Semmelweis: His Life and Doctrine. A Chapter in the History of Medicine. By Sir William J. Sinclair, M.A., M.D., Professor of Obstetrics and Gynaecology in the University of Manchester. Manchester: At the University Press. 1909. Price, 7s. 6d. nett.

It is remarkable that hitherto we have had in English no comprehensive account of Semmelweiss's life and great work, with the exception of a short but accurate and appreciative pamphlet by Dr. Duka. Professor Sinclair has removed this reproach in the present monograph, and done so in the most admirable manner. He possesses all the necessary qualifications for such a task—precise knowledge, enthusiasm, a vigorous clear style, and no hesitation in laying blame on the right shoulders. The present work will take a high place in medical biography.

Semmelweiss was born at Buda in 1818 of well-to-do parents, and was a Hungarian by descent. After study at Pesth and Vienna, he began his life work in one of the great obstetric Kliniks of the Vienna allgemeines Krankenhaus. He did so at a most important epoch of its history. Boer, a follower of British methods, had been ousted from a position he had held with high credit, for a reason that will now appear strange to all, viz. for refusing to teach operative midwifery on the cadaver, and Klein, the incarnation of bigoted officialism, took his place. As to Klein's teaching we need mention only one fact—"he weakly consented to teach midwifery, even to midwives, by demonstrations on the cadaver instead of the phantom" (p. 14). The puerperal mortality at once rose from 0·84 per cent. in 1822 under Boer, to 7·8 per cent. in Klein's first year. Semmelweiss was an enthusiastic pathologist, and this mortality appalled him. From his sensitive and honest nature he deeply felt the loss of life, and determined to get at its cause. The picture given of the routine treatment of the lying-in women at that time appals us now. Frequent examination of the parturients by hands fresh from septic or non-septic post-mortems, were made early in the morning, and might be repeated, in delayed cases, at midday and in the evening. No wonder that Semmelweiss could predict death to any primipara, however strong and healthy, if her first stage were prolonged unduly.

In the Midwives' Klinik, where no students attended, the mortality was much lower, and this was a great directing fact. Semmelweiss

1 Operative courses were still given to graduates in Vienna on the cadaver in 1877 by the obstetric assistant, and when no eviscerated body was available, "Kein cadaver, kein Curs?" was chalked on the board. On one occasion an excited student, feeling he was not getting worth for his money, rushed forward and wrote up below this, "Wir haben sieben Stunden verloren; sieben Stunden, zwanzig Gulden." All antiseptic precautions were, of course, taken, and the cadavers were presumably not from septic cases.
collected and collated the labour results in both those Kliniks most carefully, and demonstrated the excessive mortality in all its relations. He noted all the facts he could—the comparative immunity from sepsis of the "Gassengeburten," i.e. of women delivered on the way to hospital and therefore not subjected to examination: the curious occurrence of septic cases, sometimes in a series of women lying side by side, sometimes in irregular succession. All causes of this were considered—epidemic, mental, postural during delivery and so on—but all explanations based on these were answered by the fact of the comparative immunity from sepsis in the Midwives' Klinik and in Vienna itself. It would take too long to give all the curious facts mentioned, the puerperal Geruch (odour) of the wards, and again the Abort (closet) Geruch! That must be read in Sinclair's vivid description.

One may wonder how the real cause was not discovered. The main reason was the pathological teaching. What are we to think of such teaching as that of the well-known Scanzoni, a bitter opponent of Semmelweissism? "The condition sine quâ non is the fibrinous crisis of the blood, which, when it rises to a high degree, represents the immediate cause of the disease, and consequently the essential element in the ordinary puerperal fever. It originates under influences of a cosmic telluric character. By no means is the wound of the uterus, represented by the placental site, the real cause and origin of the puerperal fever" (p. 90). Semmelweiss was imaginative and prophetic in his temperament, and the final inspiration came to him from a sidelong, as it were. Kolletschka, a colleague of his, and Professor of Medical Jurisprudence, received a finger infection from an accidental wound during a post-mortem examination, and died as a septic puerpera may die, with peritonitis, pleurisy, and, finally, double panophthalmitis. This would not have inspired the official intellect, but to Semmelweiss it suggested at once that the uncleaned hand of the student in attendance on a lying-in woman after a post-mortem, was the real cause of the terrible mortality in the Klinik. All facts fell into line with this view, and when hand disinfection was employed the explanation was clinched by the fall in the mortality. Semmelweiss vehemently urged his views; Skoda, Rokitansky and other eminent colleagues supported him, and the result was—loss of his position in Vienna, relegation to Buda-Pesth, apathy on his part after a time, neglect of his work, and, finally, his death in a lunatic asylum in 1865, the immediate cause, curiously enough, being sepsis from a finger infection. So died a great benefactor of womankind.

