putation" should be welcome to both students and teachers in such places.

The author has put into book form the course of lectures he has been giving to engineering classes in the mathematical laboratory at the Massachusetts Institute of Technology. It is a comprehensive course, including a discussion of various kinds of scales and the slide rule, networks of scales for several variables, nomographic charts, empirical formulas (with the method of least squares), periodic curves, interpolation, and approximate integration and differentiation (with various kinds of planimeters, integrators, integraphs, etc.). Each part of the subject is dealt with in some detail, with the result that the book is a mine of useful information on practically all the processes that occur in computative or graphical work. One may, perhaps, think that the subject-matter is too condensed both in treatment and in actual print, but as a foundation for a course in a mathematical laboratory the book can be recommended without hesitation; it should find a place in every mathematical and engineering or technical library, and serious students will find it a continual help in their industrial or research work.

A particularly exhaustive treatment from the practical point of view is given of nomography. Perhaps it would be better if the author had laid more stress upon explaining exactly how nomograms are to be constructed and used than upon the reproduction of so many nomograms. This is, however, a matter of taste, and what the author has put into this section of the book is on the same standard of excellence as the remainder. There are numerous examples, many of them worked out numerically in full. The book also contains accurate charts of uniform and logarithmic scales, as well as of square roots.

S. BRODETSKY.

Our Bookshelf.

Creative Chemistry: Descriptive of Recent Achievements in the Chemical Industries. By Dr. Edwin E. Slosson. (The Century Books of Useful Science.) Pp. xvi+311. (London: University of London Press, Ltd., 1921.) 12*s.* 6*d.* net.

THIS book is written by an American journalist with some knowledge of chemistry. It is intended for lay readers who wish to make themselves acquainted with some of the recent developments of applied chemistry, including nitrogen fixation, fertilisers, dyes, sugar, rubber, poison gas, and other subjects likely to be of interest to the average reader. The facts, which appear to be accurate and selected with care and discretion, are presented clearly and forcibly, with a certain native humour. Gerhardt should not (p. 6) be described as a German chemist, while the account of the origin of Kekulé's theory of the benzene nucleus (p. 66) differs somewhat from that usually accepted. It is also interesting to know (p. 33) that "we might have expected that the fixation of nitrogen by passing an electrical spark through hot air would have been an American invention [it was discovered by the English chemist Cavendish], since it was Franklin who snatched the lightning from the heavens as well as our sceptre from the tyrant, and since our output of hot air is unequalled by any other nation."

A Little Book on Map Projection. By Mary Adams (Dr. William Garnett). New and revised edition. Pp. viii+112. (London: George Philip and Son, Ltd.; Liverpool: Philip, Son, and Nephew, Ltd., n.d.) 5*s.* 6*d.* net.

THE second edition of this useful book differs little from the first, which was published in 1914, but the author's identity is now revealed. Most books on map projection are either severely mathematical or, at the other end of the scale, so trivial as to have little value. Dr. Garnett strikes a happy mean, and contrives to give within a modest compass practically all that a student of geography requires to know of this difficult subject. He wisely takes nothing for granted, and as he develops his subject gives ample explanation at each step. About half the book is concerned with the principles involved, and the remainder with the consideration of the principal projections. The subject is treated with a freshness and lucidity which result in a most readable book. The treatment of Sanson-Flamsteed's, Mollweide's, and Mercator's projections may be specially noted. There are a number of clear diagrams and a short bibliography. The book should make a strong appeal to teachers and students.

Proceedings of the Aristotelian Society. New Series, vol. xx. Containing the papers read before the society during the forty-first session, 1919–20. Pp. iv+314. (London: Williams and Norgate, 1920.) 25*s.* net.

THE original papers included in this volume have already been noticed in the reports of society meetings. The present volume contains, in addition to the papers read at the ordinary meetings of the society, two of the symposia contributed to the Oxford Congress last September, in which the members of the French Philosophical Society took part. Of particular interest in this volume is Prof. J. A. Smith's sympathetic account of the philosophy of Giovanni Gentile, an Italian philosopher, the originality of whose speculation, already acknowledged in his own country, is beginning to be recognised universally. We may also mention as of special scientific interest Mr. A. F. Shand's article on "Impulse, Emotion, and Instinct," and Dr. Beatrice Edgell's article on "Memory and Conation." The volume is well up to the high level of the proceedings of previous years.