

the bark. If but one spraying is to be given, use the soda-and-potash wash or the whale-oil and sal-soda separately; but in badly-infested orchards a combination of the two is commended.

“Whale-oil soap and caustic: To this mixture of soda and potash for deciduous trees perfectly dormant  $\frac{1}{4}$ lb. of whale-oil soap can be added to each gallon of the solution with advantage.

“Salt-and-lime wash: The following was first commended by growers in the San Joaquin Valley, and has recently been widely used: 25lb. of unslaked lime, 20lb. of sulphur, 15lb. of salt, 60 gallons of water. To mix the above, take 10lb. of lime, 20lb. of sulphur, and 20 gallons of water. Boil until the sulphur is thoroughly dissolved. Take the remainder, 15lb. of lime and 15lb. of salt; slake, and add enough of water to make the whole 60 gallons. Strain and spray on the trees milk-warm or warmer. This can be applied when the foliage is off the tree, and will have no injurious effect on the fruit-buds or tree whatever.

“Summer Washes for Deciduous Trees.—Sulphide-of-soda wash: Dissolve 30lb. of whale-oil soap in 60 gallons water by heating the two together thoroughly. Then boil 3lb. of American concentrated lye with 6lb. sulphur and a couple of gallons of water. When thoroughly dissolved it is a dark-brown liquid, chemically called sulphide of soda. Mix the two—the soap and the sulphide—well, and allow them to boil for half an hour. Then add about 90 gallons of water to the mixture, and it is ready for use. Apply it warm, by means of a spray-pump. Used warm its effect is better, and less material is required, than when cold.

“Resin soap: Ingredients for one barrel of 50 gallons (measure). Weight, about 450lb. to 500lb. Ten pounds caustic soda, 98 per cent; 10lb. potash, 40lb. tallow, 40lb. resin. First, dissolve the potash and soda in 10 gallons water. When dissolved place the whole amount in the barrel to be used. Second, dissolve the tallow and resin together. When dissolved, add the same to the potash and soda in the barrel, and stir well for five minutes or so. Leave standing for about two hours, then fill up with water, stirring well as every bucket of water goes in. Use, the following day, 1lb. to the gallon of water. Apply warm.

“Kerosene emulsion: Five gallons best kerosene oil, 150° test;  $1\frac{1}{4}$ lb. good common soap, or bar and half of soap usually sold as pound packages,  $2\frac{1}{2}$  gallons water. This makes the emulsion. When using, dilute  $6\frac{1}{2}$  to 7 gallons of water for each gallon of oil, and to this mixture add  $2\frac{1}{2}$ lb. of good home-made soap dissolved in boiling water. All this mixing is done with hot water, and applied at a temperature of 140° Fahr. Care must be taken to use best kerosene.”

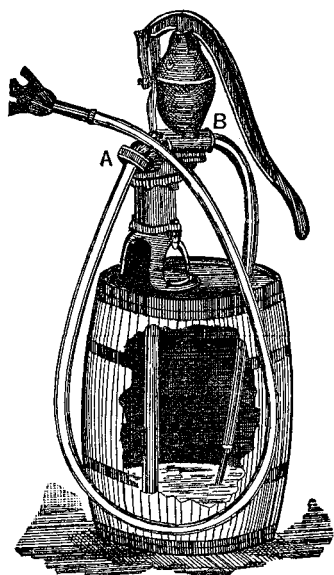
170. Is not the use of poisonous washes, such as Paris green, very dangerous?—I am convinced there is no danger whatever if ordinary care is used. Very exhaustive experiments have been made in America, and the results show there is no danger.

171. Is there any method of quarantine that would be advisable?—That is one of the things that the Government could assist us in. They could pass a short Act as an amendment to the Codlin-moth Act. There is no reason why such an Act should not be as strict in dealing with this evil as you are with your sheep. Any one having infected fruit should not be allowed to remove it off their premises. I have seen the effect of the negligence in this respect: these grubs come out from the towns in boxes of every kind, being by this means brought into all the country districts. It is clear to me there should be some regulations to meet it.

172. What regulations?—A penalty for anybody disposing of or removing off their premises infected fruit or anything containing infected fruit.

173. But you spoke of empty boxes?—All kinds of boxes; not only empty boxes. The boxes are in the first instance taken into Auckland to the auction marts and handed over to the dealers. If they are infected the maggots creep out into other boxes. In this way the pest is distributed all over the country. Recognising the importance of the fruit industry in Tasmania, they have very stringent regulations, and a Board to see that they are carried out.

*Witness:* In answer to a correspondent inquiring as to spraying outfits, the following cut, with explanation, is given by the *Canadian Horticulturist*:—



In reply to a good many inquiries about outfits for spraying trees, we here give a cut furnished us by Messrs. Johnson and Stokes, of Philadelphia, representing the perfection outfit, which is recommended as being the best hand-power for the purpose, and capable of spraying one hundred trees per hour. This pump is fitted with 10ft. of discharge-hose and a graduating spray-nozzle, the above being attached to the pump at the spout “A.” At the aperture “B” is attached 3ft. of return-hose, at the lower end of which is connected a discharge-pipe, so that at every stroke of the pump a small part of the liquid is redischarged into the tank near the bottom of the suction-pipe, which keeps the water and poison well mixed. The pump has a 3in. cylinder, and is furnished with an iron suction-pipe, ready to mount on a barrel. This outfit complete, without the barrel, can be had for \$10.