by the author may seem hardly a review ; it does, however, when taken with the introductory remarks, give perhaps in the shortest space the best idea of a book of this nature where scope and presentation are the two features of most vital interest. The author certainly has written a good introduction to Maxwell's theory and has given appropriate attention to its relation to the later atomic view of electricity.

E. B. WILSON.

## NOTES.

THE twenty-ninth regular meeting of the Chicago Section of the AMERICAN MATHEMATICAL SOCIETY will be held at the University of Chicago on Friday and Saturday, April 28–29. Titles and abstracts of papers to be presented at this meeting should be in the hands of the Secretary three weeks in advance of the meeting.

AT the meeting of the London mathematical society held on January 12 the following papers were read : By T. C. LEWIS, " A property of the number 7 " ; by H. M. MACDONALD, " A mode of representation of an electromagnetic field as due to singularities distributed over the surface " ; by W. H. YOUNG, " On the fundamental theorem in the theory of functions of a complex variable " ; by E. W. HOBSON, " On the fundamental theorem relating to the Fourier constants for given functions."

THE Paris academy of sciences announces the following prize subjects for the year 1912 : The grand prize (3000 francs) for the improvement of the theory of algebraic differential equations of the second or of the third order the general integral of which is uniform. Also the problem mentioned in the BULLETIN, volume 16, page 332. This was proposed before, but no suitable memoirs were received. The Francoeur prize (1000 francs) for work useful to the propagation of pure and applied mathematics. The Poncelet prize (2000 francs) for a worthy memoir in pure mathematics. The Montyon prize (700 francs) for the improvement of machinery useful in agriculture. The Fourneyron prize (1000 francs) for the best contribution to the theory of aviation. A number of prizes in astronomy are announced, without close restriction of the subject.

PROFESSOR L. HEFFTER, of the University of Kiel, has accepted a professorship of mathematics at the University of Freiburg.

DR. F. HARTOGS, of the University of Munich, has been promoted to an associate professorship of mathematics.

PROFESSORS E. JAHNKE, of the mining academy in Berlin, and E. PAPPERITZ, of the mining academy at Freiberg, have been elected to membership in the academy of sciences of Halle.

PROFESSORS J. NEUBERG, of the University of Liège, and P. MANSION, of the University of Ghent, have each been given the rank of professor emeritus. They will retire at the close of the present academic year.

PROFESSOR E. BOREL, of the University of Paris, has been appointed sub-director of the Normal School, as successor to the late Professor J. Tannery.

PROFESSOR M. DULAC, of the University of Algiers, has been appointed professor of mathematics at the University of Lyon.

PROFESSOR E. CARRUS, of the University of Besançon, has accepted the professorship of mathematies at the University of Algiers.

DR. P. BOUTROUX, of the University of Nancy, has been appointed professor of the calculus at the University of Poitiers.

DR. M. FRÉCHET has been promoted to the professorship of rational mechanics at the University of Poitiers.

DR. A. CAHEN will give a course in the theory of numbers at the University of Paris during the second semester of the present academic year.

DR. E. ZORETTI, of the University of Grenoble, will give a course in rational mechanics at the University of Caen.

DR. M. CHAZY has been appointed master of mathematical conferences at the University of Grenoble.

DR. A. CLAEYS, of the University of Ghent, has been promoted to a professorship of mathematics.

DR. M. LAGRULA will assist Professor CARTAN in the newly inaugurated course in general mathematics at the University

of Paris. About 100 students are participating in the exercises, which consist in the evaluation of definite integrals and the use of logarithmic and other numerical tables and of calculating machines.

DR. M. MANDERLI has been appointed docent in mathematics and astronomy at the University of Bern.

AT Princeton University, Professor W. GILLESPIE has been promoted to a full professorship of mathematics.

MR. DUNHAM JACKSON, now studying at Göttingen on a travelling fellowship from Harvard, has been appointed instructor in mathematics at Harvard University for the academic year 1911–1912.

PROFESSORS E. R. HEDRICK, of the University of Missouri, and J. I. HUTCHINSON, of Cornell University, have been granted leave of absence during the second half of the present academic year; they will spend most of their time in Paris. During Professor Hedrick's absence, Professor O. D. KELLOGG will be in charge of the department of mathematics at the University of Missouri.

PROFESSORS E. J. WILCZYNSKI, of the University of Chicago, and C. L. BOUTON and J. L. LOVE, of Harvard University, are spending the present half-year abroad on leaves of absence.

THE marriage is announced of Professor E. D. ROE, JR., of Syracuse University, and Miss JOSEPHINE A. ROBINSON, professor of mathematics at Berea College, at Berea, Ky., February 1.

PROFESSOR G. GUNDELFINGER, of the technical school at Darmstadt, died December 13, 1910, at the age of 65 years.