

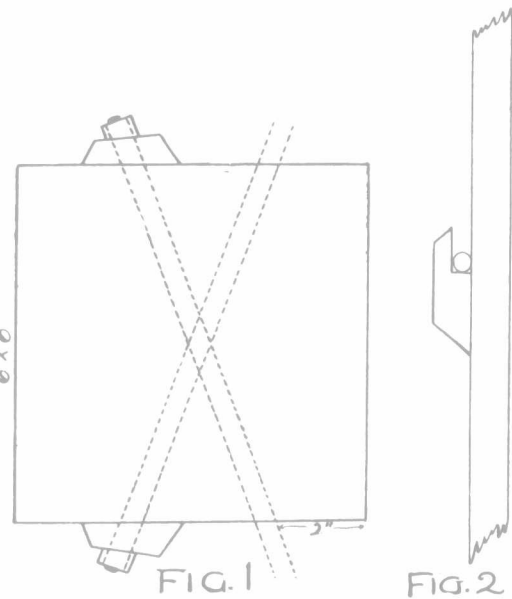
of the farm at work. The owner pays taxes on all his land, and is out of pocket for whatever is not earning him something. Further, by growing a tree crop on land which is too poor to plow, the quality of the land itself is improved. Forests add humus to the soil, bettering its character, and it has lately been discovered that the decaying leaf litter has also the power of gathering from the air a certain amount of nitrogen, the most important of plant foods. In this respect the forest does for the soil what leguminous crops, like clover and alfalfa, do. Wood growing on worn-out land thus becomes doubly profitable. The land is made useful and improved at the same time.—[Live-stock Report.]

BUILDING A STAVE SILO.

Editor "The Farmer's Advocate":

In answer to an inquiry from J. O. B., in a recent issue, re stave silos, the following may be of some service:

In 1906 we built a stave silo, 14x26 ft., on a concrete foundation. The foundation is 15 feet in diameter over all. The wall is 12 inches thick, and 2 feet below and 1 foot above the level of the ground. The earth inside the wall was then shovelled out enough to leave a saucer-like depression, about 6 inches lower in the center than at the sides. A concrete floor about 2 inches thick was put in, leaving a drainage hole in the center connecting with tile below.



Wooden Silo Contrivances.

The silo was built with three 6x6-in. pine posts, and 2x6-in. pine staves, 26 feet long, dressed on both sides. Two of the staves were ripped at the mill, making four pieces 2x3.

Hoops are 3/4-inch round iron, 15 ft. 6 in. long, with about 8 inches of thread on each end. The washers are cast iron, and 4 inches in diameter. The holes in the posts for the hoops were bored with a 1/4-in. bit, as shown in Fig. 1. By boring with this sized bit, the hoops slip through the posts without much trouble.

The hoops are spaced as follows, commencing at the bottom: First 4 inches, second 18 inches, third 24 inches, fourth 30 inches, fifth 36 inches, sixth 42 inches, seventh 48 inches, eighth 48 inches, and the ninth 60 inches, above the preceding one.

The doors are four in number, and 20 inches square, and bevelled on one side and both ends. The doors were cut after the silo was built, the cut being started by boring a 1/4-inch hole at one corner, and using a narrow-bladed saw. The first door is between the second and third hoops, the second between the fourth and fifth, the third between the sixth and seventh, and the fourth between the eighth and ninth. Before the silo is filled they are covered with one thickness of tarred paper and a sheet of galvanized iron 30 inches square.

In building, the posts are first placed on end on the foundation, at equal distances apart, plumbed, and well stay-lathed. Commencing at the bottom, the hoops are placed in position in two of the sections, and nuts started on each end. A stave with wooden clips (see Fig. 2), to prevent hoops sagging in the middle, is placed half way between the posts in each section.

