the laws of the phenomenon cannot yet be derived they at least appear to be definite.

Note on the Osmotic Theory of the Voltaic Cell: By H. M. Goodwin. Prof. Goodwin dissents in this article from some conclusions reached by Prof. Bancroft in a recent paper on 'The Chemical Potential of the Metals,' and presents results of recent determinations of the E. M. F. of certain types of cells in support of his position.

The Division of an Alternating Current in Parallel Circuits with Mutual Induction: By Frederick Bedell. This paper is devoted to a discussion, both graphical and analytical, of the case of branch circuits which act inductively upon one another. The general formulæ are derived and several special cases are considered. The results are not of a character which could be presented here to advantage.

On the Specific Gravity and Electrical Conductivity of the Normal Solutions of Sodium and Potassium Hydroxides, and Hydrochloric, Sulphuric Nitric and Oxalic Acids: By E. H. Loomis. The results of careful determinations of the specific gravity and conductivity are here presented in the case of some salts and acids for which these quantities had not previously been accurately determined.

New Books.—Wuller: Experimentalphysik. Carhart and Patterson: Electrical Measurements. Le Blanc: Electrochemie. Fleming: Alternate current transformer. Bedell: Principles of the Transformer.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES.

The Section of Geology and Mineralogy, held its regular monthly meeting November 16th, with Prof. Albert H. Chester in the chair, as chairman *pro tem.*

The first paper was by Dr. E. O. Hovey, entitled 'On a Deep Well-boring at Key West, Fla.' Dr. Hovey described the geological section uncovered by the well for a depth of more than 2000 feet. A number of microscopic organisms were obtained. It proved somewhat difficult to identify the geological horizons, but without much doubt the well penetrated a considerable distance into Miocene. In the limestone many grains of quartz, possibly of secondary depositions, were met, and also rolled grains of quartz, doubtless in the nature of sand. Dr. Hovey commented on the significance of the phenomena, and expressed his obligations to Prof. Alexander Agassiz, from whom the samples had been obtained. The paper will appear in full in an early number of the Bulletin of the American Museum of Natural History.

Prof. A. J. Moses then exhibited a number of new mineralogical instruments which had recently been sent from Europe. They included a little adjustable dark room which could be fitted to a Fuess No. 2 Goniometer, so that crystals could be measured by daylight. Perfect signals could be obtained even in a well-lighted room. The instrument is called the Traube Verdunklungsvorrichtung. The universal rotation attachment for mineralogical microscopes which has been invented by Prof. Klein, of Berlin, for measuring the angle of the optic axes of microscopic crystals was also shown. Klein's new rotation apparatus for the orientation of thin sections was next described. The new attachment which can be adjusted to the Fuess Goniometer No. 2 for measuring the optic axes was shown and an opportunity was afforded to test it by actual experiment. The von Federow mica wedge (Glimmerkeil), which consists of a series of superposed $\frac{1}{4}$-undulation mica plates in step-like arrangement and is used for all the purposes of a quartz wedge, concluded the paper.

The third paper was read by Mr. A. Chester Beatty, and was entitled 'The Minerals of the Elkhorn Mine, Montana.' Mr. Beatty exhibited with comments, a remarkable series of calamine, smithsonite, native silver and other minerals.

Prof. A. H. Chester presented a paper on the new discovery of the brassy, micaceous mineral which seems, from the only analysis, to be chalcodite, and which has been found in a quarry at Rocky Hill, New Jersey. He also exhibited a remarkable series of rutile from Graves Mountain, Georgia.

G. F. Kunz described a new meteorite from Guatemala, and read a joint paper by Dr. Hillebrand and himself upon a new discovery of prosopite in Utah. He read also a joint paper by J. H. Pratt and himself on the new find of saphires at Utica, Mont.

Mr. Frederick Braun described his discovery of spinels and chondrodite in dolomite, at Fordham, New York City, an association closely resembling that at Edenville, N. Y. It was discussed by Prof. J. F. Kemp, who remarked on the interest attached to this association of minerals because of the difference of opinions prevailing among geologists as to whether they indicated contact metamorphism or merely regional metamorphism.

The last paper of the evening was by Prof. J. F. Kemp, entitled 'Exhibition of interesting minerals collected during the summer.' The speaker exhibited covellite, goslarite, enargite, chalcodite and tetrahedrite from Butte, Montana, which were exceptionally fine crystals. Remarkably large prisms of andalusite from the Black Hills were also shown and zircons and allanite from Mineville, Essex County, New York.

A collection of chalcodite from a quarry near Reading, Pennsylvania, was exhibited by Mr. Roebling, of Trenton, New Jersey, in connection with the paper by Prof. Chester.

The Academy then adjourned to inspect the minerals.

J. F. KEMP,
Secretary.

ANTHROPOLOGICAL SOCIETY OF WASHINGTON.

THE 253d regular meeting of the Anthropological Society was held Tuesday, the 17th of November, 1896.

Dr. J. H. McCormick read a paper on a 'Primitive Village Site in Maryland,' in which he described a discovery of an Indian village site recently made by him, in Montgomery county, Md., about thirty miles from Washington. He exhibited a collection found upon, and near the site, which illustrated perhaps, better than any other collection, the contemporaneous existence of the rude chipped stone implements and the most highly polished stone implements associated together, which substantiates Prof. W. H. Holmes's claim of the contemporaneity of the Palæolithic and neolithic ages. It was also noted that these implements, contrary to the usual rule, increased in this region, as we approached the interior, and that the camp site was always situated northeast from water supply, whether spring or stream.

