

proceeding from a system consisting of an electrified plane and an electrified line parallel to the plane, is the locus of the intersection of two straight lines having motions in a plane which is perpendicular to the electrified line; one line having a motion of uniform rotation about the electrified line as an axis, and the other a motion of uniform translation perpendicular to itself and parallel to the electrified plane.

(b) That the curve representing a line of force proceeding from a system consisting of an electrified plane and an electrified point is the locus of intersection of two straight lines having motions in a plane, which passes through the electrified point and is perpendicular to the electrified plane; one line having a motion of rotation about the electrified point and the other a motion of translation perpendicular to itself and parallel to the electrified plane. The rotation is such that the versine of the angle which the rotating line makes with  $oy$  (a line which passes through the electrified point and is perpendicular to the electrified plane) changes at a uniform rate, and the translation is such that if the moving line were the meridian line of a cylinder of revolution whose axis is  $oy$ , the area of cross section of the cylinder would change at a uniform rate.

Mr. Roever also showed other properties of the above lines of force.

One active member was elected.

WILLIAM TRELEASE,  
Recording Secretary.

#### SCIENCE CLUB AT THE UNIVERSITY OF WISCONSIN.

THE first regular meeting of the Science Club of the University of Wisconsin was held Tuesday, November 10th, the regular programme consisting of a discussion by E. A. Birge on 'The Crustacea of the Open Water of Lake Mendota,' and a paper on 'the Radiophone' by C. M. Smith. Mr. Birge, in speaking of the vertical distribution of the limnetic crustacea, enumerated the factors which effect the distribution, and illustrated the action of each factor by its effect on different species of the crustacea. Especial attention was called to the fact that in summer the crustacea do not descend below the

'Sprungschicht' of temperature, but stop abruptly at that level. This was regarded as due, not to temperature directly, but to the accumulation of decomposition products in the deeper water. Mr. Smith's paper reviewed the principal phenomena which have led to the conclusion that the production of sounds of definite pitch is a general property of all matter, whether solid, liquid or gaseous, when placed in the path of rapidly intermitted heat radiations; the pitch corresponding to the rapidity of interruptions of the rays. He further showed the application of the method to the study of emission and absorption phenomena.

WM. S. MARSHALL,  
Secretary.

#### THE BOTANICAL SEMINAR OF THE UNIVERSITY OF NEBRASKA, DECEMBER 5, 1896.

*The Polyphyletic Grouping of the Lichens*, MR. CLEMENTS. *Mycological Statistics of Nebraska*, MR. POUND. *The Comparative Anatomy of the Pistil in Apocarpous Families*, MR. ERNST BESSEY. *Phytogeographical Notes from Colorado*, MR. SHEAR.

#### NEW BOOKS.

*The Microscope and Microscopical Methods*. SIMON HENRY GAGE. Ithaca, Comstock Publishing Co. 1896. Pp. xii+237. \$1.50.

*The Principles of Sociology*. HERBERT SPENCER. New York, D. Appleton & Co. 1896. Vol. III., pp. x+645. \$2.

*List of the Vertebrated Animals now or lately living in the Gardens of the Zoological Society of London*. London, Longmans, Green & Co. 1896. Pp. xvi+724.

*Prehistoric Man and Beast*. H. N. HUTCHINSON. New York, D. Appleton & Co. 1897. Pp. xxi+298. \$3.

*A Text-book of Special Pathological Anatomy*. ERNST ZIEGLER. Translated and edited from the Eighth German Edition by DONALD MACALISTER and HENRY W. CATTELL. New York and London, The Macmillan Co. 1896. Section I.-VIII. Pp. xix+575+xxxii.

*Elementary Meteorology for High Schools and Colleges*. FRANK WALDO. New York, Cincinnati and Chicago, The American Book Company. 1896. Pp. 372.