a highly technical subject can be treated adequately in popular language. The most technical parts of the work are relieved with occasional flashes of humour. Thus, after several pages dealing with speed indicators, the author suggests that a policeman wishing to trap a motorist should carry a tuning-fork, vibrating forty-two times a second, and look past one of the vibrating prongs at the spokes of the wheel as the car goes by. The wheels would appear stationary if driven at the statutory speed. Other tuning-forks vibrating at slightly higher rates would decide the actual speed with accuracy; but, as the author remarks, "while any exceeding of the speed limit can be determined, it is highly improbable that it would be received as evidence in court." There are a considerable number of misprints, but the majority have been detected, and Messrs. Ward have printed a table of errata for those who have already purchased the volume.

ANTISEPTIC OR ASEPTIC.

M. LUCAS-CHAMPIONNIÈRE has published in a handy octavo volume¹³ a collection of lectures delivered at the Hôtel-Dieu.

The book is an important and valuable contribution to the literature of antiseptic surgery by one of its earliest apostles. Forty years ago he studied the subject under Lister, and was one of the first surgeons to adopt it and to introduce it in Paris, with the success which is well known throughout the surgical world. Many valuable lessons are to be learnt from the perusal of M. Lucas-Championnière's book, which may be recommended to the attention of the younger generation of surgeons who have been brought up in the aseptic school. Some of them have not yet fully realized the dangers of the absence of antiseptics in ordinary everyday surgical practice. In discussing the relative value of antiseptic as contrasted with aseptic surgery interesting statistics are given showing the certainty with which operations in what is perhaps the most dangerous branch of surgery—the surgery of the joints—has been carried out without a single case of death from septicaemia during a period of over thirty years. M. Lucas-Championnière has probably operated by suture for fracture of the patella on more occasions than any living surgeon; 1,135 cases of radical cure of hernia, without a single death attributable to septic infection, are also recorded, and the author states that he has never employed gloves or masks, as now used by many aseptic surgeons. M. Lucas-Championnière's experience in antiseptic surgery dates back to November 20th, 1874, when he performed the first operation under the antiseptic system in France, and probably one of the first in the world outside the British Isles.

The expressions of opinion contained in this book are founded upon temperate argument and sound judgement, whilst at the same time there is evident the fervent enthusiasm of a disciple who learnt the gospel from the lips and from the acts of the great master himself, and is wholly imbued with the invaluable blessings conferred by him on suffering humanity.

An excellent portrait of Lord Lister forms a frontispiece to the volume.

NOTES ON BOOKS.

THE *Medical Register* for 1909¹⁴ was issued on March 19th; it contains 40,257 names, as compared with 39,827 names last year, 37,878 names in 1903, and 35,836 in 1899. A part of the increase, not a very large part, is due to the growth of the Colonial list, which now contains the names of 219 Colonial graduates, of whom 79 register an address in this country. The foreign list contains 27 names; in

every case the degree registered is from an Italian university, and of this total 12 practise in Great Britain, all of them in London, and 6 in British colonies or dependencies. It appears that altogether 781 names were removed from the *Register* during 1908—672 on evidence of death, 3 under penal provisions, 3 on ceasing to practise, and 103 under Section XIV of the Medical Act, 1858, which empowers the Registrar to remove a name if no answer is received to a letter of inquiry. The *Dentists Register*,¹⁵ received on the same date, contains 4,994 names; 2 are those of Colonial and 22 of foreign dentists. The percentage of registered United Kingdom dentists who are now licentiates or graduates in dentistry is 58.29, and of the licentiates and graduates in dentistry 351 have registered surgical or medical qualifications in addition to a dental qualification.

The edition of the *Medical Annual*¹⁶ for 1909 is in external appearance identical with its predecessors of the last few years, but on turning over its pages seems more freely illustrated. There are, for instance, in the present or twenty-seventh edition, as many as 54 coloured plates, as well as some 160 engravings. Of the coloured plates a large number appear in connexion with articles on diseases of the eye, of which some are written by Mr. ERNEST MADDOX and others by Mr. J. H. YEARSLEY. The book as a whole is the work of some thirty-seven contributors, English, American, and Continental; with few exceptions they are men well known as authorities or writers on the subjects with which they deal. In connexion with many previous editions of this book we have drawn attention to its value, especially to those engaged in active practice; they will often obtain from it a hint as to the treatment of a puzzling case, and even if constant students of current literature they cannot fail to find utility in its summaries of papers which have appeared in various periodicals on special points in medicine and surgery and in the field of diseases covered by the various specialities. The latter, indeed, receive a generous amount of notice throughout the work. In addition, the volume contains abstracts of the more important legal decisions affecting medical men and the public health delivered during the preceding twelve months, and a very useful classified list of the principal medical works published during the corresponding period. There is a good general index, but reference to its contents would be facilitated if a list were given of the headings of each separate article.

