T. C. Mendenhall, the Society adopted a resolution advocating the passage of a law by Congress for the adoption of the metric system of weights and measures.

The following officers were elected for the ensuing year: President, H. T. Eddy, of University of Minnesota. Vice-Presidents, J. Galbraith, of Toronto School of Practical Science, and J. M. Ordway, of Tulane University. Secretary, C. Frank Allen, of Massachusetts Institute of Technology. Treasurer, J. J. Flather, of Purdue University. Councillors, T. C. Mendenhall, of Worcester Polytechine Institute; Robert Fletcher, of Thayer School of Civil Engineering; A. Beardsley, of Swarthmore College; M. E. Wadsworth, of Michigan Mining School; W. H. Schuerman, of Vanderbilt University, and Wm. Kent, Editor of *Engineering News*.

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*THIRTEENTH GENERAL SESSION OF THE AMERICAN CHEMICAL SOCIETY.**

THE president, Dr. Chas. B. Dudley, called the meeting to order. He spoke of the large program and proceeded at once to call upon the committee of arrangements.

Dr. Miller introduced Dr. Roswell Park, president of the Buffalo Society of Natural Science, who gave the address of welcome. After making the visitors feel at home, he made a plea to those who were interested in physiological chemistry to produce a substance which should have a germicidal property, so far as the deleterious germs were concerned, and yet not be toxic to the living tissue. With such a substance we could saturate our systems and live secure from the attacks of the deleterious germs. The president replied to Dr. Park's address. After thanking him for his kind welcome, he spoke of the advancement of chemistry in the last few years, and the benefits to be derived from chemists' being united in a society. The reading of papers was then proceeded with. Among the most interesting of the papers read was that of Prof. Kennicott, 'The Inspection and Sanitary Analysis of Ice.' This paper was discussed at length.

The following is a list of the papers read:

Composition of American Kaolins (*25m.*). CHARLES F. MABERY and OTIS F. KLOOZ.

Composition of Certain Mineral Waters in Northwestern Pennsylvania (*15m.*). A. E. ROBINSON and CHARLES F. MABERY.

Mercuric Chlor-thiocyanate (*5m.*). CHARLES H. HERTY and J. G. SMITH.

Zinconium Oxalates (*10m.*). F. P. VENABLE and CHARLES BASKERVILLE.

Rutheno-cyanides (*m.*). JAMES LEWIS HOWE.

The Inspection and Sanitary Analysis of Ice (*20m.*). CASS L. KENNICOTT.

The Reduction of Concentrated Sulphuric Acid by Copper (*8m.*). CHARLES BASKERVILLE.

Some Analytical Methods Involving the Use of Hydrogen Di-oxide (*15m.*). B. B. ROSS.

Notes on the Preparation of Glucinum (*10m.*). EDWARD HART.

Aluminum Analysis (*30m.*). JAMES OTIS HANDY.

An Analytical Investigation of the Hydrolysis of Starch by Acids (*30m.*). GEORGE W. ROLFE and GEORGE DEFREN.

The Effect of an Excess of Reagent in the Precipitation of Barium Sulphate (*15m.*). C. W. FOULK.

Estimation of Thoria: Chemical Analysis of Monazite Sand (*15m.*). CHARLES GLAZER.

Determination of Reducing Sugars in Terms of Cupric Oxide (*30m.*). GEORGE DEFREN.

Acidity of Milk increased by Boracic Acid (*5m.*). E. H. FARRINGTON.

Accuracy of Chemical Analysis (*15m.*). FREDERIC P. DEWEY.

Some Extensions of the Plaster of Paris Method in Blowpipe Analysis (*15m.*). W. W. ANDREWS.

Device for Rapidly Measuring and Discharging a Definite Amount of Liquid (*5m.*). EDWARD L. SMITH.

Table of Factors (*5m.*). E. H. MILLER.

A Modified Form of the Ebullioscope (*10m.*). H. W. WILEY.

A New Form of Potash Bulb (*5m.*). M. GOMBERG. Communicated by A. B. PRESCOTT.

Morphine in Putrefactive Tissue (*15m.*). H. T. SMITH. Communicated by A. B. PRESCOTT.

The Signification of Soil Analysis (*10m.*). H. W. WILEY.

A Complete Analysis of Phytolacca decandra (*5m.*). G. B. FRANKFORTER and FRANCIS ROMALEY.

The Crystallized Salts of Phytolacca decandra. G. B. FRANKFORTER and FRANCIS ROMALEY.

The By-products formed in the Conversion of Narcoline into Narceine (*5m.*). G. B. FRANKFORTER.

* Buffalo, N. Y., August 21 and 22, 1896.

Notes on the Determination of Phosphorus in Steel and Cast Iron (*25m.*). GEO. AUCHY.

The Development of Smokeless Powder (*10m.*). C. E. MUNROE.

The afternoons were spent in visiting the several manufactories in the city and vicinity. After transacting the necessary business the session adjourned. The winter meeting will be held at Troy, N. Y.

LILIENTHAL, THE AVIATOR.

THE death of Otto Lilienthal, the aviator, and the fatal accidents which have been so common of late among balloonists, are likely to check somewhat the work of experimentation in aërial navigation; but it is not probable that it will put a stop to research in this seductive though dangerous field. Necessarily involving experiment at the speed of a railway train, and at considerable heights above the ground, aviation is especially hazardous. Herr Lilienthal, whose death is reported to have occurred August 11th, through the breaking down of his apparatus when at the full height of his flight from the hill at Rhinow, is perhaps the greatest loss that the cause of aviation could at this time experience.

He was the most successful and one of the most enthusiastic of all the many inventors who have entered upon this field of work. He was in the prime of his life, forty-seven years of age, and had already accomplished enough to convince himself and many careful observers of the possibility of artificial flight, once the motor could be found to supplement his apparatus of support. He was a steam-engine builder, and familiar with the available motors, and was confident that only patience, perseverance and skilful engineering were required to insure complete success. A firm believer in aviation, as distinguished from ballooning, he had accomplished so much in the construction of the apparatus of flight, and had succeeded so far in actual, soaring flight that his confidence seemed well justified.

The machine employed was a system of aëroplanes forming wings and a tail; the wings being given a certain curvature, always observed in the wings of birds and which Lilienthal found to be essential to best effect. The material was 'balloon muslin,' impregnated with collodion to make it impervious to air, and stretched upon frames of split osier, and fitted with great care and skill. He was, at the time of his death, experimenting upon carbonic acid and other motors. The weight of his apparatus was from 33 to 55 pounds, as lately constructed (15 to 25 kilos); its area of supporting surface, 10 to 20 square meters. The spread of wing was usually about 23 feet (7 meters). With this machine, Lilienthal insisted that the art of flying might be acquired, or at least that of soaring flight, as readily as that of riding a bicycle. He made thousands of flights without serious accident, and was confident that comparatively little danger was to be anticipated if the method were cautiously learned. His experience indicated, he considered, that the exercise is on a par in this respect with bicycling, for though the latter sport gives rise to daily, and sometimes fatal, accidents, it is rightly commended and encouraged. His experiments confirmed, as he has stated, the deductions of Langley relative to the 'internal work of the air.'

Lilienthal was a frequent contributor to the German technical journals, and wrote a small work detailing his experiments and the methods of construction and operation of his machines.* Expecting to secure some pecuniary advantage, in time, from his inventions, he patented them in this country as well as in Europe.

CORNELL UNIVERSITY. R. H. THURSTON.

*Der *Vogelflug als Grundlage der Fliegekunst*, Berlin, 1889.