

planting what he calls fillers in the orchard, that is, trees that come into bearing quick and are liable to be short lived. Alternate with the later bearing larger trees the first will usually pay all expenses of orchard before others come into profit. In some places peaches are set in and pay all expenses of both orchards, before apples begin to bear. The Rhode Island station has found that about fifty per cent. more clusters of blossom buds grew on a limb of same size in the sun than on the one in the shade, showing that a conical tree like the No. Twenty, or a tree with plenty of room and sun light, will bear more apples than trees whose tops are crowded by too close planting. I have proofs of this in my own orchard.

SPRAYING SMALL PLANTS, POTATOES, ETC.

The home made spraying machine shown in the accompanying cut is thus described in bulletin 113, Cornell University Agricultural Experiment Station:



“The greatest sensation of the day, however, was occasioned by the appearance of the home made sprayer of Potter and Ware. An ordinary barrel spray pump was fastened to

a barrel having a capacity of about fifty gallons. The liquid was pumped into a gas pipe which was supported upon a light frame at the rear of the wheels. This pipe was fitted with four discharges to which nozzles could be attached. Four rows were sprayed at once, the work being fairly well accomplished as the horse walked across the field. Mr. Ware drove and pumped at the same time, and the machine worked without a break. The plants were uniformly although rather lightly covered, and the machine was pronounced a decided success by the four or five hundred people who saw it in operation."

HOW TO FIGHT THE CUTWORM.

Cutworms are more destructive than ever this year. On Long Island, from 5 to 20 worms are found about the roots of every cabbage plant in some sections, and complaints of its ravages are widespread. In addition to the partial remedies described in our last issue, trapping the worms under boards which have been placed on the ground and then in the morning destroying the worms which have congregated will diminish their number. A tablespoonful of a mixture of paris green with fine wheat bran and a little sugar scattered on boards or stiff paper near the plants will kill many. Plowing the infested land in the fall gives the birds a chance to destroy many of them. Kainit or muriate of potash applied liberally as a fertilizer has been found beneficial. These are the principal remedies employed but an infallible preventive or cure has yet to be found. Some success is following the use in Germany of bisulphide of carbon injected into the soil by a recently invented French apparatus. The same insecticide put into the soil about the plants with a McGowen injector is effective against the cabbage root maggot and is worthy of trial against cutworms and wire worms. Our American experiment stations ought to test this and other methods of sterilizing the soil against insect pests.