The edition for 1907 of *Die therapeutischen Leistungen*, edited by POLLATSCHKE and NÁDOR,¹⁶ was received on March 15th. It is a yearbook intended for the use of practitioners, and contains abstracts, under alphabetical headings, of papers published during 1907 deemed by the authors to be of more or less permanent importance. It is intended, of course, as a work of reference, and the editors have taken pains to provide an excellent system of indices, an alphabetical list of diseases, another of authors, general subject index, and, finally, a short index of drugs and other remedies.

The volume designated *The World I Live in*¹⁷ is by Miss H. KELLER, the talented American whose marvellous progress and proficiency in a literary education, in spite of being the subject both of blindness and deafness from infancy, were set forth in a previous autobiographical work (*The Story of My Life*, reviewed in the BRITISH MEDICAL JOURNAL of November 28th, 1903, p. 1409). The chapters of her new book are full of psychological as well as of physiological interest. Those familiar with the methods of education of the blind will perhaps be prepared for the statements made under the heading of "The Seeing Hand"; but those comprised under such titles as "The Hands of Others" and "The Hand of the Race," evidence mental discrimination on the part of the percipient of no common order. In fact, Miss Keller seems to be an expert "thought-reader," and is able to judge of the character, moods, and even tricks of speech of those with whom she is brought into contact. "Mark Twain's hand," she says, "is full of whimsies and the drollest humours, and while you hold it the drollery changes to sympathy and championship." Of the hands of our own profession she writes in complimentary terms, stating that "if the physician is a man of great nature,

¹⁵ *The Medical Annual: A Yearbook of Treatment and Practitioner's Index*. Bristol: John Wright and Sons. 1909. (Pp. 744.)

¹⁶ *Die therapeutischen Leistungen des Jahres 1907*. Bearbeitet vom Herausgeber Med. und Chir. Dr. A. Pollatschek und Med. u. Dr. H. Nádor. XIX Jahrgang. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1908. (Roy. 8vo, pp. 374. 8s. 8d.)

¹⁷ *The World I Live in*. By Helen Keller. London: Hodder and Stoughton. (Cr. 8vo, pp. 257; 4 illustrations. 3s. 6d.)

¹³ *Pratique de la Chirurgie Antiseptique*. Par le Docteur Just Lucas-Championnière. Paris: G. Steinheil. (Roy. 8vo, pp. 473. Fr. 8.)

¹⁴ Spottiswoode and Co. 1909. Price of *Medical Register*, 10s. 6d.; *Dentists Register*, 3s. 4d.

there will be healing for the spirit in his touch. This magic touch of well-being was in the hand of a dear friend of mine who was our doctor in sickness and in health. His happy, cordial spirit did his patients good whether they needed medicine or not." The book is illustrated by four admirable photographs, one of which represents Miss Keller "listening" to the trees and enjoying the rustle of the leaves through the medium of fine vibrations conveyed along the trunks! Of the sense of smell she says "there is something of the fallen angel about it," though she proceeds to tell us that in her own experience she learns and remembers much from olfactory impressions. No less than three chapters are devoted to the subject of dreams, and these we may briefly epitomize in her own sentence: "My dreams do not seem to differ very much from the dreams of other people." Of the book we have said enough to show that it is a remarkable work by a remarkable author.

Dr. F. F. STRONG of Boston, in his book entitled *High-Frequency Currents*,¹⁸ comes forward not so much with an impartial survey of the whole subject as with an explanation and defence of his own methods as an American electro-therapeutist. He claims to rank as a pioneer of high-frequency therapeutics on the ground that since 1896 he has been employing the bipolar high-potential currents of Tesla, which, he says, possess considerable advantages over the better-known low-potential currents of d'Arsonval and the monopolar high-potential effects of Oudin. Dr. Strong's theory to account for the immunity of the human body is that high-frequency currents are simply forms of vibration, like sound waves, and their passage involves the transmission of energy and not of matter. He has treated pulmonary tuberculosis by high-frequency. The writing would have benefited by further revision, and there are some misspellings, of which "J. J. Thompson" is an example.

It has not hitherto been easy for individuals who wished to possess a general knowledge of man's structure, nature, history, and relationships, to gain that knowledge, except at the expense of considerable labour and extensive reading, for the data, though numerous, are scattered, and they are often given in extremely technical language. LUDWIG HOPF'S *Human Species*¹⁹ is an attempt to provide the general knowledge so many people require in compact form and in simple language. Commencing with a few general considerations, the author passes on to the distribution of man in space and time. Then in a very general manner he deals with the anatomy of the various systems and organs, which he compares with those of other animals. In a similar manner he deals with the physiology of the senses, with psychology, and social life, art and handicrafts and music; he brings his volume to a conclusion with a consideration of pathology and diseases as they affect man and his more immediate neighbours. The book will appeal to those who like to possess a superficial knowledge of many things, and it will probably induce some of its readers to dip deeper into many of the fascinating subjects upon which it touches.

