

enough to cover the manure well, then harrowed and rolled, when it is ready for the marker.

I have not tried many varieties of corn, as our land is heavy clay and can only be worked when it is dry. It is generally June before we plant, therefore the earliest maturing varieties are the most suitable, and the common yellow has proved the earliest; White Flint, King Philip and Smutnose yielding well, but not ripening before frost comes. I only grow a crop to husk, and plant in hills three feet apart each way, requiring about a peck of seed per acre.

As to cultivation, we sometimes put the harrow on just after the crop is up; then a one-horse cultivator is started as soon as the rows can be seen readily, adjusting it so as to draw the earth away from the small plants. It is gone through once each way, when it is hoed by hand around each hill, removing all weeds, and leaving only four or five plants. After this keep the horse going frequently, and as soon as the plants are up about six inches high the cultivator teeth are reversed so as to throw the earth towards the plants, and the work is continued in this way until the corn is too high for the horse to pass between the rows.

A \$1,000 Barn.

To the Editor FARMER'S ADVOCATE:

I have wanted to write to you for a long time, but through fear of anyone saying I had blown my own horn I always hesitated, but after receiving the January 15th issue I made up my mind to have one "toot" anyway. My excuse is the hope that the plan of my barn and the explanation may help someone who is going to build. I think Mr. Hewitt's letter a very good one. My barn is not an awfully big one, but I find it sufficient for a quarter-section, which fortunately is all I have, as I am a believer in working a small farm well in preference to a half-section and working it as some do. I know I make as many dollars as some who have many more acres. Well, the barn is 52 x 60 feet, having a 10-foot wing over front, leaving it all open under, and the stable part is 40 x 60 inside stone wall, which is 9 feet high; outside posts of barn are 14 feet under the plate, and studded with 2 x 6 inch stuff 2 feet apart all round; 6-inch siding, tongued and grooved and dressed, cost \$20 per 1,000 feet. The whole barn cost \$810 cash. I did all the work on stables and granary, and put on doors and windows, trapdoors, stairs, and ventilators. I believe, counting all my own time and board for men, it would run the cost pretty close on a \$1,000. I have boxes, 3 x 2 1/2 feet, running from floor right up to the top, and have hinged doors on mow side at different heights for putting down feed; they are directly over passages below. I have a hinged door to turn up on under side of floor, which I can open or shut as required. I use these for ventilating, and have small boxes, 4 x 5 inches, built into stone wall at ends of passages about a foot up from the ground, which can be opened or closed as needed for fresh air. Some said inside of box (ventilator) would all coat over with frost and run down, but I don't find it so. When under door is open it is too warm, and when shut there is nothing to freeze, but should door at bottom be left open all night on a frosty night it would be rimed over. Generally keep temperature about 45 degrees. (Is that warm enough for cattle?)

[For milking cows that are not turned out of doors very much a temperature of 50° would probably be better, but for young and dry cattle turned out every day 45° should be about right temperature at which to keep cattle stable.—ED.]

I will enclose plan of stable and barn. I think the ADVOCATE is the best paper printed for us farmers at the price. Why, one issue is often worth subscription price.

JAS. B. GOVENLOCK.

Lausdowne Municipality, Man.

Windmill Power Capacity.

Mr. S. D. McCurdy, Elgin Co., Ont., writes expressing astonishment at the claims made by some of our correspondents regarding what they could accomplish with power windmills. Especial exception is taken to the claims of Mr. A. E. Hodgert, of Perth Co., Ont., that his 14-foot mill and Maple Leaf grinder crushed oats at the rate of 60 bushels per hour, while with his (Mr. McCurdy's) similar mill and power he is able to grind only 10 bushels per hour at the most favorable time.

We learn from Mr. Hodgert that the 60-bushel rate was made in a fairly strong wind, by starting the mill and grinding three bushels of oats, fit for cattle chop, in three minutes.

Since our series of articles on farm powers appeared in January, we have made inquiries from several owners of windmills, and are surprised to learn of results varying almost as widely as those of Messrs. McCurdy and