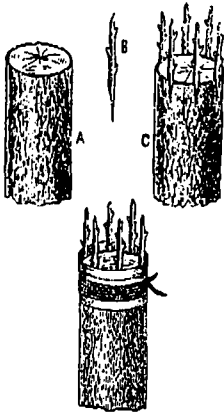




### An Effective Method of Crown Grafting.

SAW off the branch at right angles to the stem to be grafted, as at *a* in the illustration. Then cut a clean slit in the bark through to the wood, as shown—the same as in budding. Separate the bark from the wood and insert the cion *b*, one for each slit. The number of slits for each stock will be determined by its size. We will suppose the stock illustrat-



ed to be six inches in diameter, and that six cions are to be inserted. The stock after receiving the cions is shown at *c*. A thick paper is wound about the top of the stock extending about one inch above it and securely tied with strong twine, as at *d*. The space above the stock formed by the inch of paper may then be filled to the top of the paper with a puddle of soil and water. This mud protects the surface of the wood of the stock and excludes the air from the insertions, giving every advantage of wax without its objections. Stocks of any size may be worked in this way, and one, two or any number of cions inserted.—*Rural New Yorker*.

### A Sectional Farm Roller.

ONE of the most useful implements, next to those of absolute necessity, upon a well conducted farm is a roller. When the soil is heavy and tenacious the roller helps to crush the clods and level the rough surface, while a light, shifting soil is quite as much benefited by its compressing action. A roller

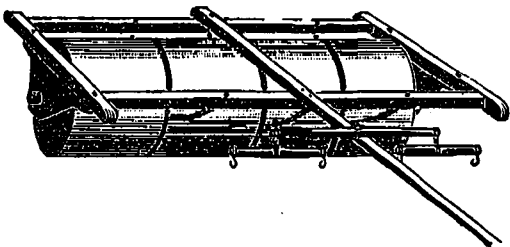


FIG. 1.—A SECTIONAL ROLLER.

consisting of a single long cylinder works at a great disadvantage in turning corners, the outer end having to travel over a much greater distance than the inner, so that it must sweep over the ground without revolving. This difficulty is largely obviated by making the roller in sections, each one of which turns independently of the others. We illustrate herewith a sectional roller which may be cheaply constructed and effective. It is in four sections. The frame shown in Fig. 1 is of oak or other tough, hard timber, three by four inches. The two side pieces are nine feet six inches long, the two end pieces three feet. A block of white oak or similar wood, eighteen inches in extreme length and nine

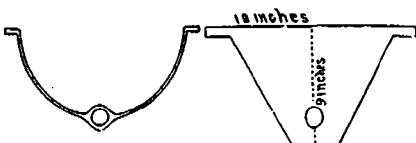


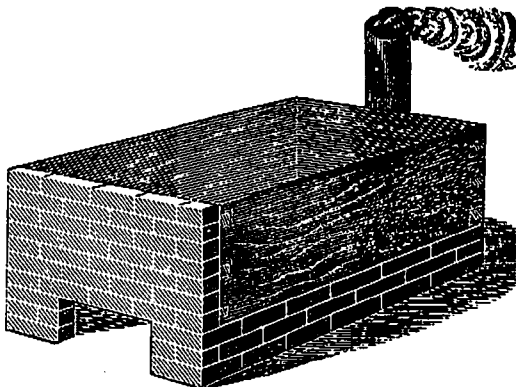
FIG. 2.—ROLLER BOX.

inches wide, shaped as shown in Fig. 2, is securely

bolted to the lower edge of each end piece, to hold the boxes in which the outer ends of the axles revolve. Three iron bars of the shape shown in Fig. 2 are bolted, one in the middle of the frame, and one on each side half way to the end. These hold the boxes which support the inner journals. A stout piece of oak or white elm is bolted across the middle of the frame and extends in front where it serves as a tongue to which the double-tree and neck-yoke are attached. The cylinders may be made of wood or iron.—*American Agriculturist*.

### Farm Boiler for Two Dollars.

In the illustration below we give a clear idea how any farmer may construct for himself a boiler suitable for all purposes that a boiler is required for. The box (or boiler) is simply a coarse box made of sound inch lumber of any desirable size, say two feet by four and one foot deep being a convenient size, well secured at the corners, with clips of sheet iron. The bottom is made of one sheet of heavy sheet iron and tacked securely to the edges of the box. The foundation is built of three or four rows of brick of the same size as the box, which latter point, if observed will carry the sides of the box the width of the brick from the fire. It is necessary to lay two or three bars of iron across to support the bottom, an old sleigh shoe answering the purpose quite well. To complete the furnace two old lengths of stove pipe are all that is necessary, being set up at the back of the furnace, and the back opening closed thoroughly around the pipe with clay, which may be built as high as the top of the box and so protect the wood from the heat. Any farmer who



will try the experiment will be astonished at the short space of time required to boil such a furnace. It can be heated with old rails, or scrap wood, such as accumulate around every farm yard. The sketch and description were kindly furnished by Mr. John Burns, Whitby, Ont.

