no one in this country into thinking that they can be of large service to technical students here. We appreciate rigor, to be sure, and feel the need of more of it. But we want also some analytical skill, we want some treatment of series, including Fourier series, and of approximation processes, and we want practice in the application of the calculus to problems of physics and engineering. And we do not care particularly for unusual generality at the expense of simplicity of proofs.

For the student of pure mathematics, on the other hand, the book has value. He may consult it with confidence, and will find it useful in supplying alternative proofs, or in supplying details of proofs given too succinctly elsewhere. He will find it well printed, well arranged, and supplied with figures which are models of clearness, if exception be made of a few, which, like the text, are overloaded with detail.

It is regrettable that so many mathematical texts are written without any clear purpose of stimulating self-activity. In the *Vorlesungen* there is not a single problem to be worked, and no detail of proof to be supplied. Many a mathematician owes his interest in the science to early bouts with problems, and the writer who gives careful attention to the selection of problems, or who includes as exercises valuable theoretical results, renders a high service. Both of these merits characterize, for instance, Appell's *Mécanique Rationnelle*, and Goursat's *Cours d'Analyse*. Had our present author followed some such course, he might have saved space, and produced a much more stimulating book.

<div style="text-align: right;">O. D. KELLOGG</div>

Plane Geometry. By L. B. Benny. Glasgow and Bombay, Blackie and Son, Ltd., 1922. vi + 336 pp.

The title of this book is misleading to American readers. The sub-title is as follows: "An account of the more elementary properties of conic sections treated by the methods of coordinate geometry and of modern projective geometry with applications to practical drawing." The contents will appeal to the American reader as a rather unusual mixture of elementary analytic geometry and projective geometry. In addition to the ordinary analytic treatment of the straight line and conic sections, the book contains chapters on ranges and pencils, harmonic properties of circles, inversion, projection, confocal conics, cross ratios and ends with a treatment of Pascal's and Brianchon's theorems. While the selection of contents is an unusual one in this country, the reader will find much of interest. Like most English texts, it is well supplied with exercises and problems of a type and difficulty unusual on this side of the Atlantic. The book also contains a number of portraits of mathematicians who have contributed to the subjects under discussion with an appendix giving biographical notes concerning them. These include Cayley, Riemann, Cremona, Descartes and Pascal.

<div style="text-align: right;">J. W. YOUNG</div>