The implements were discussed at some length, and compared to many specimens found in various parts of the United States. For the most part they were of stone not found in the vicinity. Several ceremonial stones, of exquisite workmanship, were of the Tennessee slate and one a phallus. The paper was discussed by Messrs. McGee, Thos. Wilson, Pierce, Blodgett, Cushing and Mason.

Mr. Cushing read a paper on the 'Shell Mound Explorations from Maine to Florida,' in which he described the recent explorations of the shell heaps in Maine and Florida. He exhibited a beautiful collection from the Florida coast and described the Pile dwellings and artificial islands and inlets made by these primative people. The specimens were found in the peat and marl beds of the Mangrove swamps and were obtained with much difficulty owing to the inflow of water into the excavations. The specimens showed the soaked condition in which they had existed for centuries, and upon drying, cracked and shrunk to such an extent, that many specimens broke into innumerable pieces. Among the most unique and beautiful specimens were the masks, of which water color drawings had been made as soon as they were taken from their bed, for by the following day the shrinkage had so disturbed them as to have lost their beauty.

Mr. Cushing called attention to the fact that there were no bows used, but throwing sticks instead and that the inhabitants were related to the southern and not to northern Indians, and suggested that perhaps the Seminoles were the survivors of this ancient race of people. The collection, as a whole, was the most striking and valuable ever found in these regions.

J. H. MCCORMICK,
Secretary.

GEOLOGICAL CONFERENCE OF HARVARD UNIVERSITY.

October 13, 1896.—'The Eruptive Rocks of Sussex County, N. J.' By J. E. Wolff.

'Note on the proposed Excursion to the Coastal Plain of Southern Maine.' By. W. M. Davis.

October 20, 1896.—'The Excursion to Hoosac Mountain' (illustrated with stereopticon). By J. E. Wolff.

'Some Features of the Cornwallis Valley, Nova Scotia.' By V. R. Marsters.

'Exhibition of the New Two-circle Goniometer.' By Charles Palache.

'Note on the Hurricane of October 10–14.' By R. De C. Ward.

October 27, 1896.—'Recent Accessions of Geological Material.' By W. M. Davis.

'On an Instrument for inclining a Preparation in the Microscope.' By T. A. Jaggar, Jr.

November 3, 1896.—'Review of the Excursion to Nahant.' By N. S. Shaler.

'The Tourmalines of Mt. Mica, Maine.' By Charles Palache.

'A remarkable Joint Specimen from Somerville, Mass.' By J. B. Woodworth.

Prof. Joseph LeConte was present at this meeting and gave some interesting reminiscences of the early days of the Lawrence Scientific School, from which he was one of the first graduates.

November 10, 1896.—'Material illustrating the Appendages of Trilobites.' By R. T. Jackson.

'The Excursion to the Blackstone Valley.' By J. B. Woodworth.

November 17, 1896.—'Magnetic Observations in Geological Mapping.' By H. L. Smyth.

T. A. Jaggar, Jr.,
Recording Secretary.

THE ONONDAGA ACADEMY OF SCIENCE.

The Society held its first regular meeting Friday, November 20, 1896. The President, Dr. Charles W. Hargitt, of Syracuse University, delivered an inaugural address, defining the 'Aims and Purpose of the Academy.' He considered the 'creation and cultivation of science, the dissemination of knowledge and the acquirement of a depository for everything scientific' the chief aims of the Academy. Mr. Horace W. Britcher gave a short talk, entitled: 'A Summer Laboratory on the Coast of Maine,' which was amply illustrated with photographs and alcoholic specimens.

The Onondaga Academy was organized October 24, 1896, the constitution and by-laws being adopted at that time. The Academy is the outgrowth of the scientific committee of the Onondaga Historical Association, which held scientific meetings throughout the summer, attracting numerous scientific workers from the vicinity. It has a charter membership of twenty-one. The well-known reputation of central New York, in the various scientific branches, gives considerable range to the work of the Academy, which has started out under most auspicious circumstances.

Philip F. Schneider,
Secretary.

NEW BOOKS.

The Gases of the Atmosphere: The History of their Discovery. William Ramsay. London and New York, The Macmillan Co. 1896. Pp. viii+240. $2.

Bibliographia Physiologia, 1895. Ch. Richet. Paris, Félix Alcan. 1896. Pp. 896. 3 fr. 50.

Papers presented to the World's Congress on Ornithology. Edited by Mrs. Irene Rood, under the direction of Dr. Elliott Coues. Chicago, Charles H. Sergel Co. 1896. Pp. 208. $5.

Les Aryens au Nord et au Sud de l'Hindou-Kouch. Charles de Ujfalvy. Paris, G. Masson. 1896. Pp. xv+488.

Round the Year, A Series of Short Nature Studies. L. C. Miall. London and New York, The Macmillan Co. 1896. Pp. viii+295. $1.50.

Sixteenth Annual Report of the United States Geological Survey to the Secretary of the Interior, 1894–95. Charles D. Walcott, Director. In four parts: Part I.—Director's report and papers of a theoretic nature. II.—Papers of an economic character. III.—Mineral resources of the United States, 1894; metallic products, David T. Day, Chief of Division. IV.—Mineral resources of the United States, 1894; nonmetallic products, David T. Day, Chief of Division. Vignette. Washington Government Printing Office. 1896. [II.. III. IV., 1895.]

Cambridge Natural History. Vol. II. London and New York, The Macmillian Co. Pp. xii+560. $3.50.