A SILO 10 feet square, 20 feet high, will hold 40 tons of ensilage. Three acres will fill it at 15 tons per acre. One 20 feet square and 20 feet high will hold 160 tons of ensilage, or 10 acres. There are 40 pounds of ensilage to the cubic foot. Some animals will eat 60 pounds, and do well on the ensilage alone. It is better to add bran or cottonseed meal. One hundred and sixty tons of ensilage will furnish the forage food for a single animal for 213 months, or 35 cows for six months.

A MAN has been known to buy and haul manure five miles that was so fire-fanged or burned that it was little better than straw. While he was doing this work there were about his barn and yard, fertilizers of three times the value of the manure he hauled going to waste. The leaching from the yard was allowed to run into the road, the slops, soap suds etc. followed suit, while every chance was in his favor to produce abundant fertilizers of the first quality, with half the expense. Upon his farm he had abundance of muck that would only cost the hauling. This with the liquid wastes applied would give a most gratifying result and be a lasting benefit.

If you haven't an ice house build one as soon as possible, get in a good supply and you will feel rewarded all next summer for your labor. To fill the ice-house easily and conveniently lay boards from

the ice up the bank, to the top of an old packing-box placed there. The box should be two feet higher than the bed of the waggon or sled in which the ice is to be hauled. The boards will soon become icy, and the ice can easily be pulled or pushed along them to the box, and from it to the waggon or sled. The colder the weather the better for cutting ice. It is always easier to slide ice than to lift and wheel it. The prime point of putting the ice in the house is to fit the cakes closely together. The less air confined among the cakes, the better the ice will keep. Make the crevices small, and fill them with powdered ice.

A GOOD garden is little appreciated by the average farmer, yet nothing on the farm is so valuable in all respects in proportion to the labor and expense, as a well-selected, well-kept garden. Profit, pleasure, and health may be realized and promoted by it. Thorough culture of the garden is of great importance. Frequent culture will insure moisture in times of drought, and it is valuable at all times for supplying mellowness and moisture to the soil for the use of plants. One of the reasons why many farmers pay little or no attention to having a garden is the fact that so many attempt the cultivation of more land than can well be tilled; the consequence is that they are compelled to give all their time to ordinary farm work, and have no time to make a garden. The economy of this course may well be doubted. The better way would be to attempt no more than can be done in the best manner, and in determining this question, one should allow the garden to come into the account.

BEFORE ordering your seeds make up your mind how much ground is to be planted with each kind of vegetable or flower, and calculate accordingly the amount of seed required, ordering sufficient to allow you to err on the side of thick sowing rather than thin. It is better to have no surplus which you will be tempted to save for the following season, since there are few seeds, when kept over, which give as good results as those ordered fresh every year. Should the seeds you receive meet with your approval, recommend them to your neighbours, advising them to send for catalogues, and you will find you will lose nothing by so doing, for an enterprising seedsman is not slow to appreciate and reciprocate such favors. You should also make sure, before blaming your dealer for the failure of his seeds to germinate or to yield profitably, that you yourself are well posted as to the proper time and method of planting each variety, as well as its subsequent requirements.

A COLD frame is simply a construction of boards in an oblong form, similar to a garden hotbed, and differing from it only that in the latter bottom heat is furnished to force the growth of the plants. The frame may be made of common boards four feet wide and as long as required. Whether for a cold frame or a hotbed a southern exposure is the best, and each must be covered with sash, or canvas, which is sometimes substituted for glass. The back should be fifteen and the front six inches high with a cross tie every three feet. The frame should be settled into the ground a little and be banked up around on the outside. Then excavate the inside a foot or more and form the bottom into a plant bed of fine, rich earth. On warm pleasant days leave it uncovered and exposed to the sun and air. Much the same care about watering and ventilation is required as for a hotbed. Such constructions are useful supplements to the hotbed, from which the early forced plants may be transferred and their growth continued until the season is far enough advanced for them to be transplanted into the open garden without further protection.

"AN Old Farmer" writes: I would recommend to every farmer who wishes to know whether spring or fall plowing is best, to try both ways on his own land, half and half. He need not be so exact as to have a land surveyor to measure each of the acres, but he may count the rows, and count the basket of ears from each portion. He may then be able, after some years of experience, to decide which is best in his particular region of heavy or light soil,