

may be mentioned the following: singular points of algebraic curves, differential equations and invariants, elliptic functions, theory of numbers, and theory of series.

For a brief sketch of the life of Halphen, with some remarks on the character of his work, the reader may consult the *Notice* by Picard (vol. I, pp. vii-xvi). In the *Notice* by Poincaré (vol. I, pp. xvii-xliii) we have an excellent systematic analysis of his mathematical contributions. Besides this there is the *Notice* by Halphen himself (vol. I, pp. 1-47) in which his own contributions were analyzed on the occasion of his candidacy before the Paris Academy of Sciences in 1885, about four years before his death. These excellent brief accounts of his work relieve the reviewer of the duty of making an analysis of the separate memoirs. The entire works (with the exception, apparently, of the *Traité des Fonctions Elliptiques*) are to be included in four volumes, of which the third is announced as in press and the fourth in preparation.

R. D. CARMICHAEL.

*A History of the Conceptions of Limits and Fluxions in Great Britain from Newton to Woodhouse.* By Florian Cajori. Chicago, The Open Court Publishing Company, 1919, pp. viii + 299.

This work appears as number five in the Open Court Series of Classics of Science and Philosophy, a series which should meet with all the encouragement and support that American scholars can give in these times, when the question of the publication of such works is so critical. That such encouragement and support is justified may be seen from an examination of this latest production of Professor Cajori's pen, for he has here given to scholars one of the best of his various studies in the history of mathematics.

The work consists of twelve chapters under substantially the following titles: I. Newton; II. Printed books and articles on fluxions before 1734; III. Berkeley's *Analyst*; IV. Jurin's controversy with Robins and Pemberton; V. Textbooks immediately following Berkeley; VI. Maclaurin's *Fluxions* (1742); VII. Textbooks of the middle of the eighteenth century; VIII. Robert Heath and the controversy in his time; IX. Abortive attempts at arithmetization; X. Later works on fluxions; XI. Criticisms under the influence of