

therewith connected are carefully explained. There is a treatment of the elements of Fourier series, from the practical rather than theoretical point of view. Single phase and multiple phase systems are discussed. At the close there are a few words about skin effect. The work will appeal to engineers more exclusively than many of the other texts in the series.

E. B. WILSON.

NOTES.

THE opening (January) number of volume 35 of the *American Journal of Mathematics* contains the following papers: "Groups containing a given number of operators whose orders are powers of the same prime number," by G. A. MILLER; "Normal congruences determined by centers of geodesic curvature," by F. W. BEAL; "A theory of geometrical relations—continued," by A. R. SCHWEITZER; "The double tangents of a binodal quartic," by H. BATEMAN; "Involutorial transformations," by F. M. MORGAN; "A theorem for the development of a function as an infinite product," by A. F. CARPENTER.

The frontispiece of the volume is a portrait of CAMILLE JORDAN.

AT the January meeting of the London mathematical society the following papers were read: By J. C. FIELDS, "Proofs of certain general theorems relating to orders of coincidence"; by W. E. H. BERWICK, "The reduction of ideal numbers"; by A. E. H. LOVE, "Notes on the dynamical theory of tides"; by W. H. YOUNG, "Uniform oscillation of the first and second kind"; by H. BATEMAN, "Some definite integrals occurring in the harmonic analysis connected with a circular ring."

THE United States Bureau of Education has just published a Bibliography of The Teaching of Mathematics covering the period from 1900 to 1912, by DAVID EUGENE SMITH and CHARLES GOLDZIEHER. This Bulletin gives 1849 titles of books and articles on the teaching of mathematics that have appeared since 1900. The Bulletin will be sent gratis upon application to the United States Commissioner of Education, Washington, D. C.