

Kansas State Agricultural College.

EXPERIMENT STATION.—Circular No. 17.

DEPARTMENT OF ENTOMOLOGY AND ZOOLOGY.

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PROTECTING TREES FROM RABBITS.

BY

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Protecting Trees From Rabbits.

In Kansas the damage done by rabbits is comparatively light and yet many young orchards, young shade trees, and wind-breaks, so much needed in our state, have been partially or completely destroyed.* Repeated requests for advice as to how to protect trees from their ravages has led to the publication of this circular,† which is based partly upon work done at this station and partly upon that done elsewhere.

CLEAN CULTURE.

It is very important to remove all brush piles and thickets, which may serve as breeding places and for safe hiding.

TRAPPING.

Traps of various sorts may be constructed. A simple and successful method is to sink a barrel in the ground level with its surface. Fit the head slightly smaller than the top and allow it to swing freely on a rod or old broomstick. Pieces of apple or grains of corn may be placed on the outer edge of the cover and when the rabbit attempts to get these, the lid tips up and he slides into the barrel, while the lid, which is slightly heavier on one side than the other, assumes its original position. The heavier side should strike against a heavy nail or bolt so that only the lighter side of the lid will drop. The whole thing should be covered over with brush

* The investigations relative to injurious mammals is a part of the work of the Department of Entomology and Zoölogy, but in this particular instance it was most convenient for Mr. Cunningham of the Department of Horticulture to make the observations and get together the information here given. The circular is published as a part of the work of the Department of Entomology and Zoölogy.

† Aside from the work with the buttermilk and soot spray and with the sunken barrel traps, this work is entirely compilation.

or light flat stones so as to make an enticing place for the rabbits.

A novel and ingenious trap for catching rabbits has been designed by Walter Wellhouse, and used with remarkable success by him in his orchards. The trap consists of a box made of fence boards (old ones preferred) six inches wide and one inch thick. The boards are cut twenty-two inches long and the top and bottom boards are nailed onto the side boards, thus making the opening four inches wide and six inches high. The door, *D*, is made of wire, shaped as shown in fig. 4, and hung with two staples, *cc*, to the under side of the top board. To prevent the rabbit from pushing the door open, a strip

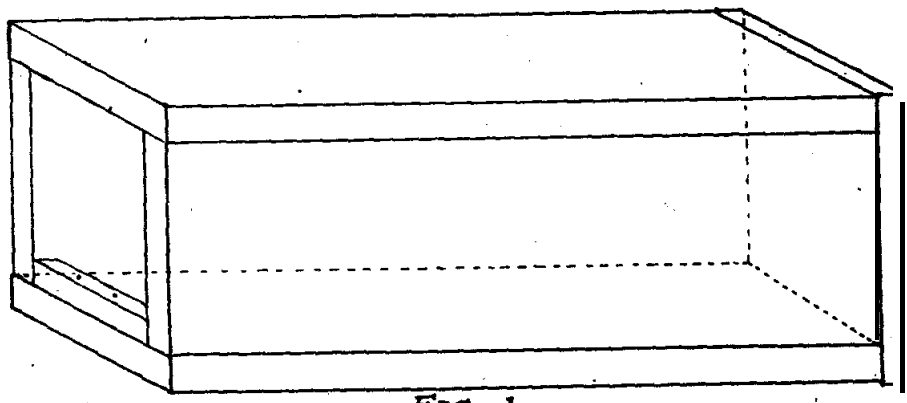


FIG. 1.

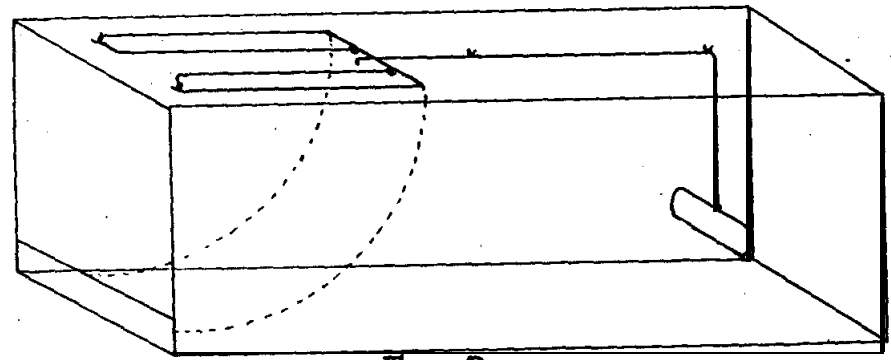


FIG. 2.

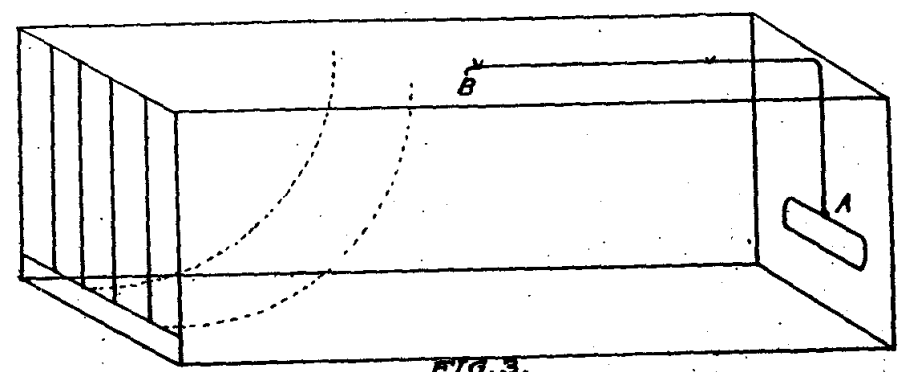


FIG. 3.

