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# THE FARMER'S ADVOCATE.

crop a good start. After planting, a light harrow should be used to keep a fine mulch and destroy weeds. The harrow may be used until the corn is three or four inches high, especially if the ground has become firmed with heavy rains. On loose soil care must be taken as there is danger of pulling out many plants. As soon as the rows can be followed the cultivator should be put to work, and kept going every week. Corn is one of the crops that responds to cultivation during the summer.

Sometimes considerable corn is destroyed by the crows, especially if it is a little slow in coming up. Coal-

tar applied to the seed before planting is claimed to prove effective in preventing loss from this source. Paper or bright tin strung across the field will also frighten the crows away. Poisoned grain may be used to destroy these robbers but there is danger of killing many innocent and beneficial birds. When conditions are favorable to rapid growth the corn soon passes the stage where it is subject to injury by crows. Every grower should know the vitality of the seed he sows, and then put the soil in a condition to lessen the danger of a poor stand of corn. Why grow half a crop when the soil is capable of supporting a perfect stand?

# Conveniences and Equipment on a Kent County Farm.

To make farming congenial, both in the home and in the fields, one should look to it that the management in the helds, one should look to it that the management is such as will conduce to a good revenue and profit every year. This is only the first step, for a large income will not insure a pleasant life in the country, if some capital is not expended on conveniences in the home and in the stables where the women and men have their duties to perform. If a portion of each year's receipts can be expended in "fixing up" it would be money well spent. The outlay on the farm and around the buildings will be returned in cold cash while that invested in the home will come back manifold in the invested in the home will come back manifold in the health, pleasure and contentment of the family. It is becoming more and more common every year that one happens into country dwellings, often some distance from town or village, and finds them equipped with electric light, modern conveniences that can be installed only with an efficient water supply, and all the advantages, without the disadvantages, of a strictly modern urban home. The average agriculturist cannot expect to equip his dwelling and stables with electric light, a modern water supply and conveniences, with an automobile, silos, all kinds of labor-saving machinery and good, up-to-date buildings. A farmer may con-sider that one of these will make life more pleasant and he takes steps to procure it. Another man may desire some other form of equipment and he installs it. Improvements must be made gradually under farm conditions, but there is always the opportunity to add some little thing that will help. A few ideas were gleaned by a visit of a representative of this paper to the farm of John Buchanan, of Kent County, Ontario. These may be of interest to many, for we find that those who accomplish most in farm life are open to receive suggestions. Some they act upon, while others they describe as unsuitable for their conditions. All the good advice one receives seldom comes from the same source. In the following paragraphs something may be suggested that will be found applicable.

## The Farm Water Supply.

The most outstanding convenience observed on the farm of Mr. Buchanan was the pressure water system. This supplies the stock at the stables with 20 barrels of water daily and forces water to the second floor of the dwelling. When taking steps to install the system Mr. Buchanan could not learn of any instance in Ontario where it is used on a larger scale than in the home. He desired to extend the service to the stables and nearby fields. A tank 12 feet long and 5 feet in diameter was made of 1/4 inch rolled steel and 5 reet in diameter was made of  $\frac{1}{24}$  inch roled steel by local manufacturers. This was placed under the approach to the barn and made frost proof. The working equipment consists of a  $\frac{21}{2}$  horse-power engine and a two-geared bull-dozer pump with an air pump attached. It has a 3 by 5-inch cylinder, a tight and loose pulley  $\frac{21}{2}$  by 14 inches and a capacity of 900 gallons per hour. The pump and engine cost \$200 and the tank another \$200. All of these could have been obtained at much less expense but as it was something obtained at much less expense but as it was something new no effort was spared to make it a success. The water is lifted 8 feet and brought through a  $1\frac{1}{2}$  inch

pipe from a well 92 feet from the tank. From there it is forced to the house a distance of 350 feet, and to the top of the hot-water tank in the bath room, a lift of 25 feet. The pipes are attached to the furnace and the kitchen range, so hot water, as well as cold, is avail-able at all times. A septic tank outside the house takes care of all the effluent from the bath room and kitchen and discharges it into a large soil drain running near the dwelling. In the stable are taps and hydrants that supply water to the stock where and when it is required. The mains are 1<sup>1</sup>/<sub>4</sub>-inch pipe and the laterals



