

## SHORTER NOTICES

*Zur Geschichte der Logik.* By Federigo Enriques (L. Bieberbach, Translator). (Vol. 26 of *Wissenschaft und Hypothese.*) Leipzig and Berlin, B. G. Teubner, 1927. 240 pp.

This small book bears the subtitle "Grundlagen und Aufbau der Wissenschaft im Urteil der mathematischen Denker." It is a narrative history of logic with some emphasis upon the logical problems of mathematics. Although the "Namenverzeichnis" lists references to some three hundred persons cited in the book, the treatment refers largely to periods and movements. The work is divided into four parts: I. The logic of the ancients, II. Rationalism and the development of modern logic (extending from Bacon through Kant), III. The modern reform of logic, IV. Supplement. From inductive logic to the logic of scientific systems.

Part I, which covers only 42 pages, is a well-digested summary of the logical views of the Greeks, supplemented by brief remarks on medieval logic. Plato, Aristotle, Euclid, the Stoics, the Sceptics are all discussed. In a similar manner Part II discusses modern developments prior to the reform in the Nineteenth Century. While Leibniz, Descartes, Newton are all mentioned, the mathematical features are treated as incidental to the larger movements. Part III summarizes the contributions of the nineteenth century and early twentieth century toward the problem of the significance of postulational systems, starting with non-euclidean geometry. The discussion is singularly clear, inclusive and impartial. This is the section of the book of special mathematical interest. It is no longer novel, despite the continued medieval flavor of many American texts on plane geometry. Part IV brings the book to a natural conclusion by discussing the role of logic in modern natural science, with mention of Einstein, Eddington and others.

The work is one of general scientific interest, available to any reader, but of added significance in proportion as one has read the basic philosophical writings to which references are made. No technical knowledge (except incidentally of the Latin and Greek languages) is presupposed. The treatment is singularly well-knit and bold summarizing remarks are frequent. Present controversial material is strikingly absent. This makes the book safe and informative but the reader may be disappointed in failing to find more than hints of those very topics which are today arousing interest among mathematicians in questions of logical import. The work in its breadth of view and literary style maintains Enriques as a master of this field of exposition.

A. A. BENNETT

*Praktische Infinitesimalrechnung.* By F. F. P. Bisacre. Berechtigte Deutsche Ausgabe unter Mitwirkung von E. Trefftz, herausgegeben von E. König. Leipzig, Teubner, 1929. 12+364 pp.

Bisacre's *Applied Calculus* was published in 1921 and was reviewed in this Bulletin, volume 28 (1922), page 471. For the German translation the text has been carefully revised but no essential changes have been made.

W. R. LONGLEY