and the principal food materials, and in testing the ventilation of buildings." The author confines himself to the simple methods used in the analysis of the substances mentioned.

The book consists of an introduction, five distinct parts, and a complete index. Part I—Atmospheric Air; Part II—Water; Part III—Soil; Part IV—Sanitary Analysis of Foods; Part V—Ventilation and Heating.

No mention is made of microscopic examinations, of waters, or of food products.

"A Brief Outline of the Sanitary Analysis of Water, Air, etc.," would have been a more appropriate title; the one used is very misleading, as the subject of hygiene is only mentioned in the historical introduction.

The book seems to be intended for the use of the medical student and "may be a means of lightening his labor in this line of study." (?) EDWARD GUDEMAN.

THE CHEMISTS' POCKET MANUAL. BY RICHARD K. MEADE, B.S. Easton, Pa.: The Chemical Publishing Co. 1900. vii+204 pp. Price, $2.00.

This is almost a model work of its kind. Its excellencies are too numerous to mention; among the important ones are good paper, clear type, convenient shape, strong and handsome binding, on the publisher's side, and accuracy, good style, and clearness on the part of the author.

The contents include almost everything which a chemist or metallurgist would consult it for, the data and methods all fresh and up-to-date. Of particular merit are the graphic methods for saving calculation, composition of standard and special reagent solutions, the valuable collection of special methods of technical analysis and the copious references to recent literature.

It being possible to point out but a few of the excellencies of the work, it is almost unfair to indicate its few shortcomings. It is hardly fair to the chemist who buys the book to tell him to recognize a cyanide by pouring hydrochloric acid on it and smelling the gas! (p. 125). Some of the data are intermixed; a little rearrangement would improve the first fifty pages. It should also contain, in my opinion, tables of the heats of combinations of salts, specific heats of compounds, the properties and composition of the most common and useful minerals, and a résumé of assay methods. A marking thread would at times be found

useful. I advise every chemist, metallurgist, and assayer to procure the book.

JOSEPH W. RICHARDS.

ANNUAIRE DE L'OBSERVATOIRE MUNICIPAL DE PARIS, DIT OBSERVATOIRE DE MONTSOURIS, POUR L'ANNÉE 1900. Librairie Gauthier-Villars, Paris. 18mo. 563 pp. Price, 2 francs.

The principal work of this observatory is not star-gazing, but a supervision of the hygiene of the city, as a short perusal of this somewhat belated, but yet valuable, yearly report shows. Founded in 1870, its work is now along the following lines: I. Physical and meteorological, including, besides the usual records, a study of atmospheric electricity, of smoke, of the air of the sewers, etc. II. Chemical, comprising the composition of the air in different parts of the city, in schools, public buildings, sewers; the examination of the water supply, of the Seine water, of the sewer water, and of the subterranean waters in and around Paris; of the rain, snow and fog; also sanitary questions submitted by the municipality, as the efficiency of disinfectants, etc. III. The micrographic service makes bacteriological examinations of the air, water, food, drains, sewage, Seine water, soil, and has a special service for contagious diseases.

The thousands of analyses, conveniently tabulated, will be of great interest and value to all concerned in the sanitation of cities or towns. For example, the carbonic acid in the air at Montsouris, taken every day for fifteen years, averaged 30 liters per 100 cubic meters. It is greater in winter than summer; also greater at night than in daytime at Montsouris, but *vice versa* in Paris.

Altogether, the book is well worth its price, especially to the sanitary chemist. JOSEPH W. RICHARDS.

EXPERIMENTAL PHYSICS. BY EUGENE LOMMEL. Translated by G. W. MYERS from the third German edition. Philadelphia: J. B. Lippincott Co. 1900. xxii + 664 pp.

Eighty-two pages are devoted to motion, 23 to solids, 31 to liquids, 35 to gases, 81 to heat, 17 to magnetism, 56 to electricity, 114 to electrical currents, 47 to waves and sound, 157 to light. This is one of the best text-books on physics that has ever been written, and we have here a very creditable English translation. No book and no translator can hope to avoid all slips and the definition of electromotive force as a quantity of work (p. 334) is