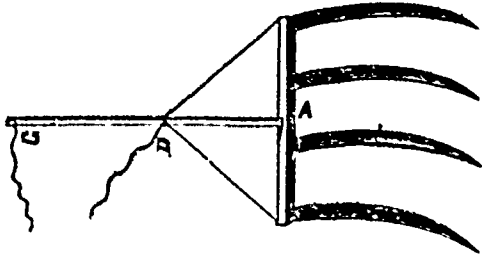
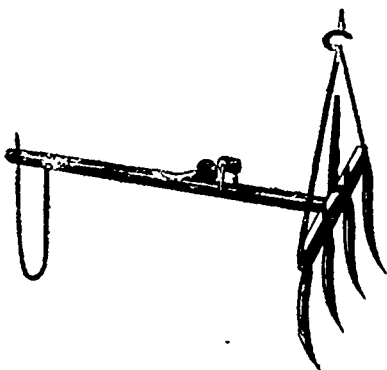


been proved repeatedly to be about five times that of a man, and if a man takes half an hour to unload a ton of hay, it follows that a horse should accomplish this in six minutes. Such is the fact.



The simplest form of the Hay-Fork is illustrated by the cut. A, the head is about 2 feet long and 2½ or 3 inches square (hardwood). A. G., the handle, is from 4 to 5 feet long, firmly fastened or mortised to the head, and kept fast by bands of thin iron, bent around the head, and extending a few inches up both sides of the handle. The fork-prongs are made of good steel, about half an inch thick at the head, 20 inches long and 6 or 8 inches apart, with nuts to screw them up tight. An occasional rivet should also be placed transversely through the head to prevent the prongs from splitting in heavy work. The rope is attached to staples at the ends of the head. The rope D, extends over a tackle block attached to a beam or rafter, near the peak of the barn, about 2 feet within the edge of the hay. The rope then passes down to the bottom of the door-post, under another block, and to the outside of the barn, where the working horse is attached to it. A small cord, G, is attached to the end of the handle, by which it is kept level as it ascends over the mow. The cord is then slackened and the weight of the hay tilts the fork, discharging its load. The horse is then backed up for another fork-full; the only labor of the workman being to drive the fork into the hay and keep the cord steady. The labor saving of this article will thus be seen to be such that the workman sets out fresh and vigorous for his next load.

The length of the handle sometimes makes it difficult to use this fork under low roofs, and another improvement has been introduced whereby the head of the fork only is tilted, leaving the handle in its horizontal position. A hinge joint is placed at the connection of the head and handle, so that at any moment, by a jerk on the cord which passes up through a bore in the handle, the fork is dropped, and its load deposited. Its weight also causes the head to fly back again, resuming its former position, ready for another forkful.



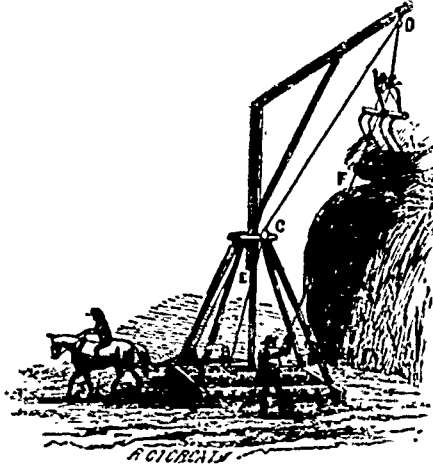
FORK DISCHARGED.

The rope suspending the fork should be fastened to the highest portion of one of the rafters over the mow, and a smooth board should be placed vertically against the face of the mow for the hay to slide on as it ascends.

The fork just described is one of the best in use. It has unloaded a ton of hay in three minutes, and over a beam 22 feet high in about nine minutes.

Another form of the same fork, but with a shorter

handle, and thereby more easily available under low roofs, is illustrated by the accompanying cut,



which also shows the general arrangement of the rope and tackle in building stacks by means of the "Stacker," or "Hay-Elevator."



Hay-Carriers.

One of the main inconveniences of the Hay-Fork is that its position is to a certain extent fixed, preventing the distribution of the hay over the different parts of a broad bay. Several persons are, therefore, employed to spread the hay as it is rapidly discharged by the fork.

