The full significance of the result of these inoculations was not realized at the time since it was not then known that *Sphæropsis* occurred on these blighted areas. In the spring of the present year, however, a *Sphæropsis* was found to be comparatively abundant on the diseased bark of pear trees in the station orchards. Since that time a large number of pear trees from various localities affected with body blight have been examined and in nearly every instance this fungus was found to be more or less abundant. One case particularly worthy of notice was that of a comparatively young orchard that was severely attacked by body blight and the fruit of a *Sphæropsis* was so abundant that the conclusion was irresistable that this fungus must be the cause of the disease.

Numerous inoculations made this spring with cultures of the *Sphæropsis* in large trees and in nursery stock clearly show that this fungus may produce body blight of pear trees.

Other species of fungi closely associated with the *Sphæropsis* frequently occur on trees attacked by body blight, *Macrophoma malorum* (Berk.) Berl. et Vogl. being specially abundant. The studies have not yet progressed far enough to determine what part these other fungi play in producing the diseased condition. Bacteria may also be concerned in this trouble, but of this we have as yet no proof.

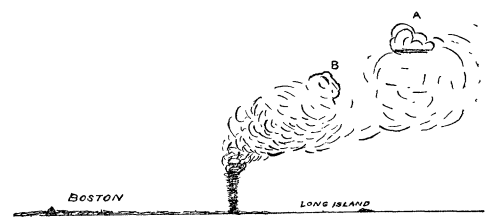
W. Paddock.

Geneva, N. Y.

Formation of Cumulus Clouds over a Fire.

In Science of January 8, 1897, Mr. R. DeC. Ward describes the formation of cumulus clouds over a fire in Cambridge. Last Friday (June 30th) another phenomenon of this kind was observed at Blue Hill and from Winthrop and approximate measurements of the height obtained.

The fire was in South Boston and consumed the buildings of the Bay State Iron Works. The smoke cloud was not of unusual size, but rose vertically to a considerable height (800 to 1,000 metres), encountering at this height a northwesterly wind, which swept it nearly horizontally over the harbor. The fire began before 8 p. m., and the smoke reached its greatest height about 8:05 p. m. At 8:03 p. m. a small white cloud began to form at the apex of the smoke, which at this time was apparently nearly over Long Island, in Boston Harbor. The cloud increased rapidly in height, assuming the form of a true cumulus and reaching its greatest size at 8:05 p. m. The accompanying sketch shows roughly the appearance of the smoke and the cumulus at that time. The sky



CUMULUS FORMING OVER FIRE, JUNE 30, 1899.

was nearly clear, no other low clouds being in the vicinity of the smoke. The cumulus cloud is shown at (A) and apparently was about 3° in height and length, the highest or thickest end being toward the north. Between 8:05 and 8:07 p. m. another smaller cloud formed at the edge of a rift in the smoke considerably lower than the one just described. Its position is shown at (B). Mr. A. E. Sweetland, of this observatory, who at this time was in Winthrop, about 5 miles (8 kilometres) northeast of the fire, estimated the altitude of the highest cumulus to be 15°, while a measurement made with the nephoscope at Blue Hill, about 10 miles (16 kilometres) south of the fire, gave 10° as its altitude as seen from the observatory. These measurements show that the vertical height of the top of the cloud at A was at least 2,500 metres, while that of the cloud at B was about 2,000 metres, above sea level.

The smoke began to diminish in quantity at 8:07 p. m. and separated from the clouds, which became flatter and more elongated. At 8:11 the clouds were separated from the smoke by a space several degrees wide, and after this time they slowly evaporated.

S. P. Fergusson.

Blue Hill Observatory, July 1, 1899.

A Reply to Mr. Marlatt's Article on Sources of Error in Recent Work on Coccidæ.*

When I lived in Colorado, some years ago, I remember hearing it said that a man who had

*Science, June 16, 1899, pp. 835–837.