

ing courses under him can testify that he could always speak from the fulness of his knowledge. It has seemed in perusing this new book that the author did not always appreciate that others had not equal experience, and to those who find descriptions of apparatus difficult to follow without the aid of illustrations, their almost total absence may be disappointing. But it is enough to say that Professor Cooke has brought out this new book to make sure that all teachers of chemistry will be anxious to examine it.

Eighty-odd experiments are described, some of them, owing to the modern developments, of a physical rather than of a chemical nature as formerly understood. The apparatus called for is not expensive, and can be rendered even less so by resort to various make-shifts, which are, however, always bothersome and time-consuming.

Conduct as a Fine Art. The Laws of Daily Conduct, by NICHOLAS P. TILMAN; *Character Building*, by EDWARD P. JACKSON. New York, Houghton, Mifflin & Co. 12°. \$1.50.

SOME time since the American Secular Union of Philadelphia offered a prize of one thousand dollars for the best treatise for teaching morals in the public schools without inculcating any religious doctrine, and the prize was divided between the authors of the two works here named. They are quite different in literary form, Mr. Gilman's being an essay in several chapters, and Mr. Jackson's a series of conversations between a teacher and his pupils. Religion as a basis of morality having been set aside, it is held to be necessary to give it a "scientific basis;" and Mr. Gilman in particular makes special claims for his work on this account. After a careful reading of it, however, we are unable to find any scientific quality in it. The only way to make ethics scientific is to find the ultimate ground or criterion of right and wrong, and then deduce all minor principles from this fundamental one. But Mr. Gilman expressly repudiates any design of doing so, apparently because he has no settled opinion as to what the criterion is. Nor is there anything scientific in the arrangement of his work; on the contrary, it is a series of desultory chapters which might just as well have been arranged in any other way. Mr. Jackson makes much less pretension of being scientific; but after reading both works we can readily understand the statement in the preface that the society that offered the prize was not satisfied with either of them.

But in saying these things we do not wish to be understood as condemning the essays, either of them. They present the common-sense ethics of the time in a form suitable for instructing children, and in the hands of good teachers may be made useful. They are intended rather for teachers than for pupils, it being supposed that the teacher will instruct his pupils orally; and teachers of strong moral instincts who are also good talkers would probably teach best in that way. To such teachers this book will undoubtedly furnish many valuable hints.

A Hand-book of Industrial Organic Chemistry. By SAMUEL P. SADTLER, Ph.D. Philadelphia, Lippincott. 8°. \$5.

WAGNER'S "Chemical Technology," which is about the only book of moderate size in English which describes the chemistry of industrial processes, is now somewhat antiquated, though doubtless some day a new edition will appear. There are the encyclopedias of chemistry and of chemical industries, but no single volume.

Dr. Sadtler has endeavored, within the compass of a moderate-sized octavo, to take up a number of the more important chemical industries, or groups of related industries, and to show in language capable of being understood, even by those not specially trained in chemistry, the existing conditions of those industries. The present volume is limited to industrial organic chemistry. This field, while covering many very important lines of manufacture, does not seem at present to be so well provided for as the inorganic part of the subject. A companion volume, covering this other side of industrial chemistry, is in contemplation.

In taking up the several industries for survey, there are first enumerated and described the raw materials which serve as the basis of the industrial treatment; second, the processes of manufacture are given in outline and explained; third, the products, both in-

termediate and final, as well as side-products, are characterized and their composition illustrated in many cases by tables of analyses; fourth, the most important analytical tests and methods are given which seem to be of value either in the control of the processes of manufacture or in determining the purity of the product and, fifth, the bibliography and statistics of each industry are given, so that an idea of the present development and relative importance of the industry may be had.

The author has endeavored in a number of cases to give a clearer picture of the lines of treatment for an industry by the introduction of schematic views of the several processes through which the raw material is carried until it is brought out as a finished product.

The subjects treated are: petroleum and mineral oil industry; industry of the fats and fatty oils; industry of the essential oils and resins; the cane-sugar industry; the industries of starch and its alteration products; fermentation industries; milk industries; vegetable textile fibres; textile fibres of animal origin; animal tissues and their products; industries based upon destructive distillation; the artificial coloring matters; natural dye-colors; bleaching, dyeing, and textile printing.

That such a book is needed cannot be questioned. It will be of value to the specialists engaged in industrial chemistry and to the general reader seeking information.

The author has had experience in writing chemical books and in editorial work. The number of illustrations is large, and they are well made and increase materially the value of the book for the purposes for which it is intended. There is also a considerable number of valuable tables.

A Study of Greek Philosophy. By ELLEN M. MITCHELL. Chicago, S. C. Griggs & Co. 12°. \$1.25.

THE authoress of this book has been for some years the leader of a band of ladies who have devoted themselves to the study of philosophy. Being a disciple of Hegel, it was natural that she should devote special attention to the history of philosophy, that aspect of the subject having been given special prominence by Hegel himself and by some of his principal followers; and this sketch of the Greek philosophy is the outcome of her studies. It is written in an earnest and serious spirit, and with an evident desire to present the truth as the writer understands it. It is impartial, too, as between the different schools and thinkers, none of them being slighted and no decided preference shown for one over another except as their real importance demands it. The chief fault of the book, to our thinking, is its excessive Hegelianism. In treating the various Greek thinkers, those points in their teaching that seem to anticipate Hegel's philosophy, or lend it support, are given special prominence, and sometimes there is a tendency to read into the ancient writers views derived from Hegel himself. Then the frequent repetition of the Hegelian catchwords, such as "self-consciousness," "the idea," "subjectivity and objectivity," the "infinity of mind," etc., detracts from the merit of the work.

Miss Mitchell has followed Zeller largely in her interpretation of the Greek thinkers, but has also derived something from Hegel's history of philosophy, and she quotes occasionally from both these writers. Her account of the earlier philosophers is one of the best parts of her work, their leading characteristics, as far as known, being very clearly presented in a small space. In the chapters relating to Plato and Aristotle the dialectics and physics of these writers are examined at greater length than seems necessary; while in the latter part of the book we could have wished for a little more information about the relations between Greek philosophy and Jewish and Christian thought. But though the book is not free from faults, it has much to recommend it, and it will be specially acceptable to adherents of German philosophy.

The Philosophy of the Beautiful. I. Its History. By WILLIAM KNIGHT. New York, Scribner. 16°. \$1.

THIS book is one of a series to be published by John Murray in England and by Messrs. Scribner in America, and designed to furnish books for study and reference on a variety of subjects. They bear the general title of "University Extension Manuals,"