To obviate these inconveniences, the Hay-Carrier has been invented, by means of which the hay can be carried 50 or 100 ft. horizontally, and in any direction. It consists of a track of 2 by 5 inch plank, fastened by strips and tuppenny nails to the rafters, a few inches below the ridge of the barn. A hay-car runs along this track; a rope runs through it and through a catch-pulley attached to a horse hay-fork, then back to the car again; the other end passes back to the end of the barn and returns through pulley wheels to the barn floor; to this end the horse is attached.

By a peculiar arrangement of the car, it is held in position on the track, over the load to be unloaded until a forkful of hay is elevated to it, when it is liberated from its position and the fork made fast to it in one operation; then it moves off on the track quite easily, and as fast as you please. The operator, by pulling a cord, trips the fork, and the horse, turning around, walks back again to the starting place.

This operation is so expeditious that 300 or 400 lbs. of hay may be packed away at a distance of 40 or 50 feet from the load, in a minute.

Time spent in sharpening tools and putting implements and machines in perfect order, is time bestowed to the very best advantage.

Grasses and Forage Crops.

Hungarian Grass.

A correspondent who subscribes himself, "A Young Farmer," says:—"I have heard a great deal about Hungarian Grass, and am anxious to try it. But an experienced farmer who professes to know, tells me that it is sure to spread over the farm, and become as troublesome as fox-tail. I would be much obliged if you, or some one who can speak from experience, would give me a little information about it.

Hungarian Grass is a forage plant somewhat resembling Millet, so much so that it is sometimes called Hungarian Millet. It was introduced into France in 1815, where it has been largely cultivated, being apparently well suited to the soil and climate of that country. It is thought to be more nutritious than common Millet, and is valuable both for green and dry fodder. It grows and matures in about the same time as common Millet, and when allowed to ripen, yields from twenty to thirty bushels of seed per acre.

Hungarian Grass has some qualities which would seem to render it particularly suitable to this climate, and yet, from various causes, it has failed to come into general cultivation. It germinates readily, grows rapidly, and withstands drought remarkably well continuing fresh and green, when other vegetation becomes parched and withered-looking. When rain comes after a dry time, it quickly takes a fresh start, and grows with great vigor. It throws out a number of succulent leaves, and is a good plant to sow for green fodder, provided it can be used in the early stages of its growth, for when it gets old, cattle do not care for it. It must be cut before it approaches ripeness if wanted for hay, as it makes poor reedy stuff, scarcely better than timothy saved for seed, when suffered to mature.

We are inclined to think this grass does poorly in some localities, and that this is one reason why it is not more extensively grown. But no crop succeeds well everywhere, and it is well to ascertain by actual trial, what is adapted to a particular soil and locality. Hungarian Grass attains its best growth in land of rich quality and somewhat firm texture, though it often does well in rather light and dry soils. It may be sown broadcast or drilled in, and its culture is precisely the same as that of common Millet. From twelve to twenty-eight quarts of seed are sown to the acre, the quantity being determined by the fineness or coarseness of the desired product. The thicker the seeding, the finer the grass will be. The land should be well harrowed before sowing, and gone over with a very fine-toothed harrow, or with the roller only, after sowing. If the soil is very mellow and the seed can be sown just before a heavy rain, there is no need for either harrowing or rolling after sowing.

This is not one of the earliest of green forage crops. It must not be sown until danger of frost is over in the spring. Hot weather is required to force it along. In this and in some other respects, it resembles Indian Corn. From the fact that it cannot be sown earlier than Corn, and in view of the quick growth and great yield of corn as a green fodder crop, some prefer to cultivate Corn; still, where circumstances are favorable, Hungarian Grass is, without doubt, a profitable crop. A correspondent of the *Country Gentleman* some years ago, detailed his experience in growing this grass for four successive seasons, and stated that he "never failed to have tremendous crops." He added, "I can show positively, that I have raised five tons of cured hay to the measured acre." He recommended it highly as a winter food for horses, and on the whole considered it the most valuable grass crop he could grow.

But farmers differ as to the value of this product. Some have a prejudice against it from an idea that it