the beet. Illustrations are given of the factories at Rome and Binghamton and of the apparatus used in the chemical investigation.

Sugar Beets. Notes for 1897. *Bull. Nev. Agr. Expt. Sta.* 37, 3-16.—General information for the farmer.

APPARATUS.

A. H. GILL, REVIEWER.

A Condenser for Extraction Work. BY C. G. HOPKINS. *J. Am. Chem. Soc.*, **20**, 965.—This is a tubular condenser cooled internally.

On a Balance for Use in Courses in Elementary Chemistry. BY C. E. LINEBARGER. *J. Am. Chem. Soc.*, **21**, 31-33.—This balance—called the Chaslyn balance—resembles in form the familiar Westphal balance for specific gravity determinations. It has a capacity of 111 grams and is sensitive to 0.01 gram when loaded. It would seem to be admirably adapted to the purpose.

Improved Apparatus. BY J. L. SAMMIS. *J. Am. Chem. Soc.*, **21**, 42-45.—A burette is described and sketched with an S-shaped connection at the bottom so that it can never deliver more than 50 cc. Directions are also given for the manufacture of an electric stove for use in ether extractions.

A New Apparatus for the Determination of Volume. BY C. F. MCKENNA. *J. Am. Chem. Soc.*, **21**, 50-52.—This apparatus for determining the specific gravity of powdered solids resembles a flask pycnometer with two narrow graduated tubes fused on. The substance is introduced through one of these having an expansion above closed by a tubulated ground glass stopper. The volume, before and after adding the solid, is read off on the other narrow tube, after bringing the liquid to a zero point in the former tube by exerting suitable air pressure on its surface through the tubulated stopper. No glass joints are in contact with the liquid, thus preventing leakage.

Baume's Hydrometer—American Standard. BY. S. S. EMERY. *J. Am. Chem. Soc.*, **21**, 119-132.—This article consists of a table showing the comparison of Baumé degrees with specific gravities for liquids heavier and lighter than water.

A New Filtering Medium. BY G. W. SARGENT AND J. K. FAUST. *J. Am. Chem. Soc.*, **21**, 287-288.—A quarter-inch layer of sand supported below by glass wool, covered with asbestos, and held in place by glass beads, is placed in a carbon funnel

and washed with nitric acid. This filter is especially applicable for manganese dioxide and ammonium phosphomolybdate. The work with them is as accurate as with paper, much more rapid, and less expensive.

A Method for Cleansing Burettes. Note. By W. Glenn. *J. Am. Chem. Soc.*, **21**, 302.—The method consists in the use of chromic acid. The reviewer having used this method for the last fifteen years can attest its efficacy, if the acid be concentrated (see also Talbot, *Quant. Analysis*, p. 58 (1897), and *J. prakt. Chem.*, 79, 117).

INORGANIC CHEMISTRY.

Henry Fay, Reviewer.

On an Isomer of Potassium Ferricyanide. By James Locke and Gaston H. Edwards. *Am. Chem. J.*, **21**, 193–206.—By treating potassium ferricyanide with potassium chlorate and hydrochloric acid Skraup obtained a red solution from which, by repeated precipitations with alcohol, he obtained an amorphous, hygroscopic powder, to which he assigned the formula $K_2Fe(CN)_6$, although he was not able to prepare it in pure condition. The authors, by modifying Skraup's conditions, have been able to obtain a pure crystallized product. Potassium ferricyanide was heated to 95° C. with hydrochloric acid and potassium chlorate until effervescence began. The solution was cooled to 20° and filtered; and to the cool filtrate slightly less than an equal volume of alcohol was added. This produced a heavy crystalline precipitate. By partial reprecipitation the crystals were obtained pure, and on analysis were shown to have the composition represented by the formula $K_3Fe(CN)_6.H_2O$. The substance is an isomer of potassium ferricyanide, and the authors propose to name it potassium β-ferricyanide. Like the ordinary salt, this isomer yields characteristic precipitates with the solutions of the heavy metals. These have, in general, the same characteristics as the salts of the normal ferricyanide, and in some cases pass over into the latter with extreme ease. The precipitate of the β-ferricyanide with silver nitrate is dark-brown and flocculent, and when heated in its mother-liquor to 100° passes over into the bright-orange of the α-ferricyanide. The potassium β-ferricyanide can readily be distinguished from the normal ferricyanide by the fact that with bismuth nitrate solutions it does not form a precipitate, while the α-ferricyanide produces an insoluble straw-colored precipitate. Stannic chloride, on the other hand, yields no precipitate with potassium α-ferricyanide, but precipitates the isomer completely. No explanation of the isomerism is offered.