

arithmetical problem whatever that is solvable by the application of algebraic functions of elliptic theta functions.

The translation was made from what is apparently the unique copy of this book in the United States. The translators wish it to be stated that copies can be purchased only at the University of Chicago Book Store, 5802 Ellis Ave., Chicago, and that the price is \$3.00. The 146 pages of mimeographing are, on the whole, clearly done; the book is substantially bound in a stiff paper cover and, as such work goes, is of a very high quality. It is to be hoped that this translation will at last make Nazimoff's penetrating ideas familiar to those who either do not read Russian or who are content to accept second hand abstracts from those who also do not read Russian.

E. T. BELL

The new Quantum Mechanics. By G. Birtwistle. Cambridge University Press, 1928. xiii+290 pp.

This book contains an exposition of the theories of Heisenberg, Schrödinger and Dirac, with applications mainly to the theory of spectra. There are also chapters on de Broglie's particle waves, and the Bose-Einstein and Fermi-Dirac statistics. The closing chapter deals with Heisenberg's indetermination relations and the formulation given to them by Bohr in his article in *Nature*, April 1928 (and communicated to the author before publication; the author's preface is dated Copenhagen, 1 Oct. 1927).

The book contains a great deal of information on the main developments in quantum theory up to the latter part of 1927, and is convenient for reference; on the other hand, owing perhaps to lack of time, the presentation is uncritical, so that the book cannot replace the study of the original memoirs.

T. H. GRONWALL

Traité d'Analyse, volume 3, third edition. By Émile Picard. Paris, Gauthier-Villars, 1928. ix+660 pp.

This is a reprint of the second edition, with additional notes on pp. 601-656. Although no review of previous editions has appeared in the *Bulletin*, the *Traité* is so well known and so highly appreciated by the mathematical public, that it seems superfluous to describe the contents of the main body of the volume. The additions to the new edition are as follows: (1) a note on Sundman's work on the problem of three bodies (reprinted from *Bulletin des Sciences Mathématiques*, 1913, pp. 313-320); (2) a lecture on integral invariants and Poisson stability (from the author's course at the Sorbonne in 1914, printed here for the first time); (3) remarks on some of Poincaré's results in analytical mechanics (*Bulletin des Sciences Mathématiques*, 1914, pp. 320-236); (4) on the solution of $\Delta u = e^u$ on a closed Riemann surface (*Journal für Mathematik*, vol. 150); (5) on linear partial differential equations and the generalization of Dirichlet's problem (proof of the analyticity of the solution for a second-order equation of the elliptic type, reprinted from *Acta Mathematica*, vol. 25 (1901), pp. 121-137).

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