For suggestions such as the one mentioned, the book may be recommended to anyone who is already familiar with other works on the foundations of geometry, but for a beginner it would be thoroughly misleading, and to a philosophical outsider who wished to learn the methods and ideas of the logic of mathematics it would give some very queer notions indeed.

It seems to the reviewer not to be worth while to lengthen this notice with criticisms of details, especially as many of the points that would be mentioned have already been adverted to by Dehn in a review published in the *Jahresbericht der Deutschen Mathematiker-Vereinigung*, volume 14, page 535. The reader who is interested in such things will find a rejoinder to Dehn by Vahlen on page 591 of the same volume, a retort by Dehn on page 595, and a second "Erwiderung" by Vahlen in volume 15, page 73. With these he may compare a footnote by Schoenflies on page 31, volume 15.

OSWALD VEBLEN.

Quadratic Partitions. By Lt. Col. ALLAN CUNNINGHAM, R.E. London, Francis Hodgson, 1904. xxiii + 266 pp.

THE main tables in the book under review contain the quadratic parts (t, u) of the partitions

$$p = t^2 \pm Du^2,$$

wherever possible, for all values of $D < 20$ $(D \neq k^2 \cdot \delta)$, and for all primes p to various limits not above 100,000. Shorter tables at the end of the book contain solutions of the Pellian equations

$$\tau^2 \pm Dv^2 = \pm 1, \quad \pm 2, \quad \pm 4, \quad \pm 8, \quad \pm 16$$

for various values of D not over 1,000.

In the Introduction the author gives a brief, but excellent sketch of the properties of quadratic forms, and describes methods of applying the present tables to factorizations, the calculation of Hauptexponenten and kindred problems.

Comparing it with the earlier tables of Jacobi and Reuschle, the student of number theory cannot fail to be impressed with the excellence of Col. Cunningham's book. Neatness, freedom from errors, and admirably compact arrangement of tables of such extent add to their appearance as well as their usefulness. The odd primes are printed *forty* on each page, an arrange-

ment which greatly facilitates counting the primes that fall in a given interval, and reduces the liability to error in computations where a number of successive primes are used.

In addition to errata noted by the author, an obvious misprint occurs in the Introduction: page ix, line 4 from bottom, for $(3\tau^2 v + qv^3)$ read $(3\tau^2 v + Dv^3)^2$.

J. C. MOREHEAD.

ERRATA.

The following errata in the present volume of the BULLETIN have come to the attention of the editors:

Page 74, line 28, *for* k *read* $k > 1$.

Page 75, line 38, *for* $3^{k+\beta}$ *read* $2^{k+\beta}$.

line 42, *for* 0, 1 *read* 0, n; $n > 0$.

NOTES.

AT the meeting of the London mathematical society, held on May 10, the following papers were read: By B. RUSSELL, "On the substitution theory of classes and relations"; by E. CUNNINGHAM, "On linear differential equations of rank unity"; by E. J. ROUTH, "On the motion of a swarm of particles whose center of gravity describes an elliptic orbit of small eccentricity about the sun"; by H. BATEMAN, "The theory of integral equations"; by G. H. HARDY, "Singularities of power series in two variables."

THE appearance of the April number (volume 28, number 2) of the *American Journal of Mathematics* has been delayed by an extensive printers' strike in Baltimore.

THE University of Kiel announces the following prize problem for the year 1906–1907:

It is required to determine the relations which exist between the principal integrals of the various regions, for the hypergeometric differential equation of the third order with two finite singular points.

THE following advanced courses in mathematics are offered during the year 1906–1907 by the universities named below: