Professor Webster is to be congratulated on the well-deserved success of his work and we may justly take pride in this product of American scholarship.

<div align="right">W. R. LONGLEY.</div>

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## NOTES.

THE concluding (October) number of volume 14 of the *Transactions of the American Mathematical Society* contains the following papers: "Applications and generalizations of the conception of adjoint systems," by MAXIME BÔCHER; "On a certain class of self-projective surfaces," by E. J. WILCZYNSKI; "On the representation groups of given abstract groups," by G. A. MILLER; "On the accuracy of trigonometric interpolation," by DUNHAM JACKSON; "On a simple type of irregular singular point," by G. D. BIRKHOFF; "On quadratic residues," by J. McDONNELL; "A set of five independent postulates for Boolean algebras, with application to logical constants," by H. M. SHEFFER; "Formal modular invariants with application to binary modular covariants," by MILDRED SANDERSON.

THE December number (volume 15, number 2) of the *Annals of Mathematics* contains: "On the numerical factors of the arithmetic forms $\alpha^n \pm \beta^n$" (continued), by R. D. CARMICHAEL; "Geometric characterization of isogonal trajectories on a surface," by J. LIPKA; "On the second variation, Jacobi's equation, and Jacobi's theorem for the integral $\int F(x, y, x', y')dt$," by ARNOLD DRESDEN; "Quartic surfaces invariant under periodic transformations," by F. R. SHARPE and F. M. MORGAN; "Postulate sets for abelian groups and fields," by W. A. HURWITZ.

UNDER the auspices of the International commission a congress on the teaching of mathematics will be held at Paris, April 1–5, 1914, in the halls of the Sorbonne. The chief subjects of discussion by the congress will be the introduction of the first notions of the calculus and of primitive functions in the secondary schools (lycées, Gymnasia), and the teaching of mathematics to engineering students.

THE address on "Molecular theories and mathematics," delivered by Professor EMILE BOREL at the dedication of the Rice Institute, October 10–12, 1912, has been published in the annual report of the Smithsonian Institution for 1912, pages 167–186.

FOR several years volumes 5 and 7 of the *Proceedings of the Edinburgh Mathematical Society* have been out of print, and it has been practically impossible to procure them even in second hand condition. These volumes have now been reprinted by the Society and are available for the completion of sets.

THE Italian society for the advancement of science held its annual meeting at Siena, September 22–27. The following papers were presented at the general sessions: "The principles of mechanics," by A. GARBASSO; "Thermodynamics of liquids and gases," by S. LUSSANA; "Astronomy and historical chronology," by E. MILLOSEVICH; "Phosphorescence and fluorescence; statements and theories," by A. POCHETTINO; "The actuary and actuarial science," by G. TOIA. The following papers were presented before the section of pure and applied mathematics: "On the flow of water through conduits," by L. CONTI; "On the sufficient conditions in the calculus of variations," by F. ENRIQUES; "The southern and eastern deviations of falling bodies," by G. GIANFRANCESCHI; "Volterra's distorsions in solids of revolution," by E. LAURA; "On Torricelli's theorem," by T. LEVI-CIVITA.

UNIVERSITY OF PARIS.—The following courses in mathematics are announced for the present semester, beginning on November 3: By Professor G. DARBOUX: General principles of differential geometry and their applications to partial differential equations, two hours.—By Professor E. GOURSAT: Operations of the calculus, elements of the theory of analytic functions, two hours.—By Professor E. BOREL: Uniform monogenic functions of one complex variable, one hour.—By Professors P. PAINLEVÉ and C. GUICHARD: Statics, general theorems of dynamics, elements of analytic mechanics, movement of fluids, two hours.—By Professor C. GUICHARD and Drs. H. LEBESGUE and E. MONTEL: General mathematics, two hours.—By Professor J. BOUSINNESQ: Interior friction of fluids with application to continuous flow and gradual extinction

of waves, two hours.—By Professor G. KOENIGS: Thermo-
dynamic and experimental study of thermic motors, general
principles of dynamics of machines, two hours.—By Dr. L.
CAHEN: Elements of the modern theory of numbers, Fermat's
last theorem, two hours.   Conferences will be held by Pro-
fessor GUICHARD and Messrs. DRACH, MONTEL, SERVANT, and
VESSIOT.   Courses in the Ecole Normale are given by Pro-
fessors BOREL and CARTAN and Messrs. LEBESGUE and
VESSIOT.

PROFESSOR MAXIME BÔCHER, exchange professor from
Harvard University, will give a two-hour course on: The
work of Sturm and Liouville in differential equations; its
modern developments.

DR. M. LAPALLY has been appointed docent in mathematics
at the technical school of Munich.

THE Italian national academy of sciences (the XL) has
awarded its gold medal to Professor MAX ABRAHAM,of the tech-
nical school at Milan, for his researches on gravitational fields.

AT the University of Washington, Mr. ALLEN F. CARPENTER
has been promoted to an assistant professorship.   Dr. L. E.
WEAR, Dr. L. L. SMAIL, and Dr. N. ALTSHILLER have been
made instructors in mathematics.   Professor G. I. GAVETT
has been granted leave of absence for the year.

AT the Iowa State College the following changes have been
made in the mathematical department.   Miss M. ROBERTS has
been promoted to the rank of professor; Miss J. COLPITTS has
been promoted to an associate professorship: Dr. W. M. JONES,
Mr. G. A. CHANEY, and Mr. G. W. SNEDECOR have been
appointed assistant professors; Miss G. HERR has been
appointed instructor in mathematics.   Professor E. A.
PATTENGILL has returned from his leave of absence and has
resumed his regular work.

MR. C. G. SIMPSON, of Columbia University, has been
appointed assistant professor of mathematics in Pennsylvania
State College.

DR. H. M. SHEFFER, recently instructor in mathematics in
Cornell University, has been appointed instructor in philos-
ophy in the University of Minnesota.

PROFESSOR A. W. WHITNEY, of the University of California,
has resigned to accept a position in the State board of in-
surance.