

not been examined, as yet, to the extent its importance demands, and no one knows all the changes which take place in the silo.

One important thing in preparing ensilage for the silo is to have a good cutter, the knives of which should be kept well sharpened at all times, so that it will cut well and not drag the ensilage through in bruised strips. An upward cut is the most desirable for several reasons. The knives carry the cut fodder over the cylinder and completely separate from the dirt, grit, or any foreign substances that it may get into the fodder while gathering it, and prevent in many cases expensive breakages. Machines with a downward cut give a great deal of trouble, especially in cutting rye and grass, for the grass will wind around the axle and the machine will have to be stopped and the grass taken out; at least that has been our experience with them.

Ensilage is without doubt a very desirable feed to take the place of grass, both in the winter and the long droughts of summer, and is far superior to dry hay or fodder, for the cattle eat it better and become more healthy, and generally increase in their quantity of milk.

#### Fall Treatment of Meadows.

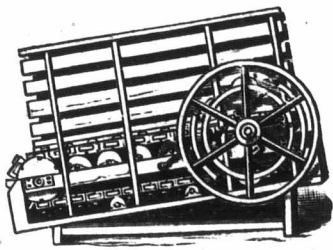
Now that the hay is off from the meadows, the propriety of pasturing the aftermath may be discussed. There are conflicting opinions upon the question. Some farmers prefer and advise to pasture the aftermath closely, leaving no dead growth in the bottom to smother the young herbage in the spring and to clog the mower when cutting the next year's hay. Some persons who are not farmers and cannot take a practical view of this matter, and some who are, think it better to leave the aftermath as a protection to the sod against the winter's frosts and thaws. There are some things to be said on both sides, but the right course depends upon circumstances, which vary considerably. For our own part, we prefer to get all we can from the soil, believing that the earth is generous and sufficiently fruitful to give us freely all we can take. Moreover, having had experience with grass lands that have a thick aftermath left upon them, and realized the difficulty of cutting the hay the next season, we would even take extra pains to have the aftermath as closely eaten or mowed off as possible late in the season. We have found, too, that the dense dead grass provides harbors for mice, which burrow in the sod and make havoc with the grass roots. It also protects the sod from frost and thus permits the white grubs and other insect larvae to feed upon the roots, so much as to frequently cut off acres of sod loose from the soil and leave it as free as a carpet upon it. These injuries are so severe and so frequent upon meadows covered with dead aftermath that we should view with great apprehension the probable condition of the sod in the spring. But we have said that it depends upon circumstances whether the aftermath should be eaten or mown or not. Certainly, it depends upon the condition of the grass and upon the character of the soil. If the grass is a new seedling and the roots have not taken a firm hold upon the soil, the aftermath had better be left as a protection to them. If the soil is one that readily heaves with the frost and there is danger of injuring the sod by tearing the roots, the same course should be taken. If the meadow is thrifty and the sod firmly established, we would take off all the grass up to the latest period of the fall, but we would repay our draft upon it by giving back to it early in winter a liberal top-dressing of manure, or just now a dressing of plaster or fine manure, which would strengthen the roots and thicken the sod and make this an equivalent protection by its denseness, as the aftermath could be by its length. One other point should be noticed, which is that if the grass is pastured it is indispensable that the droppings either of horses or cows should be broken up and evenly spread before the winter to avoid their wasteful and unsightly effects upon the field the following year. When sheep are pastured this is not necessary, and where there is a choice of stocks to be used sheep will be found by far the best for the purpose. In fact, a farmer might do well to give away the aftermath of a meadow to any neighbor who would pasture it closely with a flock of sheep, for the sake of even clearing it off and the return of fine manure the flock would make to the soil.

—[N. Y. Times.]

#### Hints and Helps.

##### Improved Tread Power.

In this tread-mill power, the endless traveller consists of cast iron chain links jointed together and carrying lags which are connected to the links by a tenon on each end fitting in a corresponding mortise in the link. Carrying rollers are fitted to run in boxes attached to the frame, so that the chain links run along on them from one to another, and in order that the rollers may be of larger than ordinary size and placed further apart, the chain links have abutting shoulders above the pivot joints, which hold the lags up level for the horse to walk on. Each lag has a rib or cleat nailed on the upper surface just back of the front edge. The



rollers that sustain the weight of the horse may be larger, stronger, and easier running than where the rollers are attached to the chains. For a brake to regulate the speed of the machine, a couple of centrifugal levers are pivoted to a couple of the arms of the flywheel, and having a brake-shoe on the short arm to act on a friction rim attached to the frame, the long arms of the levers being connected to the rocker bar by rods, and to the rocker one of the levers is connected by a coiled spring and adjusting screw, which tend to keep the brakes off the rim when the speed is not too high; but when excess of speed throws out the centrifugal levers the shoes will be pressed on the rim till the speed slows to the proper limit. The machine is provided with a simple stop device and is improved in other details.

