mathematical works of the best type. It is quite possible that in some cases direct translation from foreign languages would be highly beneficial. Many of the most important mathematical works published in German, French or Italian are at once translated so as to be accessible in all three of these languages. Is there no lesson in this for us? An English translation of the new 'Encyclopedia of Mathematics' would probably do much to spread throughout this land of seventy-five million inhabitants a knowledge of and an interest in advanced mathematics.

Finally, we must not relax our efforts to increase and improve the opportunities offered those interested in mathematics to meet one another for the purpose of exchanging their views upon mathematical topics. The society must encourage, even to a greater extent than hitherto, the holding of mathematical colloquiums, sectional meetings, largely attended general meetings, and international congresses.

THOMAS S. FISKE.

THE AMERICAN MATHEMATICAL SOCIETY.

THE eleventh annual meeting of the American Mathematical Society was held at Columbia University on Thursday and Friday, December 29–30. The attendance at the several sessions included forty-nine members. The retiring president, Professor T. S. Fiske, occupied the chair. The council announced the election of the following persons to membership in the society: Mr. G. I. Gavett, Stanford University; Mr. M. E. Graber, Heidelberg University, Tiffin, Ohio; Mr. E. B. Lytle, University of Illinois; Professor R. E. Moritz, University of Washington; Dr. B. L. Newkirk, University of California. Fourteen applications for membership were received. A committee was appointed to arrange for the summer meeting.

At the opening of the afternoon session on Thursday, President Fiske delivered his retiring address, the subject being 'Mathematical Progress in America.' The address, published in the present issue of SCIENCE, dealt with the general development of mathematics in this country and especially with the powerful influence exerted by the society since its organization in 1888. Professor Fiske was himself one of the founders of the society, which owes much to his initiative and valuable services as secretary, editor of the *Bulletin* and the *Transactions* and in other official capacities culminating in the presidential office.

At the annual election, which closed on Friday morning, the following officers and members of the council were chosen:

President—W. F. Osgood.

Vice-Presidents—E. W. Brown and James Pierpont.

Secretary—F. N. Cole.

Treasurer—W. S. Dennett.

Librarian—D. E. Smith.

Committee of Publication—F. N. Cole, Alexander Ziwet, D. E. Smith.

Members of the Council to serve until December, 1907—E. R. Hedrick, T. F. Holgate, E. O. Lovett, L. A. Wait.

An informal dinner on Thursday evening, attended by about thirty-five of the members, added much to the pleasure of the meeting.

The *Annual Register* of the society, this year a book of 76 pages, including the catalogue of the library, has just been published. The total membership is now 473, of whom 32 are life members. The number of papers presented during the year 1904 was 118. The treasurer's report shows a balance of $3,884.28 on hand December 27, 1904. The library now contains over 2,000 volumes.

The following papers were read at the annual meeting:

MAX MASON: 'The doubly periodic solutions of Poisson's equation in the plane.'

VIRGIL SNYDER: 'On the forms of sextic scrolls having no rectilinear directrix.'

A. B. COBLE: 'Some applications of a theorem in the theory of forms.'

L. E. DICKSON: 'The group of a tactical configuration.'

T. S. FISKE: Presidential address, 'Mathematical progress in America.'

MAURICE FRÉCHET: 'Sur les opérations linéaires (deuxième note).'

F. MORLEY: 'On an inversive relation between five points of a plane.'

J. E. WRIGHT: 'Application of the theory of continuous groups to a certain differential equation.'

EDWARD KASNER: 'Geometry of point correspondences: osculating homographies.'

C. H. SISAM: 'On septic scrolls.'

E. V. HUNTINGTON: 'Note on definitions of groups, abelian groups, and fields.'

E. V. HUNTINGTON: 'A set of postulates for ordinary complex algebra.'

BURKE SMITH: 'On the deformation of surfaces of translation.'

L. E. DICKSON: 'A general theorem on algebraic numbers.'

A. B. COBLE: 'The similar projective groups of a cubic space curve and a quadric surface.'

E. H. MOORE: 'On a definition of abstract groups.'

The Chicago Section of the society met at Chicago, on December 30–31. The next meeting of the society will be held on February 25. The San Francisco Section will meet on the same date.

F. N. COLE,
Secretary.

THE GEOLOGICAL SOCIETY OF AMERICA.

THE seventeenth annual meeting of the Geological Society of America was held at the University of Pennsylvania, Philadelphia, December 29–31, 1904, under the presidency of Professor John C. Branner, of Stanford University. Sixty-one papers, divided among eight branches of the science, were presented for reading, and about one hundred members of the society were in attendance, making the convention one of the largest in its history. The report of the council for the year 1904 shows that in all respects the affairs of the society are in a highly satisfactory condition. The net active membership of the society was reported as being 259, and 15 new members were elected at the Philadelphia meeting. During the past year, five members have been removed by death, Professor C. E. Beecher, J. B. Hatcher, Henry McCalley, W. H. Pettee and Charles Schäffer. Memorials of these members were read at the first session of the Philadelphia meeting.

The report of the treasurer showed that the society had a balance in the treasury, December 1, 1904, of $1,973.68 and invested funds amounting to $8,300. The volume of the *Bulletin* of the society comprises 636 pages of text, with 75 illustrations, the articles being divided among nine branches of the science, of which stratigraphic geology occupies about one half. The library of the society, which is deposited with the Case School of Applied Science in Cleveland, now comprises some 2,600 numbers, of which 1,400 are bound volumes.

Professor Branner chose as the subject of his presidential address, 'Geological and Geographical Studies on the Northeast Coast of Brazil,' and illustrated his paper by means of numerous photographs and charts. The most peculiar feature of this coast is the series of hardened sandspits occurring at the mouths of most of the rivers. These spits consist of quartzose sand which has been cemented together into a hard solid rock by means of calcium carbonate brought down in solution by the rivers and precipitated by contact with the waters of the ocean, which here possess a high degree of salinity. This hardening extends to a depth of several feet and, in many instances, has been of great economic importance through the formation thereby of natural breakwaters, forming safe harbors, as at Pernambuco. The spits contain many fossils, all of which are of living species. A second coast feature of importance