It would take too long to mention the many interesting facts brought out in this work. The black list of opponents to Semmelweiss is striking. Klein is, of course, there, Scanzoni, Kiwisch, Carl Braun, Dubois, even Litzmann and Virchow, alas! are in it too. It is sad reading. Our own country comes out favourably, as Routh, J. Y.
Simpson, and many others received and spread the doctrine, but the general opposition abroad is not understandable.

A summary as to the forerunners and contemporaries of Semmelweiss in civilised countries, of their methods of midwifery instruction, and the reception they gave—a very varied one indeed—to Semmelweiss's views, forms a valuable part of this work. The concluding chapter gives the modern bacteriological work, the analysis, as it were, of Semmelweiss's cadaveric poison.

Semmelweiss's life is really a tragedy, and follows its laws. The hero, Semmelweiss, has an untimely end, as the hero in tragedy must have. Villainy is represented by the University and Hospital official school, who triumph at first, only to be pilloried for all time, a worse fate than Iago's. Semmelweiss's virtues were his sympathy, and self-sacrifice; he had genius, but was no diplomat, and a mere child in the hands of officials with family and Court influence. His faults were his impulsiveness, the way he ultimately alienated some of his friends, and his neglect to publish his facts early enough. They were the defects of his temperament, but a cooler man would not have done so much. We may well say, "Who can control his fate?"

It is interesting to note Semmelweiss's method of work. He had keen sympathy with the untimely deaths from puerperal sepsis, genius and patience in the collection of facts, and then, finally, that imagination which a sideline inspires. Kolletschka's death gave this. So with Darwin and Wallace. Both, when full of facts and anxious for light on the origin of species, got it from Malthus's theory when far apart—the one in England, the other in Ternate. We may regard Pasteur's influence on Lister in the same way.

The whole narrative goes with a swing and clearly; the thread of description and argument is never lost. It is a book all obstetricians and research-men should read. They will profit by its study. As for the descendants of the official school, nothing touches them but self-interest, and there is nothing of that in Semmelweiss's life.

The "Nauheim" Treatment of Diseases of the Heart and Circulation. By Leslie Thorne Thorne, M.D., B.S., M.R.C.S., L.R.C.P. Third Edition. Pp. 82. London: Baillière, Tindall & Cox. 1909.

This little book contains four chapters, an introduction, and fifty-eight illustrations. We are first told how to give the baths, and something of their mode of action; the "Schott" exercises are described: Chapter III. is on the Selection of Cases Suitable for Treatment, and in the remaining chapter the author gives examples of illustrative cases. The book does not constitute any very valuable addition to our knowledge of the treatment of disease of the heart and circulation.
Graphic Methods in Heart Disease. By John Hay, M.D., M.R.C.P., Assistant-Physician, Liverpool Royal Infirmary. With an Introduction by James Mackenzie, M.D., M.R.C.P. Pp. 184. London: Henry Frowde, and Hodder & Stoughton. 1909. Price 7s. 6d.

