

trated by the fact that the Crippen case is not even mentioned under the mydriatic alkaloids group, and the method described in the text of identifying cocaine by the potassium permanganate test is quite useless when really small quantities have to be identified. Hankin's modification of the test, published in 1911, is not mentioned, although it is extraordinarily delicate. The reviewer has used it for years and cannot speak too highly of it. The methods of detecting and estimating arsenic might be condensed with great advantage, and the section on the toxicology of lead would be more valuable if adequate references were given to the enormous literature of the subject. Lead tetraethyl is not even mentioned; in fact, the section dealing with metallic poisons is very unsatisfactory.

The treatment is quite inadequate elsewhere, as illustrated by the section on boric acid as a food preservative, the only reference being to a dissertation published in Munich in 1883: as so much of the valuable work on this subject was done in America, it is quite extraordinary that, in an American translation, no mention is made of Dr. Harvey W. Wiley. In like manner the section on carbon monoxide poisoning might have been written twenty years ago. Surely references might have been made to the large amount of recent work.

Another example is that of aconitine, the treatment of which is not up-to-date, the well-known test for which, first described by the late Sir Thomas Stevenson, is ascribed to Fühner in 1911! The comparison of frog heart tracings on a kymograph is not described. No mention is made of the identity of yohimbine and quebrachine, and the importance of detecting oxydimorphine in certain cases of suspected morphine poisoning is neglected. The section on blood stains and the detection of human blood suffers from the same defects, and requires extensive re-writing. The amazing statement is made that "if the blood stain is perfectly fresh, it may be recognised by observing blood corpuscles with the microscope. Human blood may be differentiated from animal blood by comparing blood corpuscles with those of animal blood as to size, only when the corpuscles are still intact." Further on, however, the biological detection of human blood is dealt with, although in a most inadequate manner, no mention being made of Nuttall, or of Dale's anaphylaxis method.

The index is poor, and the apparatus described is in most cases archaic. The printing is very good, but the binding is not strong enough to withstand the amount of handling such a book would receive as a constant laboratory companion. K. C. B.

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### Our Bookshelf.

*Allen's Commercial Organic Analysis: a Treatise on the Properties, Modes of Analysis, and Proximate Analytical Examination of the Various Organic Chemicals and Products Employed in the Arts, Manufactures, Medicine, etc.* Vol. 6: *Colorimetry, Dyes and Colouring Matters, the Synthetic Dyestuffs, and the Analysis of Colouring Matters.* By the Editors and the following Contributors: W. A. Gallup, Hans Edward Fierz-David, A. W. Joyce, and V. E. Yarsley. Fifth edition, revised and in part rewritten. Editors: Samuel S. Sadtler, Dr. Elbert C. Lathrop, C. Ainsworth Mitchell. Pp. ix+658. (London: J. and A. Churchill, 1928.) 30s. net.

THE seventh volume of this work is considerably different from the corresponding volume in the previous edition. Such subjects as tannin, natural colouring matters, and inks, which were included with synthetic dyestuffs in the old edition, have already been dealt with in Vol. 5 of the new edition. The new book, therefore, is confined practically to an exhaustive study of the preparation, structure, and analysis of synthetic dyestuffs. In addition, there is, however, a small well-written section on colorimetry, which might with advantage have been considered in the same volume with other physico-chemical determinations.

The largest section of the work consists of an article on dyes and colouring matters, in which dyes are classified on chemical lines on the method of Schultz's "Farbstofftabellen" and of the "Colour Index." Importance is placed on absorption spectra as the quickest method of identifying a particular compound. Synthetic dyestuffs, the next largest section, are concerned with the constitution of various dyes by their reduction products. The remaining chapters deal briefly with the analysis of colouring matter on the lines of A. G. Green's "Analysis of Dyestuffs," which the authors use as the main source of reference.

The editors have been careful to prevent much overlapping, especially in the closely connected second and third sections, and the work as a whole is well up to the standard of the previous edition. There is, however, a slight tendency for it to take the character of a book on special branches of organic chemistry for the specialists, rather than a book of commercial organic analysis of particular value to the analyst. The general production of the present volume, both with regard to printing and paper, is excellent, and comparatively few misprints have been noticed. J. REILLY.

*Handbuch der biologischen Arbeitsmethoden.* Herausgegeben von Prof. Dr. Emil Abderhalden. Lieferung 266. Abt. 2: *Physikalische Methoden*, Teil 2, Heft 8. *Die Methoden der Erdbebenforschung.* Von Friedrich Errulat. Pp. 2151-2262. (Berlin und Wien: Urban und Schwarzenberg, 1928.) 6 gold marks.

THE first work in which the modes of investigating a great earthquake were described was Robert Mallet's report in two large volumes on the