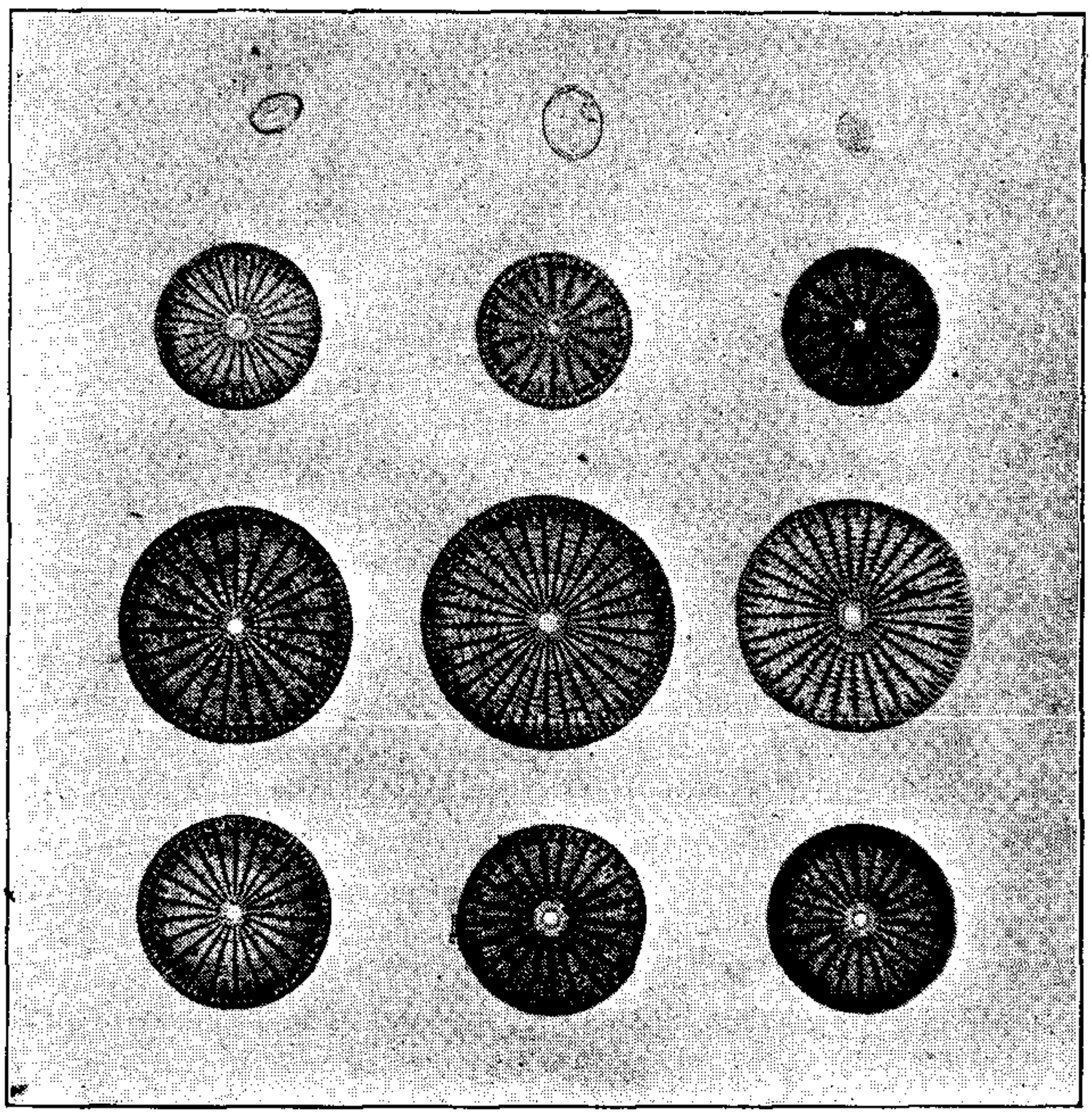
Section of Photography and Microscopy.

Stated Meeting, held April 4, 1903.

The Diatoms of Agar-Agar.

By Henry Leffmann.

Agar-agar, well known in the bacteriologic laboratory, is derived from several species of algæ growing in eastern Asiatic waters. It occurs usually in the form of filaments



Diatoms from agar-agar, prepared by Henry Leffmann; arranged and mounted by F. J. Keeley; photomicrograph by W. H. Walmsley.

about as thick as common straw. Its chief value to the bacteriologist is that it produces with water a jelly that does not melt at blood-heat, and can, therefore, be used for culture experiments at higher temperatures than can be used with common gelatin. It is analogous to the pectin of common fruits, and is not nitrogenous. It is used to a

limited extent as food, especially in the East, and is much employed in the large cities of the United States in the making of the cheaper ice-creams, especially the so-called "hokey-pokey" ice-cream sold by hucksters. It may also be used in some fruit jellies. It does not seem to be an objectionable article when used in moderate amount in these foods; in fact, as regards the ice-cream, the far more serious question is the liability of it to be made in dirty places and from dirty materials.

The detection of agar-agar itself when mixed with other vegetable or animal products would be difficult. Fortunately, the commercial article is always sprinkled with characteristic diatoms, which have attached themselves to the growing plant. The most important is *Arachnoidiscus Ehrenbergii*, a well-marked circular form, which does not live in the Atlantic Ocean or adjacent waters. By destroying the organic matter in any food article by strong oxidizing agents, the siliceous skeletons of the diatom are left uninjured, and can be easily recognized under moderate magnifying power.

A picture of forms obtained from a specimen of commercial agar-agar is appended.

Notes and Comments.

PRECIOUS STONES IN 1902.

A preliminary report submitted to the United States Geological Survey by Mr. G. F. Kunz, of New York, says that the year 1902 has been remarkable in precious-stone industry in America in a number of particulars, among which the following may be especially noted: The finding of a new locality for sapphires in Montana—a new creek, in the bed of which sapphires are found associated with gold, as in the Rock Creek region at Yogo Gulch, and on the Missouri near Helena; the further development of a new mine of blue sapphires in Fergus County; and the continued workings of the other two mines in the same State. Then comes the mining and development of the old beryl localities in Mitchell County, N. C., and the development of the beryl locality at Grafton, N. H. An amethyst mine has been opened in South Carolina, and two new amethyst deposits have been found in the State of Virginia. The mining of rubellite in San Diego County, Cal., continues, and a new deposit near Banner in the same region has been found. The further develop-