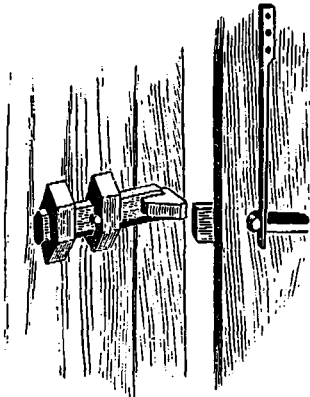




Barn-Door Fastening.

A DEVICE for fastening a barn-door is illustrated herewith. It consists of a wooden bolt, playing loosely in two wooden guides. A pin of tough hardwood, two and a half to three inches long, is firmly driven into the bolt, and extends through a transverse slot in the door. On the inside of the door is fastened a spring of ash or hickory, with its free end resting against the pin. As the door is



SECURE DOOR FASTENING.

closed, the bolt catches on the wooden fastening driven into the opposite door-post, and is held there by the spring inside of the door. This is a very simple contrivance, but it is none the less valuable. A bolt on the barn-doors is always in place. Even where honesty is the rule, it is better to lock the door before the horse is stolen.—*American Agriculturist*.

A Simple Saw-Mill.

FIG. 1 shows in horizontal section a method of cutting down a standing tree by the aid of spring-poles. An inch hole is bored into one side of the

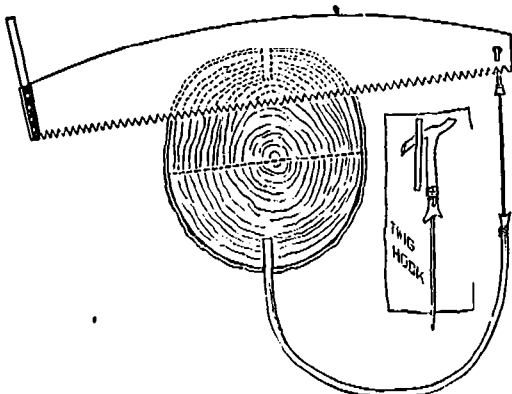


FIG. 1.—HORIZONTAL SECTION OF TREE.

tree directly opposite the point where the saw-cut is to begin. Into this hole is inserted the butt-end of an elastic pole, cut to the proper length. To the tip of the spring-pole is attached a hook cut from a forked branch. This end is then bent

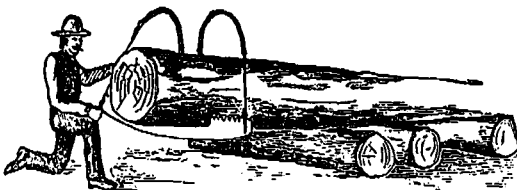


FIG. II.—MODE OF CUTTING FALLEN TREE.

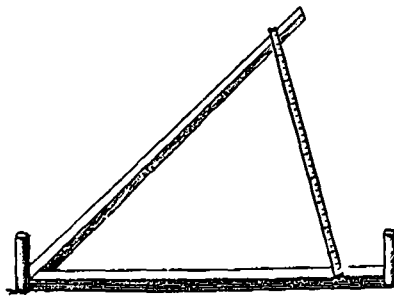
around and the hook inserted into the hole in the saw near one end. This spring-pole holds the saw close to the work, and assists in hauling it, as the sawyer, grasping the handle, pushes it from him. When the tree is cut half off, the hook is liberated from the saw and the spring-pole shifted to the

opposite side of the tree, where it assists in completing the work.

Fig. 2 shows a similar method of cutting the fallen tree to logs of any desired lengths. In this case two spring-poles are inserted into holes in the upper side of the tree, as the distance from the ground would not admit them on the lower side.

Uses for a Ten-foot Rod.

AMONG the things which are found convenient in every farmer's work-shop is a ten-foot pole, made thus: A piece of wood, one and a quarter inches square and ten feet long, is nicely smoothed with the plane, and then marked as follows: One side has a mark every three feet, to indicate yards; another side is marked every two feet; the third side is marked every foot; while the fourth side has feet, inches, and half inches, the pocket-rule furnishing the smaller sub-divisions of an inch. This measure will be found useful in many places. For instance, when a small building is being started,



stakes are set in the ground at each corner. The proper angle of the sills may be found by measuring eight feet on one, and six on the other. Bring them together until the ten-foot pole just reaches both marks, as in the engraving, and a right angle is the result. Again, the proper length for a post, to support a low roof, is quickly measured with such a pole. If a corn-crib is being built, six feet wide at the bottom, seven at the top, and nine feet high, the proper length of the various scantling is readily measured off. Many other uses will be suggested when this simple implement is at hand.

