

introduced by Darboux, and who has appreciated its power in dealing with geometrical problems, must wonder why Bianchi has never made much use of it. He introduced the elements of it in his treatment of Weingarten's method for the study of applicable surfaces (vol. II, p. 176), but seems not to have used it elsewhere. It appears as a note at the close of this volume.

Bianchi is a past-master in the art of writing treatises, not only in the field most closely associated with his name, but in many other fields. And this book reveals him at his best. The reader has no grounds for criticizing the book as to clarity of statement, but the student who wishes to follow up a particular subject may regret the lack of references to many of the sources from which the cream has been taken.

L. P. EISENHART

THE IMUK REPORTS AND LOREY ON INSTRUCTION IN GERMAN UNIVERSITIES

Das Studium der Mathematik an den deutschen Universitäten seit Anfang des 19. Jahrhunderts. Von W. Lorey. (Abhandlungen über den Mathematischen Unterricht in Deutschland veranlaßt durch die Internationale Mathematische Unterrichtskommission.* Band III, Heft 9). Leipzig, Teubner, 1916. 12 + 431 pages and 4 plates.

During the deliberations of the fourth International Congress of Mathematicians at Rome in 1908, steps were taken to organize an International Commission on the Teaching of Mathematics, the members of which were to prepare or procure reports on the methods and materials of mathematical instruction in different countries. Most of these reports were ready when the fifth International Mathematical Congress convened at the University of Cambridge in 1912, but several more have appeared since then. At this writing, 18 countries have published 294 reports containing over 13,500 pages. Germany has issued 53 reports with a total of 5571 pages; about one-fourth of this space is required by the United States for its 18 reports, and about one-sixth of the same space by each of the following countries: Austria for 13 reports; Great Britain for 39; Switzerland for 13; and Japan for 16 reports in two volumes. The reports of France cover nearly 700 pages. Of more modest dimensions are, in order of size, the reports from Belgium, Russia (including Finland),

* A new word *IMUK* has been coined and is used in German writings as an abbreviation for these last three words.