

three irons which have hooks at the lower end. A 1-inch pipe runs from this tank near the top with a rubber hose attached and leads the water which is not used in the cooler to the cement tank. A short pipe runs from the upright pipe to the cement tank and has a valve at the end. When water is needed in the cooler supply tank this valve is closed. The cooler supply tank is a half-barrel and a tap is screwed into it at the bottom with a hose attached, which leads to the cooler. A valve is at the lower end of the long upright pipe which is worked by a stick which has two iron prongs on the end to fit it. This can be closed and the pipe taken off in winter if there is any danger of it freezing. It should not freeze in the coldest weather if a little water is pumped every day. The pipe runs through the tile where it goes under the building so the pipe can be taken out if it is ever necessary. A layer of gravel is under all the wall and a tile drain leads the water from this. The cement tank is put in so that the bottom of the cement of it is about level with the top of the other floor. This was done so that the frost would not break it as might happen if it and the floor were altogether. Iron rods are bedded in the cement walls of the tank just a little above the level of the top of them for the cans to rest on when being lifted into the tank. This will save the walls from being broken.

To put the milk on the milk stand we lay boards across the tank under the door by the milk stand and stand on them to lift the cans out of the tank on to the boards. Then it is only a 14-inch lift from there to the milk stand. It is much easier to lift the cans out this way than to stand on the floor and lift them out on the floor and then carry them to the door as nearly everyone does. If you will try laying some boards across a tank and standing on them as I have described you will see how much easier it is, and one person can do it.

We have a large water tank on lower ground than the milk-house, and the water from the overflow pipe and cooler runs to it for the stock to drink. If you cannot arrange it this way the overflow pipe should run into a tile. The end of the hose which leads the warm water from the cooler is put into the overflow pipe so it will not warm the water in the tank.

The cooler, pails, and strainer should be washed well every time they are used, and every two or three days we scour them thoroughly with a brush and a cleansing powder, as water alone will not keep them clean enough. If the cooler isn't cleaned in this way the milk will run over it too fast and will not cool. The cans are all washed and scalded with steam at the factory.

In my article on dairy farm management in

May 1st number of "Farmer's Advocate" readers may find some description of this milk-house which I have not written here.

Any farmer should be able to build one like this for \$50 if he does the work himself.
Elgin Co., Ont. THOS. BRADT.

HORTICULTURE.

San Jose Spreading

Editor "The Farmer's Advocate." :

Reports coming from some parts of the Dominion tell of serious injury having been done to apple orchards by tent caterpillars and cankerworm. Orchards attacked by such insects will be stripped of their foliage in a very few days, and have the appearance of having been swept by fire. The injury to the orchard and loss to the owner is not only this season's crop of fruit, but the next season's crop as well. The leaves are the lungs of the tree, and when destroyed by insects or disease the vitality and vigor of the tree is seriously impaired. The fruit buds which produce the crop of fruit next season are grown and developed this season, and when the foliage is destroyed the fruit buds will not develop, and consequently there will be very little if any fruit on the trees the season following the one in which the foliage was destroyed by caterpillar or cankerworm. Orchards can be kept free from leaf-eating insects by spraying with two or three pounds (2 to 3 lbs.) of arsenate of lead dissolved in forty (40) gallons of water, and by adding one (1) gallon of commercial lime and sulphur leaf spot and apple scab will be prevented. The loss sustained by fruit growers throughout the Dominion by neglecting to spray their orchards, amounts to many thousands of dollars annually. In order to spray an orchard effectually, it is necessary to prune thoroughly, especially when the orchard is infected with San Jose scale. There are many advantages in thorough pruning. It prevents the trees from bearing an over-load of fruit and thereby insures a more regular crop each season, and it also opens up the trees and lets the sunlight to the fruit, giving it color and high flavor, which adds to its appearance and market value besides tending to produce a more uniform grade of number one fruit. Thorough spraying and pruning is now practiced by all leading fruit growers throughout the Niagara district. It is the only possible way to effectually control San Jose scale when an orchard becomes infested. The scale is without doubt one of the most serious pests we have to contend with in our orchards, and yet it is a blessing in disguise, for in seeking for a remedy to kill the scale, lime and sulphur was brought into use,

