

will run parallel to any of the lines of classification along which the subject of organic chemistry is generally developed.

As stated before, however, since the book aims to cover only a special field and is designed primarily for "home consumption," the above criticisms should not be construed too harshly. There are, on the other hand, many excellent features. The preparations selected are typical, the details are given clearly, and much more space is properly accorded characteristic reactions and analytical tests than is customary in such books. The book is in attractive form, and the proof has evidently been read with great care.

MARSTON TAYLOR BOGERT.

**Practical Methods for the Iron and Steel Works Chemist.** By J. K. HEES, PH.C., Chief Chemist for the Carnegie Steel Company, New Castle, Pa. pp. 60. Easton, Pa.: The Chemical Publishing Co. 1908. Price, \$1.00.

The author has compiled from various sources, methods for the analysis of such materials as iron ores, coke, coal, slags, irons and steels, fire-bricks, cements, boiler waters, fats, bearing metals, and chimney and producer gases. These have been modified to conform to his experience and it is stated that all procedures have been carefully tested, and that the directions as given are intended particularly as a guide to analysts of limited experience. For such readers the author also describes some of the essential features of a works laboratory, and gives directions for the general conduct of laboratory work, the preparation of reagents, or standards, and adds a collection of useful tables.

In his endeavor to make this a "practical" manual, the author has made his directions so concise as to approach, if not to pass, the danger point, especially in a work designed for inexperienced analysts. The volume is of interest as an expression of opinion on the part of one who is familiar with the demands made upon the laboratory of an iron or steel works, regarding methods best adapted for use in such a laboratory.

H. P. TALBOT.

**A Laboratory Outline for Determinations in Quantitative Chemical Analysis.** By ALBERT F. GILMAN, S.B., A.M., Professor of Chemistry, Ripon College. pp. 88. Easton, Pa.: The Chemical Publishing Company. 1908. Price, 90 cents.

The procedures described include a considerable range of gravimetric analyses and the volumetric determination of iron by the permanganate, dichromate, and stannous chloride methods. Each procedure is accompanied by a series of questions to be answered by the student, and a page upon which it is apparently intended that the student shall record his observed data.

It is, unfortunately, impossible to commend this little volume. It is badly written, the procedures are not accurately described, and many of them are unreliable, as the author states with singular frankness but

without excuse for their presentation. The number of typographical errors is not creditable to either the author or the publishers.

H. P. TALBOT.

**Analysis of Mixed Paints, Color Pigments, and Varnishes.** By CLIFFORD DYER HOLLEY and E. F. LADD. John Wiley & Sons, New York. Price, \$2.50.

Prof. Ladd's contribution to the present volume is a dissertation on Mixed Paints in general, with particular reference to their truthful labeling and to the experience of North Dakota in legislation to compel such labeling. In his discussion of this matter, he is fair and his arguments are convincing.

Part II of the book upon the analysis and testing of paints, by Prof. Holley, treats of the subjects from the standpoint of one who has recently been called upon to analyze a great number of the paints, both good and bad, that are now on the market. The discussion and the methods of analysis recommended, are more complete and satisfactory when pigments are dealt with than in the case of the vehicles. It may be said with fairness, that this is the best work that has yet appeared on the analysis of the pigments of the present day.

A chapter is devoted to the Practical Testing of Paints. This most important subject has been taken up by the North Dakota Government Experiment Station, and an account is given here of their methods of operating.

The book is certainly of value to all who are interested in the subject.

PARKER C. McILHINEY.

**Commercial Organic Analysis.** By ALFRED H. ALLEN, F.I.C., F.C.S. Vol. II-Part III. Third Edition. Revised by the Author and Arnold Rowsby Tankard, F.C.S. P. Blakiston's Son & Co., Philadelphia. 8vo. 547 pp. Price, \$5.00.

A comparison of the present book with the parts of the former edition which related to the same subjects, brings out forcibly the fact that upon these branches of analytical chemistry, a tremendous amount of work has been done in the interval between the two editions. The subjects treated are, The Aromatic Acids, Resins, and Volatile or Essential Oils. The statement on the cover, that the subject of Phenols is also treated, is misleading; this subject is really treated in Part II of Volume II.

There is, inevitably, in the discussion of such subjects as those to which this book is devoted, a certain lack of connection or logical sequence between its several parts. The properties, uses and analytical necessities of such materials as organic acids, resins and essential oils vary so greatly among themselves that a systematic or connected treatment of their analytical chemistry is a very difficult task. The present work is not faultless in this respect, but the great amount of information contained, makes up for its somewhat disjointed composition. The work