

and too restricted in its particulars; but we have to make proper allowances for the difficulties in treating of this immense subject within the narrow space of the thirty-five pages which the author has allowed himself. A subsequent chapter, which might perhaps with advantage have come nearer this one, deals with the pathology of infection. The two make a harmonious whole. In it he treats of infection, of the types of infective disease, of susceptibility and immunity, of bacterial factors influencing the occurrence of infection, of latency in infective disease, etc. With much the author says, it is easy to agree, and we are further able to admire the ability with which he marshals his facts, and the clearness of his deductions. It is open to question, however, if he has not given too much prominence to types of infective diseases, careful though he has been to point out that such a type is not a constant factor. It is indeed true that some bacteria grow and multiply locally without gaining access to the blood and tissues, while others readily do gain this access, but the wisdom of placing them in separate types may be doubted. Thus, a streptococcus which produces merely a local inflammation may, on its virulence being exalted, produce a rapidly fatal septicæmia. Again, the author says, the type of infective disease is not the same in all animals. This is true; but we have again to remember the influence of the virulence in this relation, for, as Knorr has shown, streptococci, on being inoculated in series through a number of mice, acquire increased virulence for these animals, but become less virulent for rabbits. His chapter on the heart and pericardium is an excellent one, the physics of pericardial pressure especially being clearly explained. Tachycardia, bradycardia, intermittence, and irregularity have all been touched upon. Interesting chapters have been devoted to the blood vessels, and to the blood corpuscles, and the anæmias respectively, but that upon the blood plasma, œdema, and absorption is the most extensive and readable of them all. Considerable space has been given to the problems of osmosis, œdema, and absorption, but the reader will not regret this. Special mention must also be made of the chapters on the pathology of heat regulation and respiration. Both are good, and well up to date. All who read Dr. Lazarus-Barlow's book will extend to it a cordial welcome. Its diction is clear, simple, and forcible.

It is well and logically arranged, and altogether is a book of much merit. While it may prove a little bit above the junior, it will not be above the senior student of pathology. We cordially commend it both to him and to the practitioner of medicine.

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Elements of Histology. By E. KLEIN, M.D., F.R.S., and J. S. EDKINS, M.A., M.B. Revised and Enlarged Edition. London: Cassell & Company Ltd. 1898.

A NEW edition of this well-known little text-book has just been issued, and the name of Dr. Edkins now appears along with that of Klein on the title-page. The former has practically re-written the chapters on the brain and medulla, and he has also re-edited the chapter on the alimentary canal. There have been numerous additions in other chapters, and a number of photograms from original preparations of Drs. Klein and Edkins have also been included. On the whole the

book has been well arranged; but it is, from beginning to end, a description of the subject from the theoretical standpoint alone. The preparations depicted in the illustrations are shown as viewed with a low or moderate magnification, or with no reference to the enlargement at all. This is unfortunate, as a student wishes to know what he can see with a special objective. The same spirit permeates the text, as all through the book it is a theoretical account of what is held at the present day to be the structure of the different tissues that is given, and not a description of what can be seen by a low or high power. Of course there are disadvantages in the latter method, as in all others, but perhaps a happier mean might have been struck, as, for example, in Stöhr's "Lehrbuch." The first chapter is a description of the structure of a typical cell and its development, which, although clearly written, is far too short to allow of a proper discussion of karyokinesis. The second chapter deals with blood, and here Kanthack and Hardy's views with regard to the nature of the white blood corpuscles are largely adopted. It is curious that here, as usual, the part which the bone marrow plays in the formation of leucocytes is not referred to.

Chapter iii. gives a description of the different forms of epithelium, more complete than one would have expected after the brevity of the first chapter, at least. It is clearly written, and those forms of epithelium which are not fully described here, receive attention in other parts of the book. There are some points which a number of histologists will scarcely agree with, namely, the regeneration of goblet cells to ordinary columnar cells.