The importance of the accurate clinical study of the circulation by means of graphic methods is now widely recognised, and the investigation of the heart by such methods is slowly but surely becoming an almost essential part of the routine examination of the circulatory system in every case where there is any doubt as to the functional efficiency of the cardiac organ. The epochal researches of Gaskell, of Mackenzie and of Wenckebach have enabled us within recent years to study and to understand many of the most complex problems in the pathology of the circulation in a manner that was formerly impossible. By taking simultaneous tracings from the jugular vein and from the radial artery or the apex-beat of the heart, we can now obtain with considerable facility very satisfactory records of the movements of the different chambers of the heart. The difficulty arises when we proceed to analyse and interpret the tracings. It is true that the methods of analysis have been carefully described, not only in a number of papers that have appeared recently in the medical journals, but also in Mackenzie's work on Diseases of the Heart. Yet the want of some small book which describes how graphic records may be obtained and analysed has been acutely felt by all those who were commencing to study the affections of the heart by these modern methods. The book written by Dr. Hay is an admirable guide to the whole subject. The author's original investigations in this particular sphere of internal medicine are so well known that we turn to his book in the sure and certain hope of finding a logical, succinct and lucid exposition of the subject.

The work opens with a consideration of some of the more important anatomical facts and physiological principles regarding the heart's structure and mode of action which it is important for the clinician to bear in mind. The instruments and methods that can be employed at the bedside for recording the movements of the heart and the pulsations of the arteries and veins are then described, and the author thereafter shows how the records can be analysed and interpreted. Special stress is, of course, laid upon the analysis of the tracings taken from the jugular pulse. The difficult subject of the extra-systole is next considered. Adopting Mackenzie's classification of the varieties of extra-systole, the author speaks of auricular, ventricular or infranodal, and nodal extra-systoles.

The subject of "the nodal rhythm" is then fully discussed, and it is shown that in this condition, where the cardiac arrhythmia is usually
persistent and continuous, and where there is no regularity in the dis-orderly rhythm, the auricles contract simultaneously with the ventricles, both the auricles and ventricles contracting in response to a stimulus which probably arises in the auriculo-ventricular node described by Tawara. The following chapter deals with the functional disturbances of the heart's action—the disorders of conductivity, excitability, contractility, stimulus production and tonicility. The text is well illustrated with numerous excellent graphic records. In their interpretation and description the author very wisely gives the explanations which appear to him to be the most reasonable. Controversial theories are always touched upon as lightly as possible. While the work is, therefore, essentially a handbook, it is in reality more than that, for it is not only a work of great practical utility, but is one of the most valuable of recent additions to the literature on diseases of the heart.

The Principles of Clinical Pathology: a Text-Book for Students and Physicians. By Dr. Ludolf Krehl, Ordinary Professor and Director of the Medical Clinic in Strassburg. Authorised Translation from the Fourth German Edition by A. W. Hewlett, M.D. Second Edition. Pp. 520. London: J. B. Lippincott Co. 1909. Price 21s.

The application of the principles of physiology to clinical medicine is so well presented in Krehl's Pathologische Physiologie, and the original shows so clearly how many clinical problems which would otherwise be obscure can be interpreted in the light of well-known physiological facts and principles, that we are pleased to find a second edition of the English translation is now published. The volume deals with much that is of the greatest interest to the physician, the chapters on the Heart, Nutrition and Metabolism, Fever, Immunity, and the Blood being specially worthy of notice. Much new material has been introduced into the sections dealing with the cardiac arrhythmias and with immunity. It is somewhat unfortunate that the text is not always so well up to date, and the reason for this defect in a work which is otherwise most useful and reliable is probably to be found in the fact that while the editor's preface is dated 1907, the work was not published until 1909.

Symptoms and Their Interpretation. By James Mackenzie, M.D. London: Shaw & Sons. 1909. Pp. xx. + 297. Price 7s. 6d. nett.

Those who have been keeping an eye on recent additions to medical knowledge do not hesitate to acknowledge the unique position quietly achieved by the author of this interesting book. By his work on
the pulse, the heart, and certain portions of the nervous system, Dr. Mackenzie has given a new impetus to medical observation, and has shown once more that even in well-harvested fields there is much to glean and gather. Here in small compass we have observations carefully made during a lifetime, and many of them will be found invaluable in diagnosis. After a thoughtful introduction and a classification of the symptoms of disease, pain in its various forms is discussed, especially visceral pain. This is regarded as "referred," that is, it is not felt in the organ but in the peripheral distribution of cerebro-spinal nerves. In the latter part of the work, the association between symptoms and affections of various organs is discussed. The lucidity of the descriptions is conspicuous, and is aided by excellent diagrams and by selected cases. The book is one which every practitioner ought to invest in; it is likely to become a classic.