To place the staves in position, one man works on the ground, and another on the second hoop from the top. As the staves are placed, each drives a 3-inch nail about one-half its length into the stave and turns it round a hoop, thus holding it in position. When the section is full, the staves are driven back from the post with three hardwood wedges placed between the post and the stave at the top, middle and bottom. When the staves are driven together as tightly as possible, take three pieces of inch lumber, about 2 inches wide, and cut the exact length of the dis-

tance between the stave and the post, and place between the same, with the two-inch face flush with the outside of the stave, and close to the wedges. The wedges can now be knocked out, and a narrow or a wide stave, as is needed, placed in position. In driving the stave into place, the cross-pieces are, of course, knocked out.

Now tighten the nuts, and section number one is finished. In finishing section number two, a ladder will be required, as there are as yet no hoops in section number three to work on. When section No. 2 is finished, stand the staves required for section No. 3 on end inside the silo; then put in the rest of the hoops, and continue as in sections 1 and 2. Tighten the nuts well, and watch closely, if not filled immediately, as the staves will be sure to shrink and loosen the hoops.

It will be noticed that no scaffolding of any kind was used. While it would be of some service in finishing sections 2 and 3, I do not think it would be of sufficient use to pay for the trouble of building.

The following is the total cost of material, nothing being counted for work: 2,210 feet 2 in. by 6 in. by 26 feet, at \$30 per M., \$66.30; three posts, 6 in. by 6 in. by 26 ft., \$7.00; 27 rods, 1/4 in. by 15 ft. 6 in., \$27.00; nuts and washers, 50c.; nails, 25c.; gravel, \$1.00; 3 1/2 barrels Portland cement, \$7.00; total, \$109.05.

Lambton Co., Ont.

D. A. MCINTYRE.

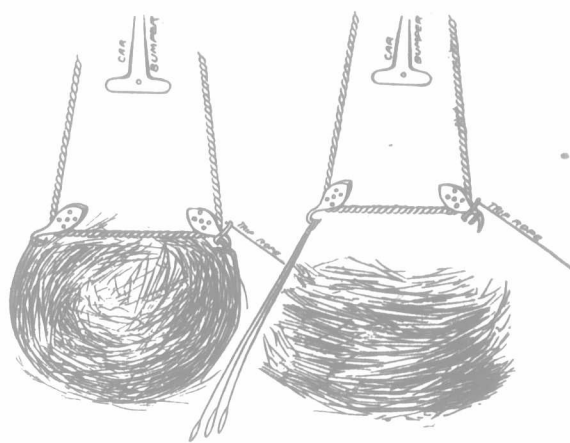
THE USE OF UNLOADING SLINGS.

Editor "The Farmer's Advocate":

Having read your article on page 816, of May 7th issue, on the use of unloading slings, by G. A. A., and having had a large experience in using these devices, I would like to give your readers the benefit of the sling machine I used last season, and which for several reasons is far ahead of anything I have seen or used, or read or heard of. This device can be used on all sure-grip cars, working on either wood or rod track, but, like H. W., I, too, prefer the rod track.

I have found this method of shirring the slings very satisfactory, as the work is all done by the horse with the draft rope, so that a boy ten or twelve years old can do the work equally as well as a man, as he simply has to hook on the shirring-hook pulleys to each end of the slings, and the horse does the rest.

I also found that the bundle is shirred up much tighter and more compact, allowing it to pass clearer over any beam that might otherwise be in the way, on account of being drawn up much closer to the roof. The secret of this is that the work, being done by the horse, instead of (the old way) by the man, a shirring strain is applied by the right creature, which strain, having to be made equal to the weight of the bundle before being lifted off the wagon, not only accounts for its compactness, but, each end of the sling receiving the same draw, brings it up in a level form from



Unloading Slings.

the load; consequently, it falls, when tripped, into the mow in the same form as when leaving the load, and therefore is very much more easily mowed away, which is a great consideration to anyone who values time, and has no desire to do things by main strength and awkwardness, at the loss of a lot of sweat.

