case of cubic number fields. A fifth chapter deals with fields which are quadratic with respect to another one, itself a quadratic field. Both of these chapters are relatively short and are not intended to be exhaustive.

The value of the volume is distinctly increased by the introduction of a considerable number of simple illustrations of the theory in addition to the more elaborate applications made in the third chapter.

The book is timely, has been put out by the publishers in an attractive form, and should materially increase the number of those who will undertake to familiarize themselves with this branch of general algebraic theory.

<div align="right">GEORGE H. LING.</div>

Les Principes des Mathématiques, avec un appendice sur la philosophie des mathématiques de Kant. Par LOUIS COUTURAT. Paris, Felix Alcan, 1905. viii + 310 pp.

THE present work owes its origin, according to the author, to the appearance of " the masterly work of Bertrand Russell which bears the same title." It seems that originally it was intended to be merely a review of the older work. But it is much more than a review of Russell's treatise. We can readily sympathize with the author when he tells us in the preface that in commenting and illustrating Russell's theories he was led gradually to include in his review abstracts of most of the recent papers dealing with the same questions. The result has been that the author has written a comprehensive and careful report on the present state of the logical foundations of mathematics, which on account of its clear style and admirable arrangement of content is valuable, not merely as a work of reference but also as a book well adapted to the needs of anyone desiring to acquaint himself with the fundamental ideas and methods of the subject with which it deals.

The book is divided into six chapters, to which are added two " Notes " and an appendix. The first chapter deals with the principles of formal logic, as developed by Peano and others. The next four chapters discuss respectively the notions of number, order, the continuum, and magnitude. The last and by far the longest chapter deals with the foundations of geometry. It is divided into four parts treating respectively of the dimensions and topology, projective geometry, descriptive geometry,