sufficient; but there is an equation of this form, occurring frequently in astronomy, in which the coefficients lie between certain limits. An extra table, occupying half a page, is, therefore, included, giving the results to seven places of decimals. Explanations and examples are added. It will be noted that a slight variation from Gauss is made in the form given to the equation.

ERNEST W. BROWN.

RECENT TEXT-BOOKS OF THE CALCULUS.

Easy Lessons in the Differential Calculus. Indicating from the outset the utility of the processes called differentiation and integration. Fifth edition. By RICHARD A. PROCTOR. London and New York, Longmans, Green, and Co., 1894. Small 8vo, vii + 114 pp. Price, 90 cents.

A Primer of the Calculus. By E. SHERMAN GOULD. New York, D. Van Nostrand Company, 1896. 12mo, 91 pp. 17 folding plates. Price, 50 cents.

A Brief Introduction to the Infinitesimal Calculus. Designed especially to aid in reading mathematical economics and statistics. By IRVING FISHER, PH.D., Assistant Professor of Political Science in Yale University. New York and London, The Macmillan Company, 1897. Small 8vo, vii + 84 pp. Price, 75 cents.

These three little books can together be easily slipped into a coat pocket of ordinary size. The first is written in the least technical language. It is devoted chiefly to problems in maxima and minima and areas, but it touches upon a number of other applications. The subject is developed by means of concrete examples, the problem of a falling body being used in the two introductory chapters to explain both differentiation and integration. Differentials are described as *infinitely minute* quantities, but the reader is warned against regarding dy/dx as the ratio of two *separable* quantities. The explanations are almost everywhere remarkably full and clear. That showing the distinction between dy/dx and dx/dy, however, is very unsatisfactory. The book contains many examples fully worked out, but there are no unworked ones and the reader is, therefore, unable to test his understanding or proficiency.

The second work gives rules without pretence of demonstration and almost without explanation. It consists chiefly of worked out examples covering about the same ground as the preceding work. We are told that "dx is purely imaginary and has no numerical value," and again that "the differential dx of a straight line represents its in-