#### A Good Cement-block Silo.

1-inch pipe. Provision is also made to supply water to the different fields lying adjacent to the barn, to water the lawn, wash wagons or the automobile and in fact to be anywhere and everywhere it is needed about the buildings. In winter over 20 barrels are used daily but the tank has a capacity of 1,760 gallons The engine is only run for 30 to 45 minutes each day and uses about one gallon of gasoline per week. By having a pump and engine of greater capacity than is required, it is thought that the work it has to do



## A Serviceable Stock Rack. A type of rack used by john Buchanan, of Kent County, Ont., for moving hogs.

is so light that less gasoline is needed. Fifteen pounds is considered a good working pressure in the tank, for this easily raises the water to the bath room. The taps also deliver the water more satisfactorily when the pressure is not high. A pump, tank and engine could be purchased at much less expense than is re-corded here and Mr. Buchanan states that a corded here and Mr. Buchanan states that a system might be installed for \$500 or less. This depends considerably upon the length of pipe required and the size used. The water problem is apparently solved on this farm for the outfit is satisfactory.

### Silo Fixtures.

Many different types and styles of silos are built every year, and it is hard to say which is the best. Mr. Buchanan has a cement-block silo, with a 13-foot inside diameter, which gives excellent satisfaction. The method of construction and the continuous door are worthy of consideration. A two-foot space was left for the door. Up and down each side, a little to the outside of the middle of the block, was placed a piece of  $1\frac{1}{2}$ -inch by  $1\frac{1}{2}$ -inch angle iron, similar to the material in a windmill with the over part to the carterian. We have in a windmill, with the open part to the exterior. Holes were drilled 2 feet apart in the side of the iron, which was placed against the cement block. These were made use of when reinforcing the structure. The ends of ½-inch iron rods were placed through the holes drilled in the angle iron and secured there with nuts. This was done on each side of the door and they were met and hooked together with No. 9 wire at the other side of the silo. Some difficulty was experienced in getting the right curve on these iron rods. It was finally solved by placing them over a block and hitting them about every six inches with a small sledge hammer. These were imbedded in a groove in the upper surface of the block and contact of the block and coated in and around with cement, so they were really welded into the layer of blocks. Mr. Were really werded into the layer of blocks. All Buchanan says that if he were doing it again he would make the reinforcing rods into three pieces instead of two. They could be more easily bent and laid, and they would be just as efficient when properly hooked to-gether with wire. These rods were laid on every third gether with wire. These roos were iaid on every third course, which brought them two feet apart. The angle iron used as the upright in the door would be better if one side were 2 inches wide and the other side 1½ inches. The 2-inch side, through which the holes would be drilled, would make it more convenient for screw-ing on the nuts. Through the sides of the uprights, which stood at right angles to the cement blocks, holes were eet, and pieces of angle iron 1 inch by 1 inch and two feet long were riveted on. These are used as a ladder by which one can get in or out of the silo. The door itself is made of 1-inch lumber, with a small block nailed at right angles to each end, both on the same side. These blocks should be of such dimensions as will make the door come flush with the inside wall of the silo, otherwise air will get in around the opening and result in considerable spoiled silage. It is a continuous door and the different pieces are taken off, or put on, as the silo is being emptied or filled. Whether the doors are in place or removed and hung away there are always the iron cross pieces by which one can climb in or out of the silo. There is also distance enough between the crossbars and the door to allow anyone climbing up the ladder to place the foot safely on the iron cross pieces. The doors lap together after the ship-lap principle. The silo itself is made of about 1,350 cement blocks, 8x8x16 inches. These were made of river gravel and cement mixed in the proportion of five to one. It cost eight cents apiece to make and lay the blocks, the contractors being provided with cement and gravel. Outside of the work performed by Mr. Buchanan, the silo cost \$217 without the roof. About  $4\frac{1}{2}$  feet at the bottom of the structure is slop cement. About  $2\frac{1}{2}$  feet of this is in the ground and two feet above. The hip-roof which may be seen in the accompanying illustration allows the sile to be filled several feet above the top layer blochs, for the hip is

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Combining Two Teams.

One disc harrow fastened behind another in use on the farm of John Buchanan in Kent County, Ont. The dises on the frent harrow throw in while those behind throw out.