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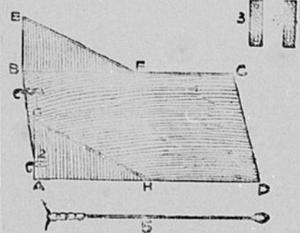
L. M. Shaw, Pres. C. F. Kuehnle, Vice-Pres. D. W. Shaw, Cashier.

## BANK OF MANILLA, MANILLA, IOWA.

### FARM CONVENIENCES.

#### Wagon Gate Useful in Husking Time. Crate For Roots, Apples, Etc.

A sketch of a very convenient tail-board or end gate, which can be attached to any wagon bed and which saves much time and labor in unloading corn or coal, is sent to the Ohio Farmer by a correspondent, who says: "The size of wagon beds varies so much that it is useless to give dimensions, but make the part A B C D long enough to extend at least six inches above the sideboards of the wagon and



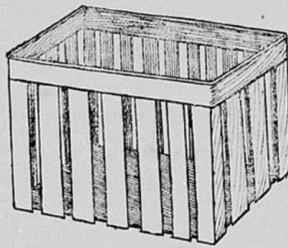
TAILBOARD OR END GATE.

also wide enough so that the wings B E F and A G H will be on the outside of the bed when the end gate is up. Have two hooks made as at 1 and 2 and bolt to the end gate with the hook turned down. Then have made out of old wagon tire two plates, 3 and 4, each about six inches long, with slots about two inches long and large enough to admit hooks 1 and 2. Bolt these plates to the under side of the wagon bed, with the slots extending out far enough from the bed to admit the hooks. This makes your hinge for the end gate so that it can be removed from the bed instantly.

"Now attach two rods or chains, as at Fig. 5, at C D and let them pass through rings fastened at the top end of the bed. This holds the end gate up, so that one may stand on it and begin to unload. Have two rings, one on each side of the bed, fastened the length of the chains or rods from the end of the bed to hold the end gate up while the load is being hauled.

Particular attention is called in the journal already mentioned to the crate shown in the second cut by a writer who describes it thus: As can be seen, all the slats composing it are upright, obviating thereby the use of corner supports, for, as put together, the slats lap at the corners and, being well nailed, afford great firmness to the whole affair. This is of decided convenience in that the crate can thus be made of dry goods boxes and the like, simply with saw and hammer, some nails and some leather straps for handles, one on each side.

The shape of this crate, remember, should be rectangular, for then if one wishes to load a number of them into a wagon box it can be done with perfect ease. Indeed, if put to use in this manner, the crate is indispensable for harvesting apples, potatoes, turnips, carrots, beets, and so on. By making up enough of them, which can be done on rainy days, to fill a wagon box load after load of vegetables and fruit can be taken from the field with a single handling, which not only saves much time, but lessens the danger of bruises, and in case of fruits, like apples and pears, this is an item of the gravest



CRATE FOR POTATOES, TURNIPS, ETC.

Importance, the enduring qualities of all such depending chiefly on their being kept whole and nice.

Provided there is only one man to handle them, crates holding half a bushel each are plenty large enough, but where two pairs of hands are present to take them in charge it is better to have them as large again at least. Kept properly housed, such crates will last one a lifetime.

#### How Mosquitoes Hibernates.

"In what stage of their existence do mosquitoes and similar gnats pass the winter?" is a query to which Miss Mary E. Murtfeldt replies in the St. Louis Republic: So far as has been ascertained, the mosquito and its nearest allies hibernate in the perfect form, hidden away in hollow trees, in corners of buildings and among low bushes. That the most severe cold does not impair their vitality is proved by the almost insupportable abundance and ferocity of these insects in arctic regions. They will also survive in heated rooms in a state of semilivability, as the writer has proved by experiment.

#### Preparing Trees For Winter.

At the north begin to prepare trees and shrubs for winter at least by the last of October. At the south this should not be delayed longer than November. To protect from the ravages of rabbits, mice, etc., clear the ground around the stalk of all rubbish, either by hoeing or mowing off close to the ground. Apply protection to the body of the tree. This can be done by wrapping with paper, rags, cornstalks, screen wire or wood veneering. So advises American Agriculturist.

