

freezing of the beet be brought about slowly, water may be drawn into the cavity from a considerable distance from cell to cell within the tissue.

Certain strong non-poisonous solutions, when applied to the cut ends of the petioles of leaves, produce a similar translucent effect in the tissue of the blades of leaves, as is shown by the writer in a paper now in process of publication.

JAMES B. DANDENO.

BOTANICAL MUSEUM OF HARVARD UNIVERSITY, May 22, 1901.

THE AMERICAN MATHEMATICAL SOCIETY.

A PRELIMINARY circular, which has just appeared, describes the arrangements which have been made for the summer session of the American Mathematical Society to be held at Cornell University, Ithaca, N. Y., during the week beginning on August 19th. The meeting proper, for the transaction of business and the presentation of papers, will take place on the first two days, while the remainder of the week will be occupied by a colloquium. Two courses of lectures by Professor Oskar Bolza, of the University of Chicago, and Professor E. W. Brown, of Haverford College, are announced as the basis for this colloquium, which will be the third organized by the society in connection with its summer meetings. Professor Bolza's subject is 'The calculus of variations, in particular Weierstrass's discoveries.' The principal object of the course is to give a detailed account of the solution of the simplest type of problems, in its historical development, with special emphasis upon the contributions of Weierstrass and his followers. A summary review of the peculiar features of the more general problems is also intended. Professor Brown will lecture on 'Modern methods of treating dynamical problems and in particular the problem of three bodies.' The object of this course is to set forth some of the later attempts to introduce more rigor into the methods of solving dynamical problems, mainly the researches of Poincaré. The course will be chiefly descriptive, in showing the principles of the methods, the mathematical difficulties which arise, and the results which have been obtained. Among the subjects treated will be the following: the

various forms of the differential equations of dynamics, the existence of integrals, solutions by infinite series, periodic solutions, stability and instability. In neither course will special knowledge of the subject be presupposed.

SCIENTIFIC NOTES AND NEWS.

DR. IRA REMSEN, professor of chemistry in the Johns Hopkins University since its foundation in 1876, has been elected president of the University.

A COMMITTEE, consisting of Professors Ira Remsen, J. S. Ames and W. H. Welch, has been appointed at the Johns Hopkins University to arrange a memorial to the late Professor Henry A. Rowland.

M. LAVERAN, the French army surgeon who discovered the malaria parasite, has been elected a member of the Paris Academy of Sciences in the section of medicine, filling the vacancy caused by the death of M. Potain. In the third ballot M. Laveran received forty, and M. Ch. Richet twenty-six, votes.

AT a recent meeting of the National Geographic Society, the by-laws were so changed as to merge into the single class of 'members' the two classes hitherto designated 'resident members' and 'non resident members,' and also to increase the board of managers from 18 to 24, including six not resident in the District of Columbia. The board has now been completed by the election of the following non-resident members: Professor William M. Davis, Cambridge; Mr. Russell Hinman, New York; Professor Angelo Heilprin, Philadelphia; Dr. Daniel C. Gilman, Baltimore; Professor Rollin D. Salisbury, Chicago, and Professor George Davidson, San Francisco.

DR. G. A. HANSEN, of Bergen, the discoverer of the bacillus of leprosy, will celebrate his sixtieth birthday in July, and it is proposed to present him with an international testimonial made up of small subscriptions. These may be sent to Dr. Sandberg, Bergen.

PROFESSOR EDWARD F. MORLEY, of Adelbert College, has been appointed a delegate from the United States to the International Conference of Weights and Measures, which is to be held in Paris during September.