

FARM & GARDEN

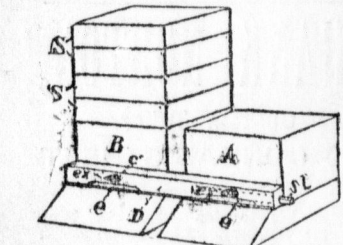
A NONSWARMING DEVICE.

The Langdon System of Controlling the Natural Swarming of Bees.

All beekeepers understand the advantages in being able to suppress at will and without detriment to the colony the desire of bees to swarm. Most of the systems of preventing or limiting natural swarming have depended upon the formation of a limited number of artificial swarms, frequent destruction of queen cells by the beekeeper, close use of the honey extractor, the combining of after swarms, changing places for hives, replacing of all queens annually, supplying empty space for comb building below the brood nest or between the brood nest and flight hole, or there has been some combination of these methods.

In the last bulletin from the division of entomology, United States department of agriculture, space is given to a detailed account of the Langdon nonswarming device, depicted in the cut, and for which are claimed the merits of effectiveness and simplicity. At the beginning of the season the nonswarming device D, shown in the cut, is placed at the entrance of two contiguous hives, each of which contains a queen and full colony of bees. The passages e e on the under side of the device connect with the entrances of the hives A and B respectively. The bees will then pass undisturbed out of and into their respective hives through these passages. By inserting the slide at the end of the nonswarming until it occupies the position indicated by the dotted horizontal lines the passage leading to hive A will be closed at its juncture with the hive entrance, preventing any bees from entering said hive. The wire cone exit still permits flight bees to come out of hive A, as a hole through the nonswarming connects the cone exit with a corresponding hole in the front of the hive. The super cases S of hive A are then placed on those of hive B.

The flight bees of hive A, finding their hive entrance closed on their return, are upon alighting at the entrance e attracted by the buzzing of the bees at the entrance e of hive B and enter said hive. This withdrawal of the field bees from hive A leaves this hive so depopulated and so disconcerts the nurse bees left therein that they will not swarm. Meanwhile



while work is going on without interruption in the supers on hive B by the field force of both hives. In 8 or 10 days, before the bees of hive B have made preparations to swarm, the supers S and S on this hive are all transferred to hive A, the slide is withdrawn from entrance e, thus opening this hive, and is inserted in the opposite end of the nonswarming device so as to close the entrance e to hive B. The bees thus excluded from hive B will be called along the gallery of the nonswarming by the bees at the entrance e and with these bees will enter hive A, thus bringing about in hive B the same conditions as were previously induced in hive A by closing the latter. At the same time the field bees of both hives are working continuously in the supers on the hive A, the entrance of which is open, and the flight bees in hive B are escaping through the cone exit and joining those of hive A.

In about a week the supers are again placed upon hive B, the entrance of which is then opened, while those of hive A are closed. In another week another transfer is made, and so on alternately during the flow of honey. This alternate running of the field bees from one hive to another and back again and the simultaneous transfer of the supers so disturbs the plans of the nurse bees and temporarily depopulates the hives so that organization for swarming is not effected; hence no swarms issue, and the field bees of both hives work unitedly and without interruption throughout the entire gathering season.

Transplanting Onions.
At the Translantic station last season the transplanted onions yielded 823 bushels per acre, while those that were not transplanted only produced 206 bushels. The transplanted onions also ripened several weeks before the others and were of a more attractive to buyers in quality than those raised in the field when placed upon the market. The method of transplanting is easy. Holes are made across the field with a sharp instrument by one man, and another follows quickly to insert the onions in the holes. A third person comes along and places the onions one inch deep and presses the soil firmly around them. The work is then finished, and one can depend upon a good crop. This is called the onion culture.

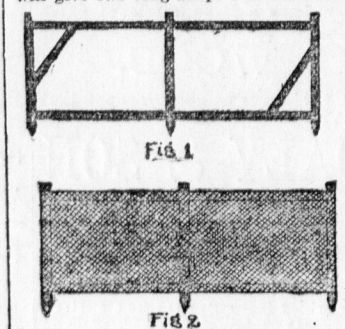
The Russian Thistle.
Farmers have a new enemy to fight, the Russian thistle. A bulletin issued from the department of agriculture, Washington, reports that it is overrunning many thousands of square miles of the best wheat sections of Minnesota and the Dakotas. Some alarming facts are given with regard to the loss it is already bringing to farmers in these states. Clean culture will subdue it on cultivated soil. A road machine properly handled will help to keep the roadsides free from it. The plant is an annual. By permitting no seeds to ripen it can soon be exterminated. Make a vigorous war on this foreign foe.

