NOTES AND COMMENTS.

APPLE SCAB.

PLATE III

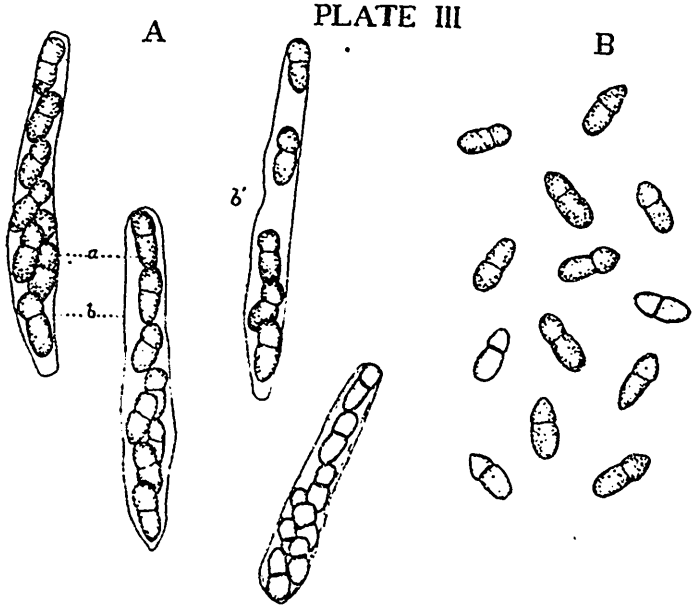

FIG. 2297.

A. Spores (*a*) in asci, (*b*) in ruptured ascus. *B*. Loose spores of scab.

Apple Scab (*Fusicladium dentriticum*) is one of the most serious hindrances of successful apple growing. By the fruit marks act, fruit so affected is virtually ruled out of the market as No. 1 grade, and in many orchards this will make seconds of nearly one half the crop. This fungus has been steadily increasing upon us, during the last twenty years, and we must now face it with faithful spraying or go out of apple growing. Green, of Ohio, made experiments in 1897 showing an average of nearly seven bushels of apples per treated tree and only two and one half per untreated; and in the case of Spy and Baldwins the actual average of profit derived from the treatment was more than $5.00 per tree!

The first application of the Bordeaux should be made soon after the leaves begin to unfold; the second when the petals fall; and, if weather is wet, a third should follow about two weeks later.

Clinton, of Illinois, found the scab was preserved over winter in the fallen leaves of the affected trees, and this stage of the life history of the scab is known by the name of *Venturia*. Fallen leaves gathered in October from scab infested trees, show, on the under side, small black round pustules, sometimes congregated in greyish spots, which mark the place of the winter scab colony. These pustules are called perethecia, which is the latin plural of perethecium. Figure 2298 C. shows one of these which has been placed fifteen hours in apple broth and the threads are the mycelial growth from the spores enclosed, which penetrate among the cells of the leaf tissue.

Figure 2298 D. shows some of these spores separated, (*a*) spore not yet swollen, (*b*) a germinating spore.

Figure 2298 E. shows germination of spores within 24 hours after placing them in water, (*a*) being a spore and (*b*) a germ thread.

Figure 2297 A. shows spores (*a*) asci, (*b*)