By varying the values of q, r, s, u, an infinite number of sets of three square integers can be found that can also be expressed as the sum of two squares ; but the first given above is probably the *smallest* set in which the numbers are all different.

Since writing the foregoing note I have been informed by Mr. Ball that the above error probably arose from a confused memorandum of Diophantus's impossible forms for the sums of two and three squares.

WASHINGTON, D. C., *September* 15, 1892.

THE THEORY OF EQUATIONS.

An Elementary Course in the Theory of Equations. By
C. H. CHAPMAN, Ph.D., Associate in Mathematics in Johns Hopkins University. New York, John Wiley & Sons, 1892. 12mo, pp. viii + 90.

IN the past no American text-book has treated exclusively of the theory of equations, but the subject has been presented briefly in the closing chapters of the more complete works on algebra. The marked tendency at the present time to prefer a sort of parallel study of several correlated branches of mathematics to carrying on successively each subject as far as possible before taking up another, has led to the introduction in many cases of short courses in trigonometry, analytical geometry, and calculus between the more elementary algebra and the theory of equations. Under this system it becomes at once desirable to treat the latter subject in a separate text-book, into which it is proper to introduce the notation and principles of the infinitesimal calculus, although logically they may be altogether unnecessary.

The first impression conveyed by the little book which comes from the pen of Dr. Chapman is that it has been unduly condensed, but upon a more careful examination one perceives that to a student possessing a very slight knowledge of analytical geometry and calculus the treatment of the subject is unusually intelligible. The book is worthy of praise both on scientific and on pedagogical grounds. The definitions are accurate, the demonstrations rigorous, and the choice of material excellent ; while the questions addressed to the student at various points, the problems, and suggested demonstrations are sure to be effective.

The first part relates to determinants. It occupies but twenty one pages, and leads from first principles through the most elementary propositions to the solution of linear equa-