#### THE ALFALFA WORM.

##### A Threatening Insect For Alfalfa and Sugar Beets.

A feature of a disastrous nature to farmers in Nebraska, attributed by a great many persons to the drought, is the subject of a communication from a correspondent in "The Country Gentleman." This is the appearance of pests which are destroying alfalfa fields by the thousand throughout the state. The correspondent says:

The bug does not seem to be doing any particular damage to other vegetation. The great recommendation to this section this plant has received in past years has been its freedom from damage by insect life. The insect has been named the "alfalfa worm" because it has been known to travel a mile around a wheatfield to get into the alfalfa fields. The pest has damaged beetfields somewhat, but alfalfa has sustained the greatest loss.

The state entomologist has defined the worm as the "fall" army worm in contradistinction to the regular army worm, which never was known to do any damage in this latitude after the middle of August. The alfalfa pest resembles the army worm in every respect. The worm, however, differs in technical ways essentially from the regular army worm, as known to the farmers generally. The body of the regular army worm, for instance, is smooth and devoid of hair, but the fall army worm has sparse hairs growing out from small black spots on his body, giving it a much rougher appearance. The fall army worm also possesses a whitish Y shaped mark on the head and differs from the other species also by being one-third smaller.

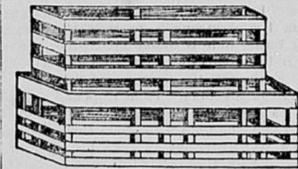
The state university has advised farmers to plow as deeply as possible in those sections of the state where the new pest has made its appearance. The worm ordinarily eats the alfalfa down to the roots, and many farmers fear the very root of the plant is rendered worthless by them. There is some apprehension that this worm will prove very damaging to the winter wheat that has been put in. On this point the university scientific gentlemen have agreed and advised the farmers of the state to be sure to keep the fields free from weeds, that the moths may have as little opportunity to propagate as possible. This insect passes the winter, they explain, in little cells just below the surface, and the breaking of these cells results in the destruction of the eggs deposited. It is impossible to do anything of this kind in the alfalfa fields unless the farmers are prepared to lose in one season the fields they have cultivated for several years.

Alfalfa culture has reached enormous proportions in Nebraska the past three years. Today it is estimated that of the 300,000,000 tons of hay produced by the state this year one-half of the product, or nine-tenths of the cultivated grasses, was alfalfa. This indicates the importance of the crop that is being threatened by the fall army worm.

In the sugar beet fields the worms have been destroyed in large numbers by spraying the plants with paris green in strength of one pound to 150 gallons of water. This has been found very satisfactory and would have been done in the alfalfa fields had it not been found that dragging heavy rollers over the fields appeared to produce better results. In many counties of the state both of these remedies, however, have been tried, and still the worms seem to prosper, traveling from field to field in their efforts to find something to eat.

#### Handling Corn Fodder.

No other grain is so well adapted to the requirements of the cattle feeder as cheap corn, and for roughness there are few feeds equal to corn fodder. A Kansas man says in the Ohio Farmer that in preparing the corn crop for feeding cattle the common small grain thrasher has been used with good suc-



FEED RACK FOR SHREDDED FODDER.

cess. The shredded fodder as it comes from the machine is run directly into a pen or rack right in the feed yard and large enough, as a rule, to hold at least a day's thrashing, say 16 by 24 or 16 by 32 feet. A sort of manger is made around the rack, into which the fodder passes through an opening at the bottom of the rack, as illustrated.

#### One Thing and Another.

An Iowa exchange tells of a wonderful "German corn," raised by a farmer of that state, which is "as white as white can be, produces from three to seven ears on the stalk and from 10 to 20 stalks to the hill and requires but one grain as seed in each hill. The corn branches out from the root like winter wheat and grows from 10 to 12 feet high."

A Kansas farmer reports having kept his potatoes sound and free from disease through the winter by fumigating them with sulphur in an airtight chamber before storing them in a cool place for the winter. The sulphur kills all germs of scab, etc., and the potatoes are said to germinate and grow more vigorously than the unfumigated when planted.

Oklahoma acknowledges the corn, with a stalk over 20 feet high, which she is reported to have sent to Washington to compete for the honor of being the tallest stalk to be exhibited by the government at the Paris exposition.

Planting fruit trees along the highways, after the fashion of Belgium and Germany, is suggested by some of our writers.