##### A Cheap Gate.

This gate is designed merely for farm use; wood and metal or wire are combined in a novel manner in its construction. It may be cheaply made by unskilled labor, and combines lightness with durability. The gate is composed of two wooden uprights, one at the hinge end and the other at the



free end, two horizontal rails and an oblique brace connecting the rods as shown. An iron brace connects the upper end of the inner upright, and is provided with an eye which receives the pintle of upper hinge. Wires are stretched between the uprights, forming a complete panel. This gate is very light and at the same time simple and strong.

##### Calf Weaner.

This invention relates to the class of calf weaners adapted to be attached to the central cartilage of the calf's nose, like a bull ring, the parts of the weaner being provided with sharp points that come against the cow's bag when the calf attempts to



suck. The parts or sections of the device are attached together by a pivot forming a part of one of the points. They are held closed by means of a small screw. This device is very effective, simple, and cheap.

#### Fruit Garden.

##### Among the Raspberries.

BY T. C. ROBINSON.

The early part of the summer seems to have been exceptionally favorable to the raspberry crop, except where the land was too heavy or too low. In this district we have had lately a three weeks' dry spell, but the ground was so thoroughly soaked before it commenced that the bushes were only beginning to suffer; and, on the whole, all kinds have done as near their best as we may ever have reason to expect.

Among the host of varieties, new and old, that now bewilder the horticulturist, the old Philadelphia seems worthy yet of something more than a passing notice. Of course its value lies in its immense productiveness, and we have learned by heart its disadvantages of poor color, softness and frequent tendency to crumble. Yet for home use its color is a very small point of objection; its softness is an advantage in working up with sugar and cream at the family board, and its tendency to crumble is not at all observable on good soils and with fair treatment. Its quality, too, which is often spoken against, impresses me as very good for a family fruit—not high, but eminently agreeable to the average taste, and much better than Brandywine, Thwack, and some others that are often praised. No doubt, for market, and especially for shipping, it is behind the age; but in the home garden, for comfortably tightening the family waistbands and replenishing the family preserve jars, there is nothing like it that I know of among all the old varieties. It will please the wife, make happy the little ones, and take up so little space in proportion to its yield as to leave plenty of room for the aristocratic Cuthbert and kindred big fellows, in which the master of the house can take pride before his delighted guests.

The once famous Franconia has had its day. As a market fruit, when you had fairly got it in the crate, it was of a high degree of excellence. But it was too hard to get it there. In many parts of the country it seldom could come through the winter alive, and in places where it did it suffered from the hot sun on any but the strongest soils. Sour, too! Let us turn to a pleasanter subject.

Clarke is a delicious berry. A seedling of the last named, it shows more vigor and willingness to fruit on light land, which, conjoined with its uncommonly sweet, delicious flavor, should give it a passport to the high places of the home garden wherever it can easily be had and will stand the winter. The berries are of rather extra size, grains large, too soft for ordinary markets. Productiveness very good, but not up to Cuthbert and some others of the native strain.

Herstine is another fruit of the same general character as Clarke; an American seedling of the foreign (*Rubus Idæus*) strain, showing marked improvement in winter hardiness and ability to stand our hot suns, yet freezing down in the colder districts. The berry is about the size of Clarke, more conical, of brighter, handsomer color, earlier, not quite so sweet, but very good indeed, and seemingly more productive. It is a berry that for the home garden or a near market can hardly fail to give great satisfaction wherever it gets fair treatment and the winters are not too severe.

The Highland Hardy I find strikes me very variously as the season advances. Just now it seems a miserable concern in comparison with the large late sorts, and scarcely worthy of garden room; yet I remember that I regarded it as exceedingly valuable when it first came in. It is so early that the first wild berries that ripen on sunny slopes facing the south, cannot get to market before it; and, reaching our customers in the same crates with the last good pickings of Manchester and Windsor Chief strawberries, it brings the highest price of the season; and it looks so tempting and tastes so good then that few can resist its charms. Yet it is small and it is a poor bearer. In a season when raspberries are plentiful it pays well; but in a poor raspberry season, when the later varieties bring a good price, then the small crop of the Highland Hardy is decidedly at a discount. If the clever men who grow seedlings will only give us a berry as early as this, and a good bearer, we will not grumble so much about the size, as the market growers who get it before the crowd will make money. Perhaps we have this, with added size, too, in the Hansell, or the Superb, or the