

Improvement of Pastures.

The pasture question is one of the most difficult the farmer has to meet. For years, as a rule, the fertility has been removed from them; and in too many instances, and on too many farms, the appearance of moss and bushes, and the feebleness of the grass growth give evidence that the process cannot be carried much farther. Just consider the matter. For years the cattle have left the pasture nightly, each with their stomachs loaded with food, and this and the milk is left behind; and the one day is a repetition of the other. The young stock are turned on the pasture to get their growth, and then this growth is sold from the farm. For years there has been a continual process of carrying off, and not a single instance of carrying on. Is it strange that barrenness should creep, during these years, on a field thus treated? In many, too many, instances barrenness has come, until it at present seems a public calamity through the gradual abandonment of large areas. If cattle are kept from the pasture so as to allow, through a species of fallow, the natural fertility of the land to return, then weeds and bushes spring up—a source of vexation and future expense. We have now come to the question of

definite outlay we can be justified in making for its amelioration. The product of an acre of pasture is not in a single crop which we can take off and weigh and value, but consists of a series of crops which are harvested by the animals each day of the season. Hence, if we apply fertilizer, we cannot measure the good it has done, in a way that is sufficiently striking to produce the impression that it has paid. If by applying bone dust to a pasture we obtain a ton of extra growth the first year, and if we suppose that the harvesting of this ton is going on during each one of one hundred days, then the two thousand pounds divided by one hundred days gives but twenty pounds a day per acre,—a quantity evidently too small for us to appreciate. There can be no question but that pastures can be improved by the application of plant food; the only question is, can we make ourselves believe it?

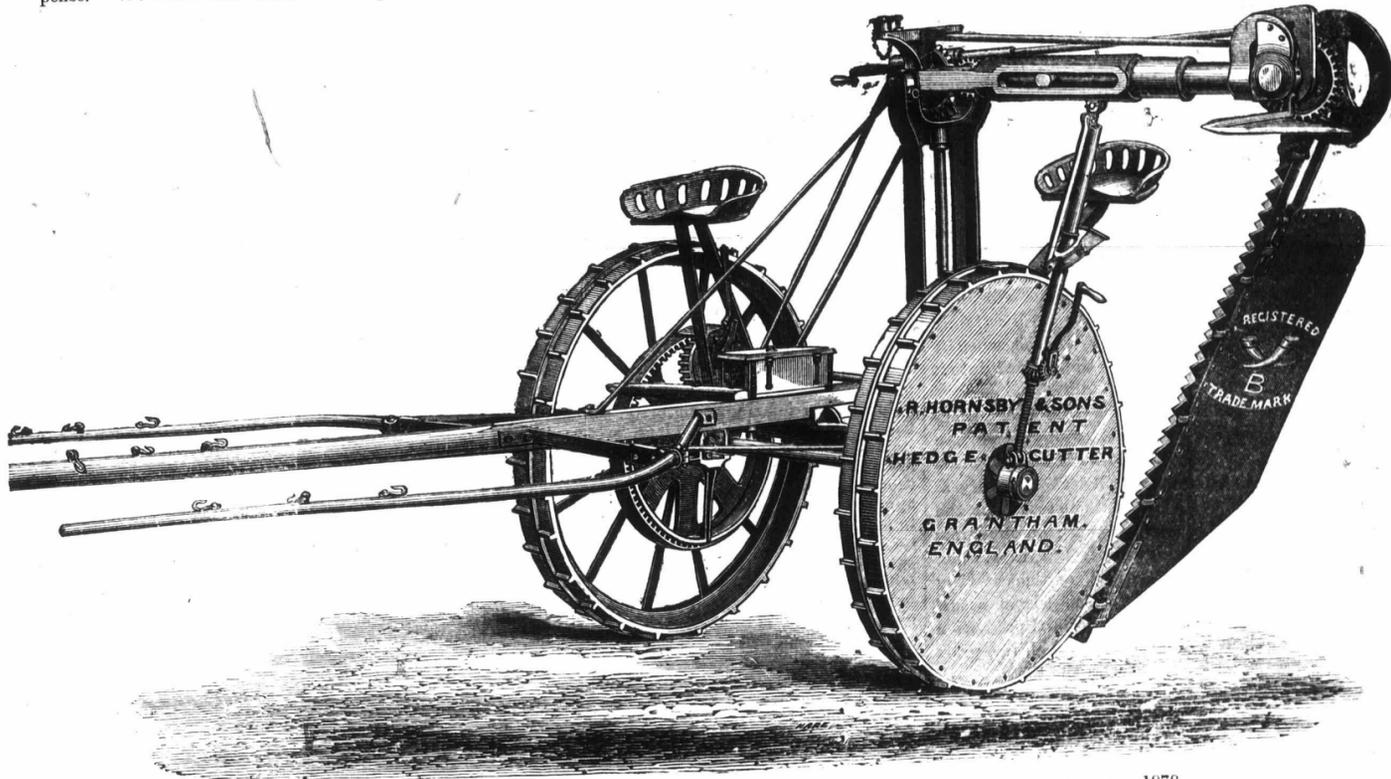
Let us suppose an ordinary New England pasture, worn out, abounding with moss and rock, the turf firm and close, the grass grazed to the roots, and brown with drought during the dry season. How can it be improved? First, an admirable way is to secure a flock of sheep, and overstocking the pasture, feed liberally of outside products, such as cotton seed, wheat bran, etc. The food