The people quickly recognize merit, and this is the reason the Russian thistle is continually increasing. Try it. It takes 70 men to make a jackknife, but it doesn't take half a man to lose one.

POULTRY CONVENIENCES.

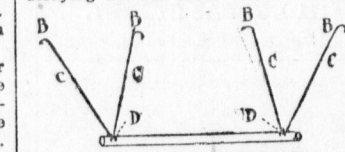
An Inexpensive Movable Run—Excellent Plan For a Roost.

When chicks are placed in a brooder or under a hen, some handy yard is wanted to confine them, and with this end in view an Ohio Farmer correspondent gives cuts and description of a panel used in his yards. Fig. 1 shows the panel. This should be constructed of boards and pickets. Procure fence boards 6 inches wide and either 12 or 18 feet long and saw lengthwise through the center. This will give two long strips 3 inches wide



to be used for the top and bottom frame. Next procure three pickets 4 feet long and nail one at each end and the other in the center; then attach braces at opposite corners, as shown in the cut. The pickets should be nailed so as to project an inch above the top of the frame and 11 inches below, these to be sharpened so as to be readily driven into the ground.

Fig. 2 shows a panel completed. The frame is covered with 6-cent muslin stretched tightly over the frame and well tacked down with common tacks. A pen made from four of these will be 16 feet square and is room enough for 100 chicks for one or two weeks, when they can be allowed to roam where they please. The correspondent who suggested this panel, so as to prevent the young chicks straying too far from home. These



frames can be made for 25 cents and will last several years with proper care. Fig. 3 shows an excellent plan for a roost, which can be any length desired. D D are staples to attach the wires C to and should be well driven into the roost. C is the wire supports cut any length, so as to have the roost suspended about 10 inches above the dropping board. B are the hooks on the end of the wires to fasten into staples to support the roost. The staples where B is attached ought to be about 12 inches apart, which will prevent the roost from swinging. These roosts are easily kept free from lice, as there are no mortises to lay eggs in and thus escape fumigating. Also the roost can be easily detached by unhooking at B and removed from the building and cleaned.

Experiments With Spring Cereals.
A summarized report has been made on tests of 37 varieties of barley, 23 of spring wheat and 81 of oats, which have been grown during four years, and of 20 varieties of peas grown for two years, at the Ontario college station. The varieties which have given the highest average results are as follows: Oats—Joanette Black, Chancellier Black, Black Etampes and Siberian (white). Wheat—Horizon Bearded, Ingle, Champion, Saxonia and Holben Improved. Barley—Manbury, French Chevalier, Empress and Scotch Improved. Peas—Prussian Blue, Black Eyed Marrowfat and Princess Royal. The 15 imported varieties of barley have given a larger yield during four years than the 6-rowed variety commonly grown in Ontario. In experiments in seeding oats, wheat, barley and peas at different dates in 1891 and 1892 the best results were obtained as follows: Wheat, April 22; oats and barley, May 1, and peas, May 8.

White Corn and Yellow Corn.
There is very little difference in the feeding value of yellow and white corn, for color never really affects the nutritive properties of this grain. The northern flint varieties contain more oil than the southern or dent varieties, but the latter contains the larger percentage of starch, but this is changed to fat or oil when assimilated in the digestive organs of animals. It is thought, however, says American Agriculturist, that the northern flint varieties are best for fattening animals quickly, but being harder they are more difficult of digestion unless in the form of very fine meal. In sweet corn the sugar as well as the starch which is changed to sugar in other varieties goes to form the fat of animals, while the phosphates in the grain aid in the building up of the bones and muscles.

Poultry Pickings.
Lettuce is one of the best greens for supplying shut in flocks. A small bed in the garden will yield a large amount. If you want the poultry to be tender and juicy, let it be fattened quickly. Quality rather than weight fixes the price of dressed poultry. This is the reason it pays a big profit to fatten, dress and pack for market in the most approved manner.