and it is now a recognized fact that we can control rot in plums and cherries, brown rot in peaches and grapes, mildew on grapes and gooseberries, apple scab and pear scab, curl leaf on peaches, shot-hole fungus and blistermite, all of the above diseases and insects being effectually controlled by the use of lime sulphur, applied at the proper time in the season. San Jose scale is getting more widely distributed over the Province than most people are aware of. I have found orchards infested with scale in the following counties: Essex, Kent, Elgin, Norfolk, Oxford, Middlesex, Lambton, Wentworth, Lincoln and Welland. Here I want to give a word of warning. In districts where scale has been found I would strongly urge the appointment of local inspectors, because the scale will no doubt get bad and seriously injure the orchards before the owner is aware of its presence. All through the Niagara district local inspectors have been appointed, and injury from tent caterpillar and cankerworm is practically unknown, and San Jose scale kept well under control.

Wentworth Co., Ont. WALTER E. BIGGAR.
Provincial Inspector.

A Job for Mr. McArthur

Editor "The Farmer's Advocate." :

So far this has been a slow season for growth, but although hay crop promises to be light, still, pasture has been good, and our recent rain improved conditions greatly.

This district suffered somewhat with the frosts, still not nearly so badly as others. Our alfalfa crops are a complete ruin. They apparently stood the winter all right, and, in the warm weather in the spring, started growth, and then the frosts that followed heaved it each one farther out of the ground.

The fruit crop of this district promises to be good, and, in some orchards, ahead of last year. Thinning of fruit is not done around here, but our own orchard is in need of it, as the Russets, Baldwins, Manns and Greenings are all well loaded. Maybe Mr. McArthur would like to do some thinning if he knew where there was an orchard that needed it. However, I hope he does not feel so bad over the failure of his own orchard as to forget to sow the cover crop this year. My own is sowed, and is buckwheat.

This year sees several more silos being built, and before long this will be known as a corn county.

The corn looks fair, but several plowed their mangels down, and resowed turnips or buckwheat.

There seems to be a difference of opinion around here as to the planting of corn. Some stay to the hill planting and cultivate both ways, while others sow with seed drill. For my own part I like the rows, as the corn binder does better work in cutting, and if not too thick corn matures fully as well as in hills.
Perth Co., Ont. J. H. MULHOLLAND.

Flea-beetles and Their Control.

The Flea-Beetles are an important group of insects which attack the foliage of many plants. They are particularly destructive to the leaves of several kinds of vegetable crops, such as turnips, potatoes, tomatoes, radishes, etc. The chief injury is effected in spring and early summer when the plants are visited by large numbers of the beetles. Numerous small holes are eaten into and through the leaves, in fact, some of the species completely defoliate certain plants. Owing to their jumping habit, these insects were given the popular name of flea-beetles. In size they range from one-twentieth to one-quarter of an inch. In Canada there are five species which are of considerable economic importance, and these are discussed and figured in a recently issued Entomological circular, No. 2, Arthur Gibson, chief assistant entomologist, Experimental Farms, Ottawa, on "Flea-Beetles and their Control." In addition, descriptions are given of eight other species which occasionally appear in destructive numbers. A chapter on "Methods of Control" gives full particulars as to remedies which have been found most successful in the control of these insects.

Copies may be obtained from the Publications Branch, Department of Agriculture, Ottawa.

The Hand of a Daniel

I appreciate the Farmer's Advocate very much. The stand you take on the public questions of the day should meet with the approval of the agriculturists of this country. You displayed the hand of a Daniel on the Bank Act. Wishing you every success in the advocacy of good measures.

Wellington Co., Ont. ERNEST PARKINSON.



A Shady Pasture.

Trees give great protection from sun and flies, and increase the milk flow.