

is entitled to a modicum of systematic manual training as a part of a rounded education.

Mr. Newcomb's paper on 'The Spoils System in Theory and Practice' was a surprisingly frank and straightforward exposition of the manner and extent to which members of Congress plunder the national treasury by creating unnecessary offices and filling them with friends who make themselves agreeable, but perform no needful public service. The paper will soon appear in print.

C. M. WOODWARD,  
*Secretary.*

WASHINGTON UNIVERSITY.

#### THE AMERICAN MATHEMATICAL SOCIETY.

THE sixth summer meeting of the American Mathematical Society was held at the Ohio State University, Columbus, Ohio, on Friday and Saturday, August 25th and 26th, simultaneously with the meeting of the American Association for the Advancement of Science at that place. In attendance and range of subjects covered in the papers presented, the meeting was thoroughly representative of mathematical activity throughout the country. The President, Professor R. S. Woodward occupied the chair, and in opening the first session contrasted the present lively interest in mathematical investigation as indicated by the list of papers to be read, each of which was in some way a contribution to the sum of mathematical knowledge, with the conditions of thirty or forty years ago when the workers in mathematical science were very few and were confined within narrow limits.

The American Mathematical Society which represents the organized forces for research and the diffusion of mathematical knowledge in the United States has had a remarkable growth. It was organized upon its present basis in 1894 and now numbers over three hundred members. Ten new members were elected at this meeting and eight applications for membership were received.

The following is a list of the papers presented, many of which will be published in the *Trans-*

*actions of the Society*, others in the *American Journal* or the *Annals of Mathematics*:

'Note on relative motion,' Dr. A. S. Chessin, New York, N. Y.

'On surfaces of zero relative velocity and a certain class of special solutions in the problem of four bodies,' Mr. F. R. Moulton, University of Chicago.

'On the use of generalized differentiation in the solution of physical problems,' Professor John E. Davies, University of Wisconsin.

'A new class of link works,' Professor Arnold Emch, Kansas Agricultural College.

'A relation between point and vector analysis,' Mr. Joseph V. Collins, Stevens Point, Wisconsin.

'John Speidell's 'New Logarithmes,' Professor Florian Cajori, University of Colorado.

'On analogues of the property of the orthocenter,' Herbert Richmond, M.A., King's College, Cambridge.

'A theorem on skew surfaces,' Professor C. A. Waldo, Purdue University.

'Irrational covariant conics of a plane cubic,' Professor H. S. White, Northwestern University.

'On the generalization of Desargues' theorem,' Professor Frank Morley, Haverford College.

'On certain crinkly curves,' Professor E. H. Moore, University of Chicago.

'Note on non-quaternion number systems,' Dr. Wendell M. Strong, Yale University.

'On mixed groups,' Professor H. B. Newson, University of Kansas.

'The invariant theory of the inversion group,' Dr. Edward Kasner, Columbia University.

'Note on the imprimitive substitution groups of degree fifteen and on the primitive substitution groups of degree eighteen,' Miss Emilie N. Martin, Bryn Mawr College.

'A new definition of the general abelian group,' Professor L. E. Dickson, University of Texas.

'Definition of various linear groups as groups of isomorphisms,' Professor L. E. Dickson, University of Texas.

'On the groups of cogredient isomorphisms that are abelian,' Mr. W. B. Fite, Cornell University.

'On the groups that are the direct products of

two subgroups,' Dr. G. A. Miller, Cornell University.

'A proof that there are no simple groups of order 1440, 1512, 1680 or 1800,' Dr. G. H. Ling, Wesleyan University.

'On a relation between the totality of the elliptic functions and a line complex,' Dr. H. F. Stecker, Northwestern University.

'Geometric construction of the elliptic integral of the second kind, and of the Weierstrass sigma-function,' Dr. Virgil Snyder, Cornell University.

'Some applications of elliptic functions,' Professor Alexander Pell, University of South Dakota.

'On Fresnel's wave surface,' Dr. L. T. More, University of Nebraska.

THOMAS F. HOLGATE,  
*Acting Secretary.*

EVANSTON, ILLINOIS.

#### THE WORK OF FOREIGN MUSEUMS.

THE annual reports of several foreign Museums have been received during the summer months, and from them one may obtain a fair idea of the work they are doing, the support they receive and the disadvantages, mainly of lack of money and space, under which they labor. These reports comprise those of the Australian Museum (1897), Colombo Museum (1898), Museum Association of the Kingdom of Bohemia (1898), West Prussian Provincial Museum (1898), Castle Museum, Norwich (1898), Edinburgh Museum of Science and Art (1897), Corporation Museums and Art Galleries, Glasgow (1898), and Manchester Museum (1898-99). The first two institutions are government museums, the last four fall in the category of local museums, although that of Manchester, from its relations with Owens College, is on a somewhat different basis from the others. The Museum of Prag, and we believe the West Prussian Provincial Museums are, like various other European institutions, under the control of an association, although re-

ceiving a subvention from the state, to which they are responsible.

The Australian Museum leads the others in the matter of expenditures, although these only reach the sum of \$35,000, and is doing much good work for the public in judiciously planned and well labeled exhibition pieces, and for science by constantly adding to its study series and publishing the results obtained therefrom. The usual complaint is made of lack of room and lack of force, but the completion of a new series of well-built and well-equipped workrooms is announced forming the basement of what will later on form a new wing to the Museum building. The most important publication was the memoir on the zoology of the Funafuti Expedition of 1896; but two parts of the 'Records' were also issued. The MS. for the two parts 'Accipitres and Striges' of the new edition of Dr. E. P. Ramsay's catalogue of birds is also ready. The number of accessions was 11,000, mostly gifts, and the number of visitors 122,894.

The Colombo Museum is practically prohibited from doing any work by the smallness of its appropriation, 24,000 rupees (about \$8,000), as this does not suffice to fairly meet the running expenses, since we are told that the wood work is suffering for the lack of paint. This is to be deplored, for the Museum is well located for original work, is the official Museum of Ceylon, and is well attended by the public as is shown by the record of 111,000 visitors.

The activity of the Museum at Prag is shown by the numerous meetings of the various sections of the association by which it is controlled, while its collections have been extensively studied. The Director, Dr. Fric, gives some of the results of his studies in connection with his *Fauna der Gaskohle* and announces the completion of ten plates for that work. The expenses of the Museum amount to \$24,000, a sum that