#### HIVES FOR WINTER.

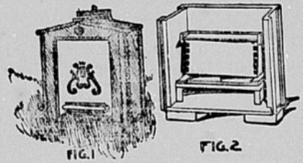
##### A Cheap Chaff Arrangement—How to Move Bees.

There is no better arrangement for wintering bees than an ordinary dry goods box made into a chaff hive, as shown in Fig. 1, and the manner of fixing it is so fully explained in the picture that no further direction is needed. The side of the large box is taken off to show how to arrange the hive of bees. The hive is tipped up at one side to show the bottom arrangement. The side is placed back and the entire space between hives inside filled with dry chaff, a good roof added and all painted up nicely, as shown in Fig. 2.

This arrangement is illustrated in Farm, Field and Fireside, in which A. H. Duff also tells about moving bees. He says that moving them, either long or short distances, should be done before cold weather. They should be located on the spot where they are intended during warm weather to be wintered, so as to be thoroughly acquainted with their surroundings before cold weather sets in. This not only answers for long distances, but more especially so if they are to be moved about in the same apiary.

If colonies are thus changed just at the beginning of winter, when they do not have a chance to mark their new location by frequent flights, it will result in irreparable damage and a heavy loss in bees. The only safe plan to move colonies in the same apiary is to move the hives a few feet each day that the bees are flying until the desired spot is reached.

In this manner the bees will follow the hive and find their way home;



CHEAP CHAFF HIVE FOR WINTER.

otherwise they would become lost or enter other hives, in which case they are liable to be stung to death by other bees. There is less loss in this respect during the autumn months than at any time during spring or summer, as the bees are lying idle the greater part of the time at this season.

Bees should not be moved during winter. They should not be disturbed or molested in any manner while taking their winter doze, except on a fine day, when they are flying, to look after their wants. They may be moved in early spring in safety, when they are beginning to fly daily.

#### Commercial Fertilizer and Potatoes.

The Virginia station draws the following conclusions from experiments with commercial fertilizers for potatoes:

First.—That potatoes grown without fertilizers contain the greatest amount of dry matter. The addition of fertilizers tends to diminish the dry matter, and also as the quantity of fertilizer used is increased the amount of dry matter is diminished.

Second.—Potatoes grown where sulphate of potash was used contain more dry matter than those where muriate was used.

Third.—The ash is not affected to any very appreciable extent. Fertilizers tend slightly to increase it.

Fourth.—Very little effect is produced on the starch by fertilizers, their tendency being to increase rather than to diminish it.

Fifth.—Potatoes grown with muriate of potash contain less dry matter but slightly more starch than those grown with sulphate of potash.

Sixth.—Neither the kind nor amount of fertilizer has any appreciable effect on the percentage of nitrogen, phosphoric acid and potash contained in potatoes.

Seventh.—The percentage of chlorine is considerably increased when muriate of potash is used, and the more muriate used the higher the percentage of chlorine.

#### Missouri Orchards.

Following is in substance advice from the president of the Missouri Horticultural society, given at a recent institute: The proper selection of varieties is very important. The Ben Davis is the leading commercial apple for this section. Eighty per cent may be planted of this. The remaining 20 per cent may be divided between the Jonathan, Winesap, Missouri Pippin and Gano. Head the trees quite low and prune sparingly. The eastern practice of giving the tree an open head will be fatal here. Our bright sunshine and hot summers will scald the limbs.

#### News and Notes.

Among vegetables which the department of agriculture has imported and pronounced of great merit are two species of asparagus new to America, one from Algeria, the other from Naples.

The Brazilian duck, a recent delicious addition to the menu of the epicures, is said to be a "wood duck," differing much from the popularly raised Pekin. To be a success for market it must be fed and fattened, with the scrupulous care and nicety of the French poultry growers, or finely chopped mixed feeds specially designed to give delicately flavored meat.

Over 20 important products are now made from corn. Under latest modern discoveries and methods not a particle of corn is wasted. There is said to be absolutely no refuse.

Our imports of wines, currants, raisins and fresh grapes aggregate over \$8,350,000 a year.

"A liberal potato crop in sight" is the American Agriculturist's verdict, though the crop has proved disappointing in the northwest and in parts of New York and Ohio.

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