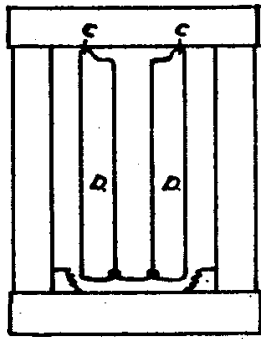


FIG. 4.

three-fourths of an inch square is inserted in the opening and nailed to the bottom board, as shown in fig. 1, and in part in fig. 4. The door must be made long enough to reach well below this catch, as shown in fig. 4. The trigger is made of wire, bent as shown in figs. 2 and 3, and hung loosely with two staples to the center of the top board. These staples must be carefully placed, to allow the trigger to be pulled forward far enough so that the door will rest upon it when the trap is set, and also to allow the loop in the trigger, *A*, fig. 3, to be pushed against the back of the trap by the rabbit when it is sprung, thus preventing its being bent. To operate the trap, push the door, *D*, inward, and with the forefinger catch the hooked end of the trigger, *B*, fig. 3, and pull it forward until the door rests upon the wire above the hook. The rabbit enters the trap, prompted by curiosity or otherwise, just as he enters a hollow log, and thinks no more of the wire trigger than he would of a small piece of brush which he must push out of his way. As soon as he touches the trigger, the door drops and the rabbit is caught. No bait is used and the trap cannot easily be sprung by birds or wind. Care must be taken to see that all staples are loosely set so that the trigger slides easily and the door will drop of its own weight. If new boards are used, it would be well to stain with some dark coloring material which is not offensive to the rabbit's delicate sense of smell.

WRAPPING.

Where one has only a few trees, such as fruit or shade trees, the most satisfactory method is to wrap them. An ordinary tree veneer which is made of very thin wood may be purchased from any seed store or nursery company. This fits closely about the body of the tree and will enlarge as the tree grows. However, during the summer it may offer a harbor for injurious insects, and should remain on the tree only during the winter. Trees may be wrapped with burlap, corn stalks, or ordinary lath. The only caution with any of these is to remove them when the tree resumes growth in the spring. Ordinary wire screen answers very well as a protection for the tree and does not harbor insects.

REPELLANTS

The tree may be covered as far as the rabbit can reach with blood. The entrails and blood of the rabbit itself rubbed over the tree is quite effective, but is very apt to be washed off by rain. A concoction of tallow and tobacco smeared onto the trees acts as a repellent. However, where there are a great

many trees, and especially small trees, such as honey locust elm, and others used as windbreaks, it is out of the question to treat each individual tree by hand. In this case a spray applied by a hand pump will be found effective. The common lime and sulphur spray used to destroy the San José scale has been recommended and can be applied with an ordinary spray pump. Mix together dry fresh hydrated or ground lime, 4 pounds; powdered sulphur, 3 pounds. Add water to form a thin paste and boil from one-half to one hour, or until the mixture becomes a reddish amber color. Dilute to 10 gallons, spray onto the trees while the liquid is still warm. This spray is excellent for the trees as well, but must not be applied to the trees while they are in leaf.

Commercial aloes at the rate of one pound to four gallons of water sprayed onto the trees gives the bark and leaves a bitter taste which repels rabbits.

A spray made of buttermilk and common stove soot has proven quite satisfactory here. Buttermilk, one gallon; common stove soot one-half pound. Boil for twenty minutes. Keep well stirred to prevent clogging the pump.

POISONING.

Much may be done in eradicating this pest with poison. The "Wellhouse" poison is made as follows: Sulphate of strychnine, 1 part; borax, one-third part; white syrup, 1 part; water, 10 parts. Put the mixture into a jug or large bottle and shake well. Cut fresh twigs—apple water sprouts are best—and with a small brush paint them, especially over the terminal bud, with the above preparation. Scatter the twigs in the runways and about the trees where the rabbits feed. Stock or fowls will not molest this poison and it is said that dogs may eat the dead rabbits and suffer no ill effects.

The Western Australia Department of Agriculture recommends a poison somewhat similar. Dissolve 1½ ounces strychnine in 1 quart of vinegar; dilute with 5 gallons of water; add 2 pounds of flour and 1 pound of sugar; stir well and apply to twigs as recommended above.

A jam made of fruit and sugar is readily eaten by the rabbits. Chop apples or melons into small cubes. Add sugar equal to one-half the weight of the fruit. Boil until the mass forms a thick jam. Add strychnine, either powdered or dissolved, at the rate of one ounce to 26 pounds of the jam, and mix thoroughly.

Approved:

ED. H. WEBSTER, *Director*.

Manhattan, Kan., February 1, 1911.