A good way to apply is to sow broadcast, then tear the sod with a harrow sufficient to open a seed-bed, but not sufficient to destroy the sod. Then sow a heavy seeding of mixed grasses, and roll with a heavy roller, or if with a light roller, or if the land is too rough, brush the seed in the crevices made by the harrow with a brush.—*Scientific Farmer.*

New Hedge Trimming Machine.

EXHIBITED AT THE ROYAL AGRICULTURAL EXHIBITION IN BRISTOL, ENGLAND, 1878.

The below cut represents the new hedge trimming machine manufactured by Richard Hornsby & Sons, of Grantham, in Lincolnshire, England. No machine drew more attention than this; every person was talking about it. The Prince of Wales made a personal examination of it, and all spoke highly in its favor, considering it a complete, practicable and useful implement. It can trim both sides of a hedge by traveling on one side; it will also trim the top of the hedge, and requires only a man, a boy and a span of horses to work it. It will



NEW HEDGE TRIMMING MACHINE.—EXHIBITED AT THE ROYAL AGRICULTURAL EXHIBITION, BRISTOL, ENG., 1878.

what can we do? and we can see but two answers that seem reasonable. Either the pastures which are too far exhausted to yield sufficient profit must be abandoned to the forest—and here comes in the present interest in and claims for forestry—or else the pastures must receive that treatment which shall improve them so that they shall soon yield a return, and ultimately a profit.

We cannot usually plow and fertilize and re-seed pastures, for various reasons, among the most prominent of which are the roughness of the land, the steepness of the slopes, and the treading of cattle. If the sod is once destroyed the rains have a tendency to wash the soil down the slopes, together with the seed, while the treading of the cattle hinders the quick formation of a firm sod; and weeds come in and increase. Certainly it is only where the pasture fields come within a system of rotation that we can be justified in breaking up an established sod; or those few instances where the state of the surface is so bad already that we need have no hesitation as to any process of ours making it worse—provided always, improvement can be made in a more economical way.

The fundamental difficulty of pasture improvement is with ourselves. We know not the real value of an acre of pasture to us in dollars and cents, and cannot make up our mind as to what

furnishes an increase in wool which will sell, while the sheep attribute their dung, which is in an especially available form, over the ground they wander over. When sheep husbandry is not advisable, then the same process may be followed cattle, keeping them in the pasture night and day, and feeding liberally with outside material as in the case of the sheep. A flock of hens kept in the pasture will scratch over and distribute the dung as it falls, so that in general there is no waste. We here reverse the process which has been followed,—carrying on instead of carrying off. In both these methods, sheep and cattle, we are not appreciating the cost, because we seem to be obtaining, and under proper care are obtaining, the value of our extra feeding in meat, milk, or growth.

If we desire to use our money directly, and have faith to wait a couple of years or so for a recognized return, then we can purchase fertilizer—bone dust is excellent—and apply in as large a quantity as we can afford. The more we apply, the sooner shall we be satisfied of its good effect; for bone takes time to act on the land, and it is only the portion which becomes soluble each year which one crop of grass receives. A way we recommend is for the farmer to decide how much money per acre he is willing to spend, and then buy as much fertilizer as this sum will purchase.

be of great advantage to many in England, and it would also be useful in the States, where hedges are extensively planted, and the time is not far distant when we must either have live fences or none.

We are pleased to introduce to the notice of farmers on this continent any new labor-saving machine that may be of use to any section. This implement appeared to be complete in every respect, and so strong that there appeared to be no danger of breaking it, even when cutting through wood over an inch thick.

ORNAMENTAL TREES.—Mr. George Ellwanger, at the late meeting of the Western New York Horticultural Society, gave the following as a list of deciduous ornamental trees possessing real merit for planting. For a small place he advocated: Birch, cut-leaved; yellow wood; thorn; Paul's double scarlet; Judas tree; beech, River's smooth-leaved purple; alder, imperial cut-leaved; Kolreuteria magnolia soulangean; mountain ash, oak-leaved willow, Kilmarnock. For larger places to the above he would add: Elm, Camper, down weeping; and Blandford; linden-white leaved; oak, scarlet; birch, Young's weeping; beech, weeping and cut-leaved; maple, Norway; and, Wier's cut-leaved; horse chestnut, double flowering.