



### Winter Feeding Structures.

THERE are many who have comparatively few animals to feed through winter, who suffer loss by not providing convenient arrangements for the purpose. They may not need the magnificent structures which extensive landowners are able to secure, but there are many smaller fixtures which may be had at little expense, and will prove important aids by way of economy, in preventing the waste of food and in contributing to animal comfort.

Those who feed their animals in sheltered yards or under sheds, may employ racks for retaining the fodder, which may also be provided with troughs for holding grain or meal when it is fed separately. Those who appreciate neatness will desire to construct such racks as present a neat appearance. Such a one is represented in fig. 1, of a rack for

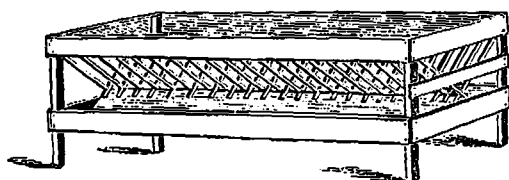


FIG. 1.

feeding sheep. The posts may be of hemlock or other timber, 2 by 4 inches, and 3 feet long. The boards must be planed on the edges, so as not to catch the wool. The end pieces may be boards a few inches wide and 31 inches long. The long bottom boards will make a tight bottom, and the posts will be about three feet long. The slats are 22 inches long and 2½ wide. All the feed that drops through the slats is caught in the trough, and afterwards eaten by the sheep.

Fig. 2 is a cross-section of this trough, showing

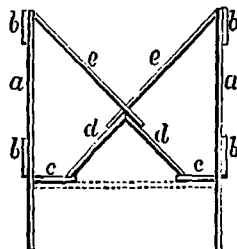


FIG. 2.

the 12-inch space at *a*, through which the sheep pass their heads for the fodder in the rack; *b b* are the long boards; *c c*, flat bottom; *d d*, inclined bottom, and *e e*, slats. The flat boards are about 8 inches wide, and the inclined ones, *d d*, are 11 inches. The length of this rack will correspond with the length of the boards used in constructing it, and it will feed about two small sheep for every foot of running length, but for large sheep about 16 inches are required.

A modification of this rack is made by covering tight with boards the part of the slats over the heads of the sheep, thus preventing the hay-seed from dropping down on their heads and wool. An advantage is likewise gained by separating the spaces for the sheep from each other, by nailing an

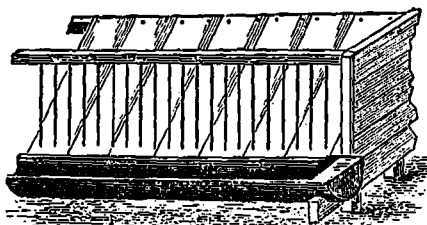


FIG. 3.

inch board upright for each space, leaving 7 inches opening for each sheep, and thus allowing 16 inches for each, which would be required for large breeds.

(The upright boards at each end would of course be only half as wide as the others.)

Fig. 3 represents another rack, having some advantages over the one just described. The front, from which the sheep feeds, is vertical, so that the hay-seed cannot fall into the wool. The back side

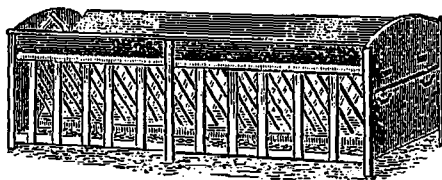


FIG. 4.

is boarded tight, and has a slope for the hay to fall down against the rack. The feeding trough is in front and separate, so as to be turned over for cleaning. The attendant walks behind and fills the space with hay.

Another and more elaborate sheep-rack is represented by fig. 4, the construction of which is shown in sections by figs. 5 and 6. In both these cross

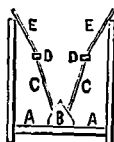


FIG. 5.

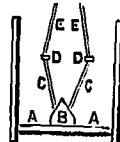


FIG. 6.

sections *A A* are the feed boxes; *B* and *D D* the timbers receiving each end of the rounds *C C*; *E E*, folding boards, represented open in fig. 5 and shut in fig. 6, for sweeping the troughs or boxes. The boards being mostly only half an inch thick, the whole feeding rack is quite light and easily moved. The following dimensions of the different parts will enable the reader to understand the construction without difficulty: The 3 posts on each side are 2 by 3 inches and 38 inches high, leaving 30 inches high above the bottom; the side horizontal inch boards are 3 and 5 inches wide; the vertical slats are 5 inches wide; bottom cross-pieces, 2 by 3 inches; the 34 rounds are ½ inch, and 15 inches long, and are 4 inches apart from centre to centre; the folding boards or "leaves" are a foot wide and half an inch thick. Doors at the ends allow sweeping out the dust. Such a rack will cost about \$10. These different racks have been in use many years.