No class of live stock more profitably economizes the byproducts of the dairy than hens. And nothing seems to be more necessary to the health, growth and productivity of fowls than skim milk and whey.

The agricultural exhibit at the World's fair from Maine is an exceedingly creditable one. Nine-tenths of the young turkeys die from lice. Remember that. There are two varieties of Minorcas—the white and the black.

The White Wyandottes originated as "sports" from the Silver Laced Wyandottes.

THE MILK

SUMMER CHEESE.

Directions For Making It Issued by the Ontario Dairy School.

Aeration and cleanliness should have the same careful attention. When the milk arrives at the factory, each can should be subjected to a strict examination by the cheesemaker—do not leave this to the poorest help—to detect if possible and reject all bad flavored or tainted milk. There is no excuse for having milk of this kind. What one person can do all can do—care for it properly and have it arrive at the factory in the very best possible condition.

When the milk has been received, heat it up gradually to 88 degrees. When this has been done, try it with the rennet test to ascertain the degree of ripeness. It is advisable to do this even in handling very ripe milk, for it enables the cheesemaker to know just about how fast the curd is going to work. If possible, have the milk in that condition that all the whey will be drawn in from 24 to 3 hours from the time the rennet is added, with a quarter inch acid on the curd by the hot iron test. Use enough rennet to coagulate the milk sufficiently for cutting in 80 minutes.

Start to cut a little early. Take plenty of time, and do not rush or slash the curd. Use the horizontal knife first, finishing with the perpendicular, and if the milk is overripe going to work fast, then cut the curd considerably finer. By so doing the cooking process is hastened. The cubes of curd being small they are much more easily cooked than if left the ordinary size. When the cutting is finished, start to stir very gently at first, or until the curd becomes somewhat firm. Do not apply heat for 10 or 15 minutes after stirring is commenced. Heat gradually up to 96 degrees, taking fully one-half hour to do so, unless in the case of fast working curd, which requires to be heated up as quickly as possible to insure a thorough cooking. Continuous stirring for some time after the desired temperature has been reached to prevent matting and to insure a more uniform and thorough cooking of the curd.

Draw off part of the whey soon after the heating has been finished, and if there are any bad odors or taints draw the whey down quite close to the curd, then by keeping it stirred and airing well the flavor will be very much improved. Draw off all the whey when the curd shows a quarter inch acid by the hot iron test, and continue hand stirring until it is sufficiently dry before allowing it to mat, and when matted break or cut into convenient strips and turn it over at short intervals (about every 15 minutes) piling a little deeper each time it is turned and never allow any whey to gather on or around it.

Grind early, or when the curd strings 1 to 1½ inches on the hot iron. Keep it apart and well stirred and aired after grinding until ready for salting. In the case of gassy curd, try to retain more moisture in it when the whey is drawn off by stirring less. Grind it about the usual time, and when it is partly ripe pile deep, and if the whey begins to lodge around it open the pile, allow the whey to drain off, then pile again. Continue in this way until the curd becomes velvety and better, when it is ready for salting. Hoop it from 15 to 20 minutes after the salt has been well stirred in.

Apply pressure very gently at first or until the whey begins to run clear, after which it may be safely increased. In from 45 to 60 minutes the pressure may be removed, the hoops taken off, the cheese dressed neatly and put back to press again. Apply full pressure before leaving them for the night.

Turn them in the hoops in the morning, paring off any curd or shavings which may arise from imperfect fitting followers, putting back to press for five or six hours longer, when the cheese will be ready to take into the curing room, which should be kept as cool as possible during the summer.

We would strongly advise cheesemakers to keep a record of each vat, the condition of the milk, and how it works each day. Stencil the cheese with the date when made, the number of the vat made from, and by so doing a great many difficulties may be overcome.

Keeping Up the Milk Flow.
There is something wrong in the practice of most farmers, viewed from the dairy standpoint. It is permitting cows to dry up at this time of year or soon after and go dry until spring. We have spoken regarding dairy cows and general purpose cows. Let us be misunderstood, we wish to say right here that we do not specify any breed or breeds as good and others as bad. Cows are what inheritance and training and feed have made them.

