

of the institute. Two lectures were given on the practical organizations of eugenics, "in the United States" by Dr. Davenport; "in Belgium" by Dr. Govaerts. On Wednesday a visit was made by the Congress to the city of Antwerp.

THE FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY

THE 1922 annual meeting of the federation will be held on Wednesday, Thursday and Friday, December 27, 28 and 29, at Toronto, Canada, under the auspices of the University of Toronto. The program will be sent out about December 14. An effort to secure special railroad rates is being made. In case these are secured members will be notified. The hotel headquarters are the King Edward. About 100 men can be accommodated, in either single rooms or in suites each with two bedrooms, in the men's residences of the university. About 12 women can be accommodated in one of the women's residences. Breakfast for those living in the residences can be obtained at Hart House. The charge for these rooms will be \$3.00 for 3 nights, or \$2.00 for 2 or 1 night. Luncheons will be provided on the 27, 28, and 29. Dinners will be followed by a smoker on the evenings of the 27 and 28. All these will be given in Hart House, the student's club, near the residences and the medical building.

The Local Committee is anxious to arrange a large series of demonstrations. As the departments of physiology, biochemistry and pharmacology are all in the one building, facilities of all kinds can readily be arranged. All communications in regard to the same should be addressed to Professor J. M. Olmsted, Medical Building, University of Toronto.

The general meetings will be held in the Physics Building of the university. Meetings of the Constituent Societies will be held in the Medical and Anatomy Buildings of the university, which intercommunicate. The lecture rooms are not distant from each other and it is hoped to have a notice board system, so that the papers to be read in each section will be

posted in each other section. Professor Andrew Hunter is chairman and Professor V. E. Henderson is secretary of the local committee.

THE AMERICAN PHYSICAL SOCIETY

THE 24th annual meeting (the 118th regular meeting) of the American Physical Society will be held in Boston on December 26-30, 1922, in affiliation with Section B—Physics—of the American Association for the Advancement of Science. The meetings will be held at the Massachusetts Institute of Technology.

At the session in charge of Section B, Professor G. W. Stewart, the retiring vice-president and chairman of Section B, will give the annual address. This will be followed by a symposium on "Ionization Potentials and Atomic Radiation," and the invited speakers are to be Dr. Paul D. Foote, of the Bureau of Standards, and Professors K. T. Compton and Henry Norris Russell, of Princeton.

Members wishing to present papers at the Boston meeting are requested to send abstracts ready for publication to the secretary before December 9. The secretary expects to send the program to all members before the meeting, but the delays in the mails are so great at present that members should not depend upon the program to determine their attendance.

Other meetings for the current season are as follows:

- 119. February 27, 1923. New York.
- 120. April 21, 1923. Washington.
- 121. Time not determined. Pacific Coast Section.

DAYTON C. MILLER
Secretary

CASE SCHOOL OF APPLIED SCIENCE,
CLEVELAND, OHIO

THE MATHEMATICAL ASSOCIATION OF AMERICA

THE seventh annual meeting of the Mathematical Association of America will be held at Room 11, Sever Hall, Harvard University, December 28-29, 1922, in conjunction with the American Mathematical Society and Section A of the American Association. At a joint session of these three bodies the following papers will be read:

Reduction of singularities of plane curves by birational transformation: PROFESSOR G. A. BLISS, University of Chicago, retiring president of the society.

The grafting of the theory of limits on the calculus of Leibniz: PROFESSOR FLORIAN CAJORI, University of California, representing the association.

Geometry and physics: PROFESSOR OSWALD VEBLEN, Princeton University, retiring vice-president of Section A of the American Association.

At the Friday morning session the following papers will be given:

Period of the bifilar pendulum for finite amplitudes: PROFESSOR H. S. UHLER, Yale University.

Skew squares: PROFESSOR W. H. ECHOLS, University of Virginia.

On the averaging of grades: PROFESSOR C. F. GUMMER, Queen's University.

Mathematics at Oxford and the Ph.D. degree: PROFESSOR W. R. BURWELL, Brown University.

Some unsolved problems in the theory of sampling: PROFESSOR B. H. CAMP, Wesleyan University.

Some unsolved problems in solid geometry: PROFESSOR J. L. COOLIDGE, Harvard University.

It is of special note that the session on Friday afternoon will be devoted to a "Symposium on Mathematical Statistics," for the purpose of strengthening the existing entente cordiale between mathematicians on the one hand and practicing statisticians on the other. It is hoped that this symposium will be of real service, not only to those who are giving courses in statistics in departments of mathematics, but also to others who may be interested in the application of mathematics to statistical problems. The following papers will be read:

The subject matter of a course in mathematical statistics: PROFESSOR H. L. RIETZ, head of the department of mathematics at the State University of Iowa, and chairman of the National Research Council's Committee on the Mathematical Analysis of Statistics.

Time series of economic statistics: their fluctuation and correlation: WARREN M. PERSONS, professor of economics at Harvard University, and editor of the *Review of Economic Statistics*, published by the Harvard Committee on Economic Research.

The fundamental concepts of the calculus of mass variation: ARNE FISHER, statistician of the American Telephone and Telegraph Company, and

author of "The mathematical theory of probabilities and its application to frequency curves and statistical methods." The discussion will be opened by RAYMOND PEARL, professor of biometry and vital statistics in the School of Hygiene and Public Health, Johns Hopkins University, and statistician of the Johns Hopkins Hospital.

CHEMISTRY AT THE BOSTON MEETING OF THE AMERICAN ASSOCIATION

THE Boston meeting of the American Association for the Advancement of Science will undoubtedly be the most important to chemists of any of its meetings held for years. Papers on research work completed or in progress are now invited from the chemists of the country. In addition to such papers as may be submitted there will be a symposium on "The Progress of Chemistry," and a second symposium on "Photochemistry and Plant Physiology," in which the leading chemists of the country will discuss these subjects. In addition the American Physical Society will continue the series of symposia begun last year jointly with the Mathematica and Chemical Societies. The subject will be "Ionization Potentials and Atomic Radiation," and the speakers will be Paul D. Foote, K. T. Compton and Henry Norris Russell.

The following list gives the papers already arranged for in connection with the symposium on the progress of chemistry: "Compressibilities and the size of atoms," by Theodore W. Richards, of Harvard University; "Proteins and the theory of colloidal behavior," Jacques Loeb, of the Rockefeller Institute; "X-rays as related to the structure of atoms and of crystals," William Duane and also George L. Clark, both of Harvard University; "Changes in volume during the solution of solids," Gregory P. Baxter, of Harvard University; "The chemistry of the photographic process," C. E. K. Mees, of the Eastman Kodak Company; "The present status of the theory of complete ionization," D. A. MacInnes, of the Massachusetts Institute of Technology; "The present status of the theory of incomplete ionization," James Kendall, of Columbia University; "Ionization potentials and chemical action," W. A. Noyes, Jr., and "The separation