appears with a *y*. An article by Dr. Gandz is given the title "The origine of the term algebre."

As was the case in the earlier editions, the index will appear in volume 7. It is possible, however, to make use of the index of the second edition, for in each of these parts of the third edition the author has included tables which show the correspondence between page numbers and footnote numbers in the second and third editions.

VERA SANFORD

The General Properties of Matter. By F. H. Newman and V. H. L. Searle. New York, Macmillan, 1933. 338 pp.

This is the second edition of a work first published in 1928. It plans to give a general introduction to physics and covers such topics as gravitation, gyroscopic motion, elasticity, surface tension, viscosity, kinetic theory of matter, Fourier's theorem, osmosis and diffusion, hydrodynamics and wave motion. On the whole the work is up-to-date and sound, but the mathematics is quite heuristic and sometimes unsound. For example the only purely mathematical chapter is one of eight pages devoted to Fourier's theorem, and in this is announced the theorem that any continuous function is equivalent to its Fourier series. The writers quite correctly state that a rigid proof of this (incorrect) theorem is beyond the scope of their book. The references in this chapter are quite out-of-date. In startling contrast is the immediately following fine chapter on osmosis and diffusion. We can recommend the work strongly to mathematicians who wish to find in compact and easily understandable form illustrations of the important applications of elementary mathematics to physical problems.

F. D. MURNAGHAN

Leçons d'Analyse Vectorielle. By Gustave Juvet. Paris, Gauthier-Villars, 1933. 120 pp.

This book contains the mathematical part of a course in vector analysis. A second volume containing the applications to physics will appear later. The subjects treated in the present volume are vector algebra, curves, surfaces, the differential and integral operators, and the analysis of scalar and vector fields.

The notation (dot, cross, inverted delta) is that of Gibbs. Vectors are distinguished from scalars by the use of arrows. In the proofs continuity and analytic character of functions are assumed and free use is made of geometrical intuition. The differential operators are defined by the integration method of Ignatowsky, the existence of the limit being assumed. Exercises are given at the end of each chapter.

The main purpose of vector analysis is to provide a notation and collect together a set of theorems which are found useful in the exposition of such subjects as theoretical electricity, hydrodynamics, theory of elasticity. For such use the little volume of M. Juvet may be heartily recommended.

H. B. PHILLIPS