In conclusion, like G. A. A., I much prefer this to the old system, as there are no chains or iron fixtures to dangle about your head when pulling the slings back. Again, the trip-rope is not only perfectly free and exclusive in its tripping capac-

ity, but is also in the right place (at the top of the bundle) where it cannot get tangled and mixed up with the bundle, nor can the bundle get in any position that it cannot be readily tripped; and, unlike the knot system of G. A. A., it is not in the slightest affected by the weight of the bundle in making it trip hard; therefore, the uniformity of the trip is the same, regardless of the weight of the bundle. Thus, I have found this system perfectly safe, sure, and all that could be desired as an unloading-sling device, being safe, rapid and easy. By taking out the bolt through the trip pulley, it can be removed in a few moments, and a fork used on the other pulley.

AN OLD SUBSCRIBER.

Wellington Co., Ont.

HAY-CARRIER CONTRIVANCE.

Editor "The Farmer's Advocate":

As the time is here that many farmers are thinking of putting up hay carriers, I have a word to offer along that line that may save considerable exertion to the man who is operating the harpoon or slings. Some years ago, having occasion to carry the hay through a long mow, which necessitated considerable rope, I found by personal experience it required the outlay of a large amount of strength to pull the carrier, harpoon or sling and the rope back after the load had been tripped. I, being constituted like, I presume, most of my brother farmers, not taking too kindly to putting forth more effort than was

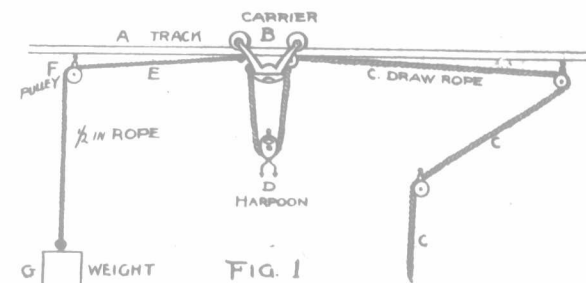


FIG. 1

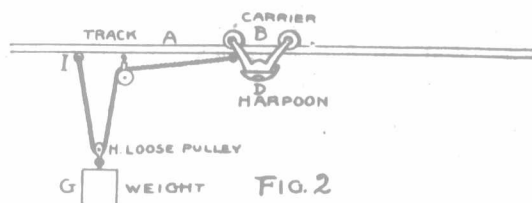


FIG. 2

Automatic Car-return.

actually necessary, conceived the idea of overcoming this exertion. I will give my plan, which may possibly be familiar to many of your readers, but I have never heard of it being used outside of this locality. It may be the means to lighten the burden of some, as it has done for me.

By referring to Fig. 1, I may be able to explain it briefly. At the end of the carrier B, opposite side of the mow in which you are putting hay, fasten, say, one-half-inch rope, which passes through pulley F, to which a weight (G) is attached, which should be just heavy enough to pull back the carrier, harpoon and rope as soon as the load is tripped; then you have only to pull the harpoon down with the trip rope. The carrier comes back readily by the weight—no human energy wasted.

In case your mow is long, you will not have enough height from your barn floor to pulley (F) to bring the carrier far enough forward. In that case, you can resort to plan in Fig. 2, using a loose pulley (H), to which the weight (G) is attached, and the end of the rope fastened at I. In this case you will require double the weight (G) to accomplish the same results.

Lincoln Co., Ont.

W. B. RITTENHOUSE.

OUTLOOK FOR TRADE IN CLOVER SEED FOR 1908.

Editor "The Farmer's Advocate":

Last year a warning note was sounded that it would be well for farmers to keep every available piece of meadow possible for the production of red clover seed. The same warning comes with equal force this year. What is the condition of affairs? The crop of 1907 was not sufficient to supply the demand, even at the very high prices which have prevailed for seed during the season. The foreign supply, too, was not sufficient to make up for the local scarcity. The result has been that those farmers who were fortunate enough last year to have either alsike or red clover seed to sell made their cleanest and best money out of their seed crop. In fact, there were plenty of farmers who made enough to pay for the land on which the crop grew, and high-priced land at that. Nine bushels of alsike per acre, at \$9 per bushel, soon counts up; or four bushels of red clover seed per acre, at \$12 to \$13 per bushel, after having the use of the first crop for hay or