Oleates, together with Related Phenomena, Especially those of Protoplasm. G. Quincke. Wiedemann, Ann. 1894. Vol. 53, p. 593.

This article is a continuation of Prof. Quincke's investigation published in 1888 (Weid., Ann., Vol. 35, 1888, p. 562, et seg), and a reply to the criticisms which his article provoked. It gives the results of elaborate investigations upon the phenomena observable upon mixing various soaps, oils and water, and traces them to surface tension and allied forces. Some very interesting suggestions are given upon the similarity of some of the resulting appearances, with the arrangement of the heavenly bodies in space, and a strong likeness is shown between some of these peculiar bubbles with very thin, solid walls formed in such mixtures, and some of the formations in plant cells. The observations also go far toward explaining the motions sometimes observed in cells, which would seem to be due to the same forces as produce those peculiar motions of a drop of oil upon water.

On the Comparison of High Range Mercury Thermometers of Jena Glass 59III, with the Air Thermometer at temperatures between 300° and 500° C. By Alfons Mahlke. (Wied. Ann. 1894. Vol. 53, p. 965.)

Contains a very careful determination of the apparent co-efficient of expansion of mercury in Jena glass 59III, and demonstrates the availability of mercury thermometers made of this glass for the measurement of temperatures up to 500° C. (900° Th). William Hallock.

On the Units of Light and Radiation. By A. Macfarlane, D. Sc., LL.D. A paper read before the American Institute of Electrical Engineers, 16th January, 1895. (Abstract.)

The author shows that the difficulty experienced in defining and denoting the different ideas commonly expressed by the word 'candle' is due to the want of a name for the unit of solid angle; and suggests the word *steradian*, which has already been used for that purpose.

He considers the different physical ideas in the general subject of radiation, and shows the appropriate expression for the unit of each. With this system of radiation units he compares the system of units of light recently proposed by M. Blondel, and shows that the light system ought to be parallel to, not identical with, the radiant energy system. Finally he discusses M. Hospitalier's proposed symbols for light quantities.

GEOLOGY.

Report on the Bevier Sheet, by C. H. Gordon and others. Arthur Winslow, State Geologist, Mo. Geol. Surv. 1894.

This is the second of a series of detailed reports on areal geology in Missouri. The main feature is a carefully prepared and well executed topographic and geologic map, which includes portions of Macon, Randolph and Chariton counties, an area of about 250 square miles. This map is on a scale of $\frac{1}{62250}$ and the topography is shown by contours of 20 feet interval. The topographic base was executed by Messrs. C. H. Gordon, C. F. Marbut and M. C. Shelton. On the map are shown the horizon lines of the coal beds and the distribution of the geological formations, as well as the location of coal pits, drifts and drill holes. It is accompanied by a sheet of columnar and cross-sections, which give details of the geology. In the accompanying text, Mr. Gordon describes the physiography, including the topography, drainage, soil, forestry, etc., and the stratigraphic and economic geology. The Quaternary geology is reported on by Prof. J. E. Todd, and the distribution of the clays and shales by Mr. H. A. Wheeler, E. M., who were employed as specialists and whose reports on these subjects for the whole State are in process of preparation. J. D. R.