### FOR FEEDING CATTLE.

A diversity of models is adopted, including the mangers for receiving the contents of the silo or other chopped feed, and feeding racks in barnyards and under sheds. For securing them in their stalls, a halter is recommended by many, as allowing the animals more liberty to turn about, but rendering them more liable to come in contact with their

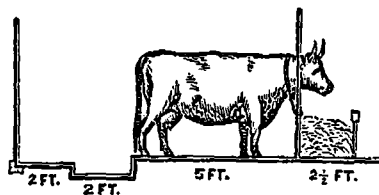


FIG. 7.

droppings. Many prefer the sliding halter (fig. 7), and others again choose the swinging stanchions, which are gradually coming into use. The manger

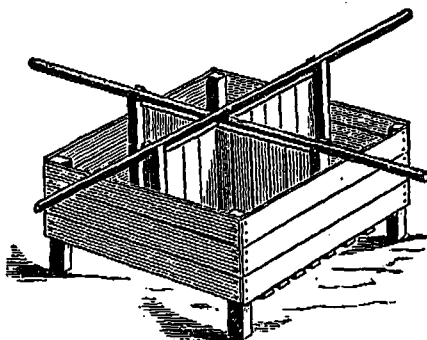


FIG. 8.

represented in fig. 7 should have a bottom eight or ten inches higher than the floor the animals stand on, for convenience to the animal and for economy

for the food. Many farmers still allow their cattle the free run of the barnyard, in which case feeding troughs are essential for preventing the waste of fodder. They are constructed in many forms, one of which is represented in fig. 8, which nearly explains itself, and which any farmer may easily construct. Four cows may eat from it at a time, the two poles set at right angles serving as guards to prevent the animals from chasing one another around the structure. A better and simpler form is to allow the four corner posts to project upwards a foot or so above the trough, and fasten the guards to these posts.

### VENTILATORS IN STABLES.

Are often of much importance to the purity of the air and the health of the animals, and they may

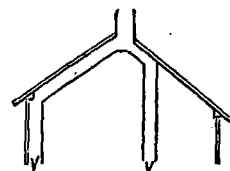


FIG. 9.

be provided with little expense. As the portion above the building should be at the peak or centre; and as the trunk or tube should be at one side and not in the middle of the barn or stable where it would be in the way, it may be made to pass from the side up to the peak in the manner represented in fig. 9, occupying but little space immediately under the shingles.

It has been proved by experiments that smut in oats is prevented by soaking them in a solution of four ounces of sulphate of copper in one gallon of water or half an ounce of caustic potash in six gills of water. Soak in the first about 30 hours and in the second 20 hours.

The following method for destroying field mice and rats has been successfully tried in England: Cut sponge in pieces of about the size of a small chestnut, and fry them in drippings where the mice or rats are troublesome. To get the drippings they have to swallow bits of the sponge. These swell and kill them.

In the house-culture of plants a serious question is, how to keep the red spiders away. Every precaution to prevent their attacks should be used, such as keeping a kettle or saucers of water among the pots. Sponges filled with water and placed among the branches of large plants have a very noticeable effect, as the evaporating comes directly in contact with the leaves of the plant, so that the spiders become discontented and leave.

A CORRESPONDENT in a contemporary gives the following as a sure preventive of injury to young trees by rabbits: Take equal parts of soft soap, sifted ashes and flour, (the lowest grade as good as any), and knead the whole into a paste. The hands have to be used, and the hands also have to apply the composition to the stems. Thickness to be about one-fourth of an inch—not less. Sometimes calves or hounds will lick it off before it dries. Sudden, washing rains may do the same thing, but let it dry once and no rabbit will touch it, provided it is applied as high up as one of them can reach, standing on his hind legs. But few persons can stand it more than an hour or so at a time, as it corrodes the hands rapidly; but when dry, the corrosive power ceases to exist.

DURING the winter tools should be looked after to see that snow cannot blow in upon them. Plows and cultivators especially, should be well sheltered, as well as greased or painted to prevent rusting. Much annoyance is often occasioned in spring by rusty plows, when it was thought sufficient precaution had been taken to prevent rusting. Moisture in damp weather and melting snows blown through small crevices wear off a light coating of oil, and before spring enough rust has gathered to cause much annoyance in black prairie soils. Axle-grease, or a mixture of tallow and white lead, makes an efficient covering for polished steel surfaces, and when wanted in the spring an application of coal oil applied a few hours before will cause the covering to rub off easily.