¹⁸ *High-Frequency Currents*. By Frederick Finch Strong, M.D. London: Rebman, Limited. 1909. (Royal 8vo, pp. 309; 183 illustrations. 2s. 6d.)

¹⁹ *The Human Species*. By Ludwig Hopf. London: Longmans, Green and Co. 1909. (Med. 8vo, 477 pp., 216 figs. 10s. 6d.)

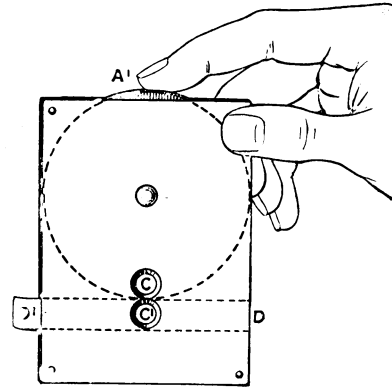
MEDICAL AND SURGICAL APPLIANCES.

The Rotary Haemoglobinometer.

DR. ARTHUR J. HALL (Lecturer on Practical Medicine, Sheffield University) writes: The value of a quantitative estimation of haemoglobin, either alone or as part of a complete blood examination, is generally recognized. So far, however, it is not made use of by the majority of practitioners in this country to the extent that it might and ought to be. One cause of this is, undoubtedly, the length of time involved in making such estimations. Any method which, while reasonably accurate and reliable, reduces the time and simplifies the apparatus required, is likely to increase its use in general practice. No method could be devised which would exceed in simplicity of apparatus and rapidity of performance that suggested by Tallqvist in the well-known form of the "haemoglobin scale" books. But, like other methods, it has its defects, and, according to some who have tried it, those defects render it unreliable. It is with the view of diminishing or removing some of the sources of error, in a method which presents so many clinical advantages to the general practitioner, that I bring forward the rotary haemoglobinometer.

It is founded on the same principle as the haemoglobin scale of Tallqvist—namely, the saturation of a piece of absorbent paper with pure blood, and its comparison with a set of artificial standard tints representing normal blood and its dilutions.

Description.—The apparatus consists of a rotating metal disc, on the front surface of which the standard colour tints are arranged at intervals near the circumference, whilst the percentage numbers corresponding to each tint are similarly arranged on its posterior surface. The disc is encased between two rectangular plates of ebonite (size 2½ in. by 2½ in.), each of which has a small round hole (C in front plate) in it corresponding with that part of the circumference of the revolving disc upon which the colour tints and percentage numbers are respectively situated. When the disc is rotated by the forefinger (A') the successive standard tints in turn completely fill the hole in



the front plate, whilst on turning the instrument over, the corresponding percentage of haemoglobin which that tint represents, can be read off through the hole in the posterior ebonite plate. The accompanying illustration shows the general arrangement as seen from the front. Close beside the hole, C, there is a second hole in the front plate of the same size and shape (C'). By means of a narrow space between the two plates (D and D') a slip of absorbent paper can be pushed in, as at D', so as completely to occupy the hole (C').

Method of Use.—After pricking the finger or ear of the patient whose blood is to be examined, a slip of absorbent paper is torn out from one of the small books of slips provided with the instrument, and a good-sized drop of blood is carefully blotted up at one end so as to make a stain larger than the size of the opening at C'. The slip is then pushed into the slot D', so that the blood stain fills up the hole C'. The disc is then revolved by its projecting milled edge at A' until the tint is found with which it most nearly corresponds. The instrument is then turned over, and the haemoglobin percentage read off through the hole in the under surface.

The instrument can only be used in ordinary daylight.

Advantages.—The advantages which this instrument offer for the busy practitioner are:

1. Its small bulk.
2. The absence of all glass apparatus or liquids.
3. The ease with which the colours can be compared owing to:
 - (a) The exactly similar size and shape of the two areas of colour to be compared.
 - (b) The absence of any other colour from the visual field whilst making the estimation. This is obtained by having the upper ebonite plate of a uniform dull black.
 - (c) The absence of any knowledge as to the actual percentage of the various tints until after the comparison has been made.

This last advantage is a real one, for, as has been pointed out by Sahli, the unconscious influence which a knowledge of the percentages may have upon the examiner at the time of comparing the colours is not inconsiderable. Sahli has to a certain extent met this difficulty in his modification of the Gowers haemoglobinometer, but by means of the rotary haemoglobinometer, on account of the various tints being arranged in a circle, this particular object can be more completely attained than by instruments of other shapes. If an estimation has been made, and the percentage of any particular tint ascertained, it is only necessary to rotate the disc again out of sight, to be able to repeat the examination without in the least knowing the position of the scale.

The instrument has been made at my suggestion by Mr. T. Hawksley, 357, Oxford Street, London, to whom I am greatly indebted for the great pains he has taken in preparing an original standard set of colours, which seem very satisfactory, and for the neat and compact instrument which he has evolved from my crude suggestions. The whole case containing needles, rotary haemoglobinometer, and books of slips can be easily carried in the pocket.