breathing pores of the insects, and, to some extent, by their corrosive action. *To be effective, the plant or tree must be very thoroughly covered.* In the case of the San José Scale, which may exist in a spot no larger than a pin-head, one scale left untouched may produce as many as a million offspring during the season. Consequently, *thorough spraying is essential to success.*

Sulphur.

Sulphur is a yellow substance which melts to a thin straw coloured liquid at 114.5° C., and boils at 448.4° C., changing to a brownish yellow vapour. When these vapours strike a cool surface they are condensed and deposited as a fine amorphous yellow powder, called "flowers of sulphur." Sulphur also appears on the market in sticks called "sulphur rolls." When sulphur rolls are ground to a fine powder we have it in the form known as "flour of sulphur." *Flour* and *flowers* of sulphur are the two forms which are used for combatting insects. They are used as a dust or, more often, boiled up with lime and water and applied as lime-sulphur solution. Flour of sulphur is somewhat cheaper to buy than flowers of sulphur.

A form of sulphur, known as Atomic Sulphur, put up by the Thomson Chemical Company of Baltimore, Md., and which is said to be "pure sulphur in a paste form combined with arsenate of lead," has been used as a fungicide and insecticide by some investigators in the United States, and has given reported good results.

Lime-sulphur Washes.

These washes have come into use during the last few years in combatting the San José scale. They have also been found to be very effective in destroying other kinds of the smaller insects, and are considered by many to be one of the best general "cleaning up" sprays that have been devised. In addition to their insecticidal value, they are efficient fungicides.

A disagreeable feature of these washes is that they are very caustic, and their application is often attended with considerable discomfort, especially in windy weather. Some of the irritation to the face and hands of the operator may be avoided by smearing the former with vaseline and covering the latter with rubber gloves. Leather is easily corroded by these washes, and care should be taken that the spray does not come in contact with the harness. Unless it is a still day, the horses should be covered with blankets, or always kept to the windward.

Home-made Wash.

A number of formulæ have been recommended for the preparation of this wash. Those usually adopted in Ontario, as given by Prof. Lochhead,* are as follows:

*Thirty-sixth Annual Report of the Entomological Society of Ontario.