## **Feb.** 15, 1913]

or less covered with a yellowish-white mealy-looking powder which they throw out from their bodies, the object being principally to provide protection from enemies, but it also serves to conceal their eggs. The mealy-bug when full-grown is about  $\frac{1}{8}$  in. long, being in colour white tinged with yellow, and a brown band on neck. The margins of the body are armed with a number of spines, and there are two long cottony threads extending backwards from the last segment of the abdomen. Mealy-bugs are dreaded on account of the enormous rate at which they multiply, a single female laying several hundred eggs a day."

Methods of Distribution .- Without doubt birds play a very important part in the distribution of scale insects by carrying them on their feet and legs. The young mealy-bugs are very small, and might easily be carried from their footing by a strong gust of wind and deposited some distance away. When once this insect gets into a vinery very rarely is this entirely cleared of it. Very few growers, indeed, claim to have done so. The bark of the vine, woodwork of the house, and the soil at the base of the plant afford cover for the eggs. Prevention is what must be looked to by those going in for vine-culture under glass. See that the vine-house is placed away from trees, shrubs, and hedges. Do not allow any pot-plants or creepers of any kind to be put in the The raising of seedling plants in the vine-house, provided vine-house. the boxes used are clean, may be done. Where the work of the vinehouse is conducted in a methodical manner, and not too large an area is placed under the care of one man, every part comes under attention so often that the presence of any pest can or should be detected. When found it should be treated at once, and a search made for others. It has been found on the foliage at the top of the house and on no other part of the vines, proving that it can be carried by the wind.

Treatment of the Vines when the Insect has become lodged in the House.—When first discovered a small bottle of methylated spirit and brush should be kept, and diligent search made for the insect and eggs, and when found touched with the spirit. This destroys both effectively. Should, however, the mealy-bug have obtained too extensive a hold to be controlled by the above treatment, the vine-house must be fumigated with the hydrocyanic-acid gas. Before attempting to use this remedy the operator must realize that he is dealing with a very deadly gas, one or two full breaths of which would probably be sufficient to cause death. With proper precautions, however, there should be no danger in its use either to plant or man. The following directions should be carefully followed :—

Time of Day to fumigate.—Fumigate in the evening between sunset and dark. Strong light induces injury to foliage. Choose an