The Influence of Heredity on Disease, with Special Reference to Tuberculosis, Cancer, and Diseases of the Nervous System. London: Longmans, Green & Co. 1909. Pp. 142 + xii. Price 4s. 6d. nett.

In view of the keen interest which is being taken in heredity, the Royal Society of Medicine held a discussion on the above subject at the end of last year, and they have done well to publish a verbatim account of it. The opinions of twenty men, more or less distinguished in their various lines, are here given, and although it cannot be said that anything has been settled that was previously in dispute, still the need for truly well-directed enquiry is brought home to the medical profession, whose members have the best opportunities for answering many questions here raised.

Rational Immunisation in the Treatment of Pulmonary Tuberculosis. By E. C. Hort, B.A., B.Sc., M.R.C.P.E. Pp. 75. London: John Bale, Sons & Danielsson, Ltd. 1909. Price 3s. 6d.

The volume contains several papers on the therapeutic value of different inoculation methods. The papers are speculative and critical rather than constructive. They include a discussion of the relation of inoculation to other methods of treatment, a consideration of the various methods of inoculation, and a somewhat sweeping statement as to the unreliability of the tuberculo-opsonic index.

The writer seems to have thought a good deal about the subject. Some of the ideas are interesting, but unfortunately their exposition suffers through considerable obscurity of expression and the use of a terminology which probably means more to the writer than to the reader.
On the Poison of Venomous Snakes and the Methods of Preventing Death from Their Bite. Reprinted papers by the late Sir Joseph Fayrer, Bart., Sir Lauder Brunton, Bart., and Major Leonard Rogers, L.M.S. Pp. 174. London: Macmillan & Co. 1909.

The nature of this book precludes it from being of much use to the general reader. It will, however, fulfill the praiseworthy purpose which in a short preface one of the authors claims for it, namely, to give a wider circulation to the work of the late Sir Joseph Fayrer, and to render more accessible to future investigators one part of the now enormous literature on snake venoms.

Diseases of the Breast, with Special Reference to Cancer. By William L. Rodman, M.D., LL.D. Pp. 385, with 69 Plates and 42 other Illustrations. London: Sidney Appleton. 1908.

The surgery of the breast owes much to American surgeons, and we cordially welcome this contribution to the literature of the subject by one whose name has come to be identified with some of the more recent advances. Nearly two-thirds of the volume is devoted to the subject of cancer, and the various problems relating to this most important disease are exhaustively and judicially discussed. With regard to the vexed question of the mode of dissemination of mammary cancer, after a full consideration of the respective claims of the embolic and permeation theories, the author states that he is not prepared to accept the permeation theory of visceral dissemination, although he attaches very considerable importance to the brilliant work of Mr. Handley on this subject. Nor indeed is he “prepared to accept as entirely satisfactory any of the theories of dissemination thus far advanced, for the reason that there are cases in which remote metastases occur which cannot be adequately explained by any of them.”

An earnest advocate of extensive operations, the author believes “that surgery should cure one-half of all cases, provided they can be subjected to the complete operation early in the course of the disease.” He would extend Volkmann’s three-year limit of immunity from recurrence to at least five years before pronouncing the patient cured. Several methods of performing the modern complete operation are fully described, and a series of excellent plates illustrative of the various steps make the descriptions perfectly clear. The same may be said of the plastic resection of the breast after Gailliard Thomas’s method, as modified by Warren.

In a supplementary chapter on Paget’s Disease of the Nipple, the author argues, and to us seems to prove, that this disease is cancerous from the beginning, and is not merely a precursor of cancer.
In the treatment of acute mastitis we miss any reference to the use of the Klapps suction bell for inducing hyperaemia, a method which has proved of value. The chronic inflammatory affections of the breast, and their relations to general cystic disease, are fully described, and although the author declares that he believes chronic diffuse mastitis with cyst formation, and general cystic disease of the breast, to be one and the same disease, the essential nature of these conditions does not seem to have been made clear. With reference to some important points relating to diffuse hypertrophy of the breast, the author differs from the opinions of Sir George Beatson recently expressed in the pages of this Journal.

