there were elected at this meeting 18 active and two corresponding members. A new board of officers also were elected, for the term of three years, including Professor C. S. Slichter, University of Wisconsin, President; Professors Harriet B. Merrill, Milwaukee-Downer College, C. H. Chandler, Ripon College, E. G. Smith, Beloit College, Vice-Presidents; Professor F. C. Sharp, Secretary; Professor L. Kahlenberg, Librarian, both of the University of Wisconsin. The library of the Academy will be installed in the fine large building provided for the State Historical Society after the dedication of the building next May.

A. S. FLINT, *Secretary.*

MADISON, WIS., Jan. 1, 1900.

THE KANSAS ACADEMY OF SCIENCE.

THE thirty-second annual meeting of the Kansas Academy of Science was held at McPherson, on December 28–29th. This Academy is a coordinate branch of the State Board of Agriculture, and as such has rooms in the State House, and its Proceedings are printed by the State. The following papers were read at the meeting:

'On Apocynum cannabinum,' by L. E. Sayre.

'The first great roof,' by Charles H. Sternberg.

'Geology of the Glass Mountains of Western Oklahoma,' by Mark White.

'Silica cement mortars,' by William Tweedale.

'The home of the Kansas tiger beetle,' by Warren Knaus.

'An apparatus for determining the relative heating power of coal and gas,' by E. H. S. Bailey.

'Some interesting pyrite crystals,' by J. C. Cooper.

'The Leonid meteors of 1833 as observed by a native Kansan,' by J. R. Mead.

'An example of variation in the human cranium,' by H. J. Harnly.

'Additions to the published flora of Kansas,' by A. S. Hitchcock.

'The testing of paving bricks,' by F. O. Marvin.

'An historical list of Kansas mammals,' by D. E. Lantz.

'Stratigraphy of Eastern Kansas,' by G. I. Adams.

'On some Diatomaceæ of Silver Lake and vicinity,' by George H. Curtis.

'Analysis of a magnesium water near Madison,' by F. W. Bushong.

'Collecting notes from Southwest Kansas,' by Warren Knaus.

'Notes on a trip through Western Wyoming,' by J. R. Mead.

'Comparison of the fauna of the Permian of England and America,' by J. W. Beede.

'A geological section of Lyon and Chase counties, along the Cottonwood River,' by Alva J. Smith.

'Harmonic forms,' by B. B. Smyth.

'Ecological areas in Florida flora,' by A. S. Hitchcock.

'Some mineral deposits in Central Missouri,' by S. Z. Sharp.

'The Corona of the sun,' by E. Miller.

Address of the retiring president on 'A theory of the cosmos,' by E. B. Knerr.

E. H. S. B.

WASHINGTON CHEMICAL SOCIETY.

THE regular meeting was held on December 14, 1899.

The first paper of the evening was read by Dr. Bigelow, and was entitled 'The Determination of Metals in Canned Goods,' by W. D. Bigelow and L. S. Munson.

After an examination of a number of the methods most commonly employed, the authors gave preference to a modification of Allen's method.

The entire contents of the can are thoroughly mixed, and 75 to 100 grams taken for analysis. Often it is found preferable to dry the entire sample, extract with petroleum ether, again dry and grind, to obtain a permanent sample. In this case only 25 grams are employed in the determination of metals.

In either case the sample taken is treated with 4 cc. of strong sulfuric acid, 2 cc. of nitric acid and 3 grams of magnesia. The whole is heated on a water bath until it becomes pasty. It is then ignited over a Bunsen burner or in a muffle furnace, until thoroughly charred, ground in a mortar, again ignited to complete combustion, nitric acid being added from time to time towards the close of the operation. The residue is then boiled for a half hour in about 40 cc. of 1–3 hydrochloric acid, almost neutralized with sodium hydroxid, precipitated with hydrogen sulfid and filtered. The precipitate is dried and thoroughly mixed with one gram each of sodium carbonate, potassium carbonate and sulfur, fused for one-half hour in a covered porcelain crucible, digested in water and filtered. The insoluble portion contains copper and lead. It is dissolved in nitric acid, and divided into