

pyroxene is subordinate. One who is not a beginner knows that most andesites contain more pyroxene than mica or amphibole; and in many instances pyroxene without either mica or amphibole. The impression is also given that granite does not contain lime-soda-feldspar. There are numerous inaccuracies of statement and definition that might be pointed out, which may be charged to the attempt at simplification. It does not seem desirable that students who intend studying petrology thoroughly should begin by studying it in an inadequate manner, and experience the necessity of remodeling some of their fundamental concepts.

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*An Introduction to the History of Medicine, with Medical Chronology, Bibliographic Data and Test Questions.* By FIELDING H. GARRISON, A.B., M.D. Philadelphia, W. B. Saunders Co. 1913.

The reproach that has been brought against modern science to the effect that it looks only to the present and future and gives little consideration to the past, probably finds the least amount of justification in the case of the medical sciences, if one may judge from the rapid increase within recent years in the amount of literature, both periodical and monographic, that deals with the history of these sciences. But it has been to France, and more especially to Germany, that we have been principally indebted for compendious treatises on the history of medicine, the only works of that nature written within recent years by English-speaking authors being the brief "Epitome" of Dr. Roswell Park and the delightful "History of Physiology" by Sir Michael Foster. The publication of the work before us is, therefore, an event of no little interest, since it places in the hands of English readers a reliable, comprehensive and interesting account of the development of medical theory and practise, from the earliest times down even to the present day. It is noteworthy also in that its production has been made possible by the unequalled collection of works dealing with the history of medicine that has been brought to-

gether in the library of the surgeon-general at Washington. Dr. Garrison is to be heartily congratulated upon the excellent use he has made of it.

The book opens with an introductory chapter on the identity of all forms of ancient and primitive medicine, and then follow chapters on Egyptian, Sumerian and Oriental, Greek (under which are included the Alexandrian and Roman schools), Byzantine, Mohammedan and Jewish, and medieval medicine, all these being treated in the brief space of one hundred and thirty pages. Then follows a well-balanced chapter on the period of the Renaissance, but the greater part of the book, nearly five hundred pages out of six hundred and sixty odd, is devoted to the history of the sixteenth to the twentieth centuries, the chapter on the twentieth century giving a welcome review of the development of our knowledge of such subjects as the internal secretions, the synthesis of proteins, parasitology, chemo- and sero-therapy.

Each chapter consists of a biographic and a general portion, the former setting forth the main features of the lives, endeavors and accomplishments of those who have contributed in any degree to the advancement of medicine, while the latter sums up succinctly and clearly the conditions under which they lived and worked. As appendices there are added a useful medical chronology, a bibliography and a number of test questions, many of which suggest interesting topics for further study and investigation. Finally, mention should be made of the excellent indexes, one of persons and another of subjects, both of which appear to be entirely satisfactory.

Dr. Garrison's book forms a trustworthy reference for those who are interested in any phase of the development of medicine. No name worthy of mention, unless it be that of Dodoens, seems to have been omitted, and although the treatment is fundamentally biographic, the subject index makes it easy to ascertain the essential events in the development of special departments of medicine. And yet with all this thoroughness in so small

a compass, the book is far from being a mere catalogue of names, facts and dates. The author's style gives life to his descriptions; he has the happy faculty of seizing upon the salient points of his subject and vivifying them by allusion, comparison and quotation. Interest, too, in the text is greatly increased by the large number of portraits with which it is illustrated, a feature that especially distinguishes the book in comparison with its predecessors.

In covering so vast a field errors are almost unavoidable; nevertheless the number to be noted in Dr. Garrison's book is so small that it seems almost invidious even to mention them. It hardly seems just, however, to speak (p. 78) of Galen as "little of an anatomist." Surely the writing of such a treatise as the "*De Anatomicis administrationibus*" in the second century marks its maker as one of the greatest of anatomists! The title of Averroes' great work (p. 89) is not "*Ketab*," but rather "*El-Kollijat*," of which the word "*Colliget*" is merely a transliteration. Mention should surely have been made (p. 149) of the splendid "*Quaderni d'Anatomia*" of Leonardo, at present being edited by Dr. Hopstock and his colleagues. The discovery of the pancreatic duct by Wirsung (p. 180) was made in the dissecting room of Vesling and not in that of Vesalius. The statement (p. 602) that "twins always have the same sex" is manifestly in need of correction. There are also a few obvious minor slips, and one must regret the omission from the bibliographic appendix of such works as the excellent *Vorlesungen* of Professor Ernst Schwalbe, Le Clerc's "*Histoire de la Medicine Arabe*," Lauth's "*Histoire de l'Anatomie*" and Medici's interesting "*Compendio storico della Scuola Anatomica di Bologna*."

But such errors and omissions are of little account beside the general excellence of the work. Its thoroughness, conciseness and clearness bespeak for it the fullest appreciation from all who are interested in the past and future of medicine.

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*Stammering and Cognate Defects of Speech.*

By C. S. BLUEMEL. 2 vols. New York, Stechert and Company. 1913.

The first volume is called "*The Psychology of Stammering*" and the second reviews critically many of the current systems for the treatment of speech defects. The first hundred pages of Volume I. are employed in a popular exposition of such psychological facts and opinions as the author may later need in his description of the etiology of stammering. The chapter headed "*The Brain*" deals rather dogmatically with some of the mooted questions of cortical localization and lacks many references to original sources. The chapter on aphasia is well handled and serves as an excellent introduction to the author's thesis that "the stammerer's difficulty is transient auditory amnesia" (p. 187). It is well shown that this amnesia attaches to the vowel sounds, especially to the more obscure ones, and that it is characteristic of the audito-moteur rather than of the subject possessing predominantly the visual type of imagery. We have already (pp. 98 and 103) been prepared for this position by the foregoing discussion concerning the necessary incitation for voluntary speech. This, it is held, always involves kinesthetic imagery, auditory imagery being supplementary and functioning chiefly in vowel production. Consonant production may be actuated by kinesthetic imagery alone, but not so the formation of the short and relatively "colorless" voice sounds. When the auditory imagery is temporarily lost or weakened the more obscure vowel sounds become impossible of production and stammering results. This position is strengthened both by introspection and by the records of speech cases, and if correct is of the utmost value in indicating the appropriate treatment for stammering.

Volume II. includes an excellent account of current systems of training, treated under the chapter titles: *Respiration, Vocalization, Articulation, Verbal Exercises, Mechanical Appliances and Psychological Methods.*

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