We can confidently recommend this work by Dr. Rodman as a faithful presentment of the present-day aspects of the surgery of the breast.

Surgical Anæsthesia. By H. Bellamy Gardner, M.R.C.S., L.R.C.P. Pp. 240. London: Baillière, Tindall & Cox. 1909. Price 5s. nett.

This book is evidently the result of many years' thought and experience. The subject is presented from a broad and scientific standpoint, and the language throughout is plain and expressive. The author has formed several strong opinions, which he is not afraid to commit to paper. We note one of these in connection with anæsthesia for abdominal sections in patients who, from some rigidity of the chest-wall, have habitually to rely on the abdominal muscles as part of the respiratory mechanism. In these cases, Mr. Gardner points out, complete relaxation of the recti abdominalis can only be obtained at the expense of passing the line of absolute safety. In such extreme conditions as advanced emphysema, this fact is of course generally recognised, but we doubt whether, in minor degrees of insufficiency of the ordinary muscles of respiration, the importance of the disability from the point of view of the anæsthetist is always taken into account. Those who give anæsthetics for dental surgeons will be interested in the account of the method, which the author perfected in 1906, of combining the administration of nitrous oxide gas, through the nose, with that of oxygen. This must be considered a great advance upon Paterson's original method. The use of ethyl chloride the author has entirely abandoned, believing that the fall of blood-pressure which it causes is dangerously rapid, and the after-effects unduly severe. The account given of the physiological action of chloroform strikes us as rather meagre, and as containing less than the student should be expected to know of this important subject. With this exception, the general plan and scope of the book are excellent, and students and practitioners will find it a safe guide to the principles underlying the right administration of anæsthetics.
An Atlas of Dental Extractions, with Notes on the Causes and Relief of Dental Pain, Designed for the Use of Medical Students and Practitioners. By C. EDWARD WALLIS, M.R.C.S., L.R.C.P., L.D.S., Assistant Dental Surgeon, King's College Hospital, &c. Pp. 26 and Plates. London: J. & A. Churchill, 7 Great Marlborough Street. 1909. 3s. 6d. nett.

It is somewhat difficult for one trained in the methods of the Edinburgh School to review a work on the extraction of teeth by the exponent of another school. The teaching and practice here are so heterodox that a book such as this, which is orthodox from cover to cover, can only be an exposition of how not to proceed. The Atlas is admittedly published for the guidance of the general medical practitioner, and there is a preliminary chapter on the Causes and Relief of Dental Pain, on Local Anaesthesia in Dental Practice, and on the Treatment of Hæmorrhage and Post-Operative Pain. Making all allowance for the orthodoxy of the teaching, there are some statements open to question—e.g. that five is the minimum number of forceps for any ordinary extraction; that the bicuspid erupt between the roots of the temporary molars; the line of demarcation assumed to exist between the mucous membrane and periosteum of the palate; and the recommendation to stop hæmorrhage by holding very hot water in the mouth.

The illustrations of teeth are very poor, and the number of plates might have been very much reduced by not repeating the photographs, one of which occurs five times and very many others three times.

Golden Rules of Dental Surgery. By CHAS. W. GLASSINGTON, M.R.C.S., L.D.S.Edin., Lecturer on Dental Materia Medica and Therapeutics (late Dental Surgeon) to the National Dental Hospital and College, &c. "Golden Rules" Series, No. xiii. Third Edition. Pp. 72. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1909. 1s.

