

Book Notices.

The Chemistry of the Terpenes. By F. Heusler, Ph.D. Authorized translation by Francis J. Pond, M.A., Ph.D. 8vo, 435 pages and index. Philadelphia: P. Blakiston's Son & Co. Cloth. \$4 net.

This excellent volume is an acceptable contribution to chemical literature. Great progress has been made in late years in the study of the terpenes, the principal ingredients of the essential or volatile oils. Much of the original literature is in other languages than English; moreover, owing to the rather restricted applications of the researches, the ordinary text books have given but brief summaries. A generation ago, indeed, all that was known about the essential oils might have been expressed in a very few pages. The textbooks of that day usually gave a brief account of some of the more important oils, stating the striking isomerism observed with regard to the hydrocarbons present. The investigations of O. Wallach have been the principal "road-breaking" element in the modern progress. He succeeded in solving the general chemistry of the essential oils so that the examination of them can be systematized and the different proximate constituents identified with comparative ease. It is now known, that while the natural volatile oils consist largely of hydrocarbons, yet these are usually accompanied by oxidized bodies, analogous to the camphors. The group of camphors has, therefore, been brought into close structural relations to the terpenes and is considered in this book. Any one who has given even superficial attention to the trade literature in this field is aware of the great progress that has been made in the production of synthetics. Not only have many of the natural products been accurately imitated, but derivatives and isomers have been obtained in great number.

The translation of Heusler's book will afford an opportunity to English-speaking students to get a synopsis of the present state of the subject. The translation is very well done. We commend the care taken to avoid mere literal rendering of German idioms and German nomenclature. The mechanical execution of the book is also good and, altogether, it reflects credit on author, translator, printer and publisher. It relates principally to the pure chemistry of the topic; the analytic and industrial features are not within its scope.

H. L.

Histoire des Mathématiques dans l'Antiquité et au Moyen Age. Par H. G. Zeuthen, Professeur à l'Université de Copenhague. Edition Française, Revuë et Corrigée par l'Auteur. Traduite par Jean Mascart. Un volume in-8 de xv-296 pages, avec 31 figures. Paris: Gauthier-Villars, 1902. (Price, 9 fr.)

The introduction of this work treats of prehistoric mathematics, and of the state of the science among the Egyptians and Babylonians. Following are chapters on mathematics as developed by the Greeks, and in India. The work concludes with an historical sketch of the sciences during the Middle Ages, especially dealing with the contributions of the Arabian mathematicians and the development of the sciences in Europe.

W.