To keep apples in winter, spread buck-wheat chaff on the barn floor, and on this place the apples, and then cover them with chaff two feet thick. Fill the interstices with chaff. Other fine chaff will answer. The chaff will exclude cold currents and absorb incipient decay.

THE compost heap is the best place for any rubbish that will decay and become fitted for manure. Old bones should be broken fine before being thrown into the heap. If weeds that have gone to seed are put in, the seeds will become scattered with the compost and bring future crops. It is much better to burn them. Where the droppings of the pig-pen, hen-roost, or stable are added to the compost heap, lime and ashes should be kept out, or they will drive off the ammonia.

WHERE owners of dwellings burn fire-wood for fuel there is danger that the accumulations of soot may take fire and cause a conflagration. The chimneys should be cleaned at least once a year or oftener. Choose the first calm day after rain when the shingles have been thoroughly soaked, or when the roof is covered with snow, clear all out. The blaze of one year's soot will not then be attended with danger, but the accumulation of two or more years set on fire on a dry day, and especially with a brisk wind, may be uncontrollable—more so if the men are on a distant part of the farm. With no ladder at hand and a blazing flake on the shingles, house and furniture would be in great peril.

THE plan of soaking the rims of waggon wheels in linseed oil once a year is a good one and pays. It should be done during a dry spell, when the wood is perfectly dry. The wheels are suspended over a galvanized iron tank containing the oil, and slowly turned a few times every 15 or 20 minutes.

They should be soaked four or five hours to do a good job. It may be done in connection with such other work as will permit one to give a moment's attention to the wheels as needed. Some men think that the oil should be kept boiling hot, but that seems wholly unnecessary. The wheels will soon take in all they will contain if the oil is hot to start with. They should be placed under shelter to dry a few days before they are used.

A SOURCE of waste and loss on the farm occurs at this time of the year by allowing manure to be washed away. Rain falls upon it, dissolves the liquid parts, which are the most valuable, and carries them to where they can exert no benefit on growing crops. This waste can be prevented in three different ways: 1—The manure heap may be placed under a shelter built on purpose. 2—It may be supplied with a sufficient amount of absorbents to prevent the wash and waste, and farmers who raise much grain may have enough straw for this purpose, if placed in alternating layers with the manure. 3—Or it may be drawn at once, as soon as made, to the fields and spread, and the washing it gets from rain and melting snow immediately carries this liquid to the soil where it is wanted, and by which it is at once absorbed and ultimately diffused through the particles.

THE benefit obtained from a thorough drainage of land is of great importance to a farmer and of benefit to his farm crops, and is still more necessary for the garden. An instance occurred where a portion of a farm had been underdrained, which rendered the soil fit for the early sowing of a crop of oats. Before the other part was quite dry enough, long rains set in and put off the sowing of this part three weeks later. The early-sown oats gave a fine heavy crop; the other, on account of the late sowing, gave a meagre product, but little more than one-half the other. Drainage on all soils needing it virtually lengthens the season several weeks, and often in vegetable gardens makes the difference between success and failure—between rich, delicate growth, and hard, dry, small garden vegetables.

EXCEPT the lightest sandy soils, all level land will be benefited by fall plowing. That the land will leach and lose its fertility is a mistake. Nothing will be lost in any case except the nitrogen, which exists in the form of nitric acid, or the most soluble nitric salts, and, as a rule, there is no danger of this because of the almost entire absence of this form of nitrogen in the land. On the contrary, it is for the purpose of developing this scarce plant-food in the soil that fall plowing is desirable. The turning over of the soil aids in the change of the abundant inert nitrogen, which is mostly combined with the carbonaceous organic matter in the soil, into soluble nitrates, and this process goes on slowly during the fall and early spring, and, where the ground is not frozen, even during the winter. Consequently the land is brought into a more fertile condition by the fall plowing, and besides this gain, there is another of much importance, viz.: the spring work is forwarded so much, and the crops may be put in so much earlier.

Few articles so useful as grindstones are so little cared for. To save time and trouble, a trough for water is attached to the frame or rest. This is, with careful farmers, well supplied with water; the consequence is, that when the stone is not running—which is a very large portion of the time—a part of the surface is in the water and kept soft. The remainder is constantly growing harder from exposure to the air and sun. This soon throws the stone out of balance; as the wet part wears much faster than the dry, the stone becomes uneven and unfit for use. The proper way to keep the grindstone in order is to have it at all times under cover; a trough it may have, but this should be adjustable, so that it can be lowered when the stone is not in use sufficient to keep it dry. The face of the stone should at all times be kept smooth and sharp by turning off. The grinders in all tool factories clean the face of the stone as often as every ten minutes. With the stone always in order, it will put an edge on a scythe or axe in one-tenth part of the time usually taken.