This little book, which has already proved its worth by reaching a third edition, is brimful of good advice and sound teaching. Since another edition is certain to be called for, we would suggest one or two improvements. Thus "dead tooth" is loosely used for "dead pulp," and, page 33, very few would support the advice to extract the first permanent molars. Again, ethyl chloride produces a better anaesthesia in children than N₂O + O, which the author recommends; and, finally, would it not be better to say what Condy's fluid is than what it is not? Such blemishes, however, seem only to throw into sharper relief the excellence of the book as a whole, and we confidently recommend it to our readers.
This book is one of the most valuable contributions that have been made to ophthalmology for some years, and English readers are under a great obligation to the translator for placing such an important work before them in their own tongue. We have read the book most carefully from beginning to end, and have no adverse criticism to offer, but simply unbounded praise. It is not a work that should be relegated to the book-shelf when read, but should lie on the laboratory table beside the microscope for constant reference, for it bears the same relation to the ophthalmic bacteriologist as "Ellis" or "Cunningham" does to the anatomical student at the dissecting table. Since the work appeared in German in 1907, Professor Axenfeld has extended parts of the text, so that the present issue may be regarded as a second edition, the proof sheets having been revised by the author himself.

The work consists of eleven chapters, with introduction and index, and covers the whole ground in an admirable manner. It is interesting to observe that it is dedicated to Morax, the distinguished Parisian ophthalmic bacteriologist, who has frequently in conjunction with the author done such excellent work in ophthalmic bacteriology.

Chapter I. deals with technique, such as staining, preparation of culture media, inoculation into the eyes of animals, &c., the information given being clear and to the point.

The normal conjunctiva and lids are dealt with in Chapters II. and III. in a most interesting and instructive manner. The flora of the normal conjunctiva, we are told, is very variable, there being no constant inhabitants. The number of micro-organisms increases under a bandage, because the lids are kept still and the temperature thereby becomes increased. The number varies in the same individual at different times of the day, while the absence of blinking, it is stated, prevents the passage of bacteria into the nose. Of the pyogenic micro-organisms met with, the pneumococcus is relatively the most common. It is gratifying to know that, in the majority of cases, the normal conjunctiva contains no virulent pyogenic micro-organisms, that the tears form a bad medium for growth, and that the number of micro-organisms is continuously being lessened by the constant flow of sterile tears through the lachrymal sac into the nose; but in the absence of winking there is no transmission into the nose.

The subject of wound infection is discussed in thirty pages, and is worthy of the most careful perusal, containing, as it does, many valuable suggestions as well as well-known and established facts. The bactericidal action of the tears plays a very small part in the auto-
sterilisation of the conjunctiva. "Post-operative conjunctivitis" is certainly less common, we are told, with the open treatment and thorough asepsis, while antiseptic compresses laid on the lids have very little influence on the presence of pyogenic micro-organisms. This is a strong argument for treating all wounds aseptically and not antiseptically by antiseptic lotions and dressings impregnated with antiseptics. Another point of the utmost importance to the operator is, that wounds, as shown by experiments on rabbits' eyes, made with septic instruments practically always suppurate, but when virulent cultures of "aureus" were dropped into the conjunctival cul-de-sac of rabbits and then the section made with sterilised instruments, only 20 per cent. became infected.

The conjunctiva, like all mucous surfaces, cannot be made absolutely sterile without damaging it by the very means employed. Further, we are told (it is an old tale now) that the usual antiseptics have no advantage over a simple saline solution.

The pneumoecoccus is by far the most important micro-organism in post-operative infection of the globe, and in tear duct obstruction the lachrymal sac affords conditions most favourable for the growth and increase of the virulence of micro-organisms, especially the pneumoecoccus. It is gratifying to note that under no circumstances can the pneumococcus pass upwards from the nose through the healthy tear duct, neither can it pass when there is a permeable stricture. Healthy lids are not dangerous, but when blepharitis supervenes the lids become a very fertile means of infection. Conjunctivitis and special forms of conjunctival infection together with lachrymal affections, are discussed in Chapters V., VI. and VII., while corneal lesions, leprosy, tuberculosis and syphilis of the eyes, endogenous infection and orbital inflammation are all fully treated in the remaining chapters.

We very heartily recommend this most valuable work to everyone who wishes to become acquainted with the latest information regarding the bacteriology of the eye, and to all operators, for they will find in it valuable suggestions which are bound to have far-reaching importance on their work.

It is, in short, a magnum opus.