The succeeding chapter deals with endothelium, while Chapter v. takes up the fibrous connective tissues. Here there are some points which admit of controversy. For example, in connection with the pigment cells in the skin of fishes and amphibians, darkness is spoken of as the stimulus, while sunlight is regarded as leaving the cells in the passive state, the skin appearing in the former condition light, in the latter dark. Now, although Brücke and Hermann have described this as occurring in certain animals, as a rule light has the opposite action. As Bimmermann pointed out, the light may either act reflexly or directly upon the cells. Again, the fibres of connective tissue, elastic as well as white, are regarded as developed within the cell protoplasm, a view that is not at present generally held.

Chapter vii. treats of the structure and development of bone. The periosteal formation of bone is termed here intermembranous instead of intramembranous ossification. The description of development of bone is clearly given, and can be easily understood by the reader. The chapter on striped muscle has been largely re-written, and the description is based upon the work of Rollett and Rutherford. The changes which the muscle fibrils undergo during extension and contraction might have been better explained at that part of the text next to the semi-schematic representations taken from Professor Rutherford's paper. The explanation of the nature of Hensen's line is not that given in the paper just mentioned, although it is given as Rutherford's view.

Of the other chapters, special attention may be drawn to that on the lymphatic vessels, which is an exceedingly good one.

The nature of Hassall's corpuscles of the thymus gland, as generally

accepted, is not that given by the authors; but the general description of the lymphatic glands is good. The chapters on the nervous system are very good, only some may think that in such a small text-book, one quarter of the whole ought hardly to have been assigned for the description. Dr. Edkins has made good use of the second volume of Kölliker's "Gewebelehre," both with regard to text and figures, with the result that he has given us a clear general account of the present-day knowledge of the minute anatomy of the central nervous system. The chapters on the alimentary canal are almost all that can be desired, when one takes into consideration the space at the writer's disposal. The chapter on the spleen is unfortunately far from being a good one, and the figures given certainly do not do much to explain the text. The nature of the splenic pulp is not properly described, nor are the Malpighian corpuscles. The splenic ellipsoids are not even mentioned.

In the chapter on the male genital organs, spermatogenesis is not nearly fully enough described. The sections dealing with the female genital organs and mammary gland are good. In the chapter on skin a better description of hair follicle might have been given, stating, for example, which part of the epidermis Henle's and Huxley's layers respectively represent. The chapters on the eye, ear, and nasal mucous membrane are very good, although, of course, there are many points which admit of controversy. The description of the ductless glands, although very short, is good.

Although reference in this review has been made to a few points which might admit of improvement, it does not imply that the book has not been very carefully written. A short account, such as this book offers, necessarily must contain a number of statements which cannot be universally accepted, but, as a student's text-book, it will be found to be most useful.

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Forensic Medicine and Toxicology. By J. DIXON MANN, M.D., F.R.C.P.
Second Edition. London: Charles Griffin & Co. Ltd. 1898.

THIS book achieved a well-deserved success in its first edition, because in many respects it offered to medical men and students a clearly written, compact manual on forensic medicine and toxicology, in which recent investigations bearing upon both of these subjects had been carefully digested and incorporated.

The classical works of Taylor and Casper still remain unsurpassed as authorities on the chief questions of criminal jurisprudence; and in regard to the descriptions given by them of the various forms of violent death, there is little which modern investigation has tended to alter.

The writings of Brouardel, Liman, Hofmann, Lesser, and others have placed the science upon a more rational basis, by affording an explanation of many of the appearances which were recorded by older writers, and by estimating the true value of many signs associated with various forms of violence and death. In this connection may be instanced the subpleural ecchymoses, which Tardieu regarded as diagnostic of death from asphyxia, but which are now admitted to have no such diagnostic value; or, again, the investigations of Hofmann in regard to the post-mortem appearances presented by bodies.

While, therefore, it is true that such works as those of Taylor and