A cow that has suckled a calf and that descended from a long line of ancestry so kept is not the cow for dairying. She may take first prize at a public three days' test, but before the end of the year she becomes an expensive thing to keep. General purpose cows may be bred and trained away from profitable dairy cows, we simply mean those which have been developed and trained in milk giving capacity regardless of breed—conceding the fact, however, that certain breeds have been trained in this direction more than certain other breeds.

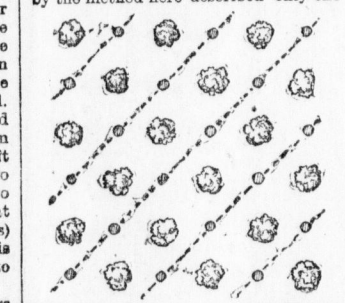
THE ORCHARD

A Plan Suggested by Country Gentlemen For Reducing the Closeness of Orchards.

It sometimes happens that the owners of limited land desire to obtain all the benefit of closely planted trees during the early years of their bearing. Here is one mode by which this is done which

has been successful both in original planting and by afterward reducing the number in obtaining symmetrical orchards. The apple trees are planted 24 feet apart. When from this nearness the branches begin to touch each other, they are reduced in number to 24 feet apart.

In the first cut is represented the orchard as planted and growing in its earlier years, with trees 24 feet apart. In Fig. 2 the dotted trees are those which are removed, leaving the remaining ones 34 feet apart and running diagonally. Where this experiment has been successfully performed it has been found that in a few years after the thinning the fruit would be both more abundant and better in quality in consequence of allowing more room for its growth and development. In the earlier years of this orchard, while there are a larger number of trees to feed, it is important that an annual top dressing of manure be given to compensate for the increased exhaustion of the soil. A mode sometimes proposed and adopted for thinning orchard trees is to take every alternate tree in both directions, leaving only one-fourth to remain, but by the method here described only one-



half are removed, while the remaining half have all the advantages of plenty of space. Every tree will be surrounded by four others at equal distances. When two kinds of trees are planted in the same orchard—such, for instance, as placing standard and dwarf pear trees alternately—it is advisable to mark out beforehand the places for the trees, so that in subsequently removing them those only will be taken which are shortest lived. It is sometimes the practice to plant peach trees in apple orchards between the apple trees, and by fixing beforehand the places for each no break will be made in their arrangement, the apple trees remaining in regular rows long after the peach trees are gone.

Rolling and Mowing the Lawn.
While rolling is not really essential to a beautiful lawn, it does help it considerably in fine appearance and greatly in smoothness. For croquet, tennis and other playgrounds frequent rolling in summer is also desirable, but in the case of plain garden lawns the mowing machine may give rolling enough. In mowing one makes the prettiest work when the grass is dry. If the lawn is mown when the grass is wet with rain or dew, the mowings gather in wreaths or clots. These should always be raked up and cleared away. And whenever there is a heavy cutting the mowings should be raked off.

There is an idea abroad that mowings should always be left where cut, so as to mulch the roots of the grass from the warm sunshine, but this is an erroneous notion. When the mown grass is thin, it soon withers up, but where at all heavy it lies in clots or mats and destroys the grass plants under it, and, too, it impedes the machine in the next mowing. The finest lawns are always kept clean from old mowings, says Gardening in concluding the foregoing suggestions.

Cut Back the Flowering Shrubs.
As soon as the flowering shrubs have finished blossoming for the season cut back the branches about one-third and thin out the old branches which were made last year by one-half if a good growth was made, and more if they need it, is American Cultivator's rule. This, with a little attention next spring to cut out the branches that are standing too close together, should insure good bloom next year, as the summer heading in will give a plenty of strong and vigorous stalks, and the spring pruning will increase the size of the flowers.

Dwarf Pear Trees.
Dwarf pear trees, says E. W. Wood of Newton, Mass., must have a moist soil, for quince roots are the same whether the top is pear or quince. They do poorly on light soil. Dwarfs should be set deep enough to root above the junction. This may be hastened by gouging and lifting bits of bark just beneath the surface on the pear wood, then hauling back the earth. Dwarfs thus rooted are far stronger, as the roots are more numerous.

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