which distinguish it not only from works on probability by other authors but from Borel's earlier works on probability. Another characteristic is the introduction of the terms "problems of the first order," "problems of the second order." Problems of the first order are those concerned with the finding of a single probability, while those of the second order deal with the distribution of probabilities. The six classes of problems arising out of these two types of problems in each of the three kinds of probability form the basis of the arrangement of the subject matter. The second part of this work is devoted to a general discussion of the functions that arise in statistics with special emphasis on the theory of moments.

The second work was written by Francis Perrin from lectures by Borel. It is devoted to classical statistical mechanics and the kinetic theory of gases presented in much the usual arrangement. Borel takes considerable pains to show that the idea of probability can be introduced naturally into mechanics without making unreasonable hypotheses, and he spends considerable time on the bonds which unite the fundamental laws of kinetic theory with the principles of mechanics.

These two fasciculi are but a small part of what promises to be a great treatise on the theory of probabilities and its applications. While they intentionally stick to the older and more established topics they are written with a clarity and an elegance of detail and arrangement that prophesies much for the complete work. When finished there should be another great French work on probabilities to be placed besides the works of Laplace, Poisson, Bertrand, Poincaré, and the earlier work of Borel.

A. R. CRATHORNE

Wie man einstens rechnete. By E. Fettweis. Mathematisch-Physikalische Bibliothek, Band 49. Berlin, Teubner, 1923. 56 pp.

This small volume, issued for a quarter (one gold-mark) represents a fine type of popular scientific work common in Germany and Italy. There are chapters on the primitive origins of counting and reckoning, on Egyptian, Babylonian, Mayan and Chinese arithmetic, on computation among Greeks and Romans, on the abacists of the middle ages, on the arithmetic of the Hindus and of the Arabs, on the development of the Hindu-Arabic methods in the West, and on reckoning with counters.

The author is well acquainted with the modern literature of his subject. In the section on the Greek abacus, however, the author permits himself to enlarge upon what is actually known concerning the methods of computation with that instrument in ancient Greece. The methods of division and the like described by the author are found only in late times, about 1000 A.D. and thereafter, not in ancient times as stated here. In the treatment of Hindu mathematics, the methods of the early European works are included by Fettweis; we do not certainly know them to have been employed by the Hindus, although there is evidence showing that probability.

Any one interested in the history of arithmetic will find in this little volume a stimulating and entertaining account of the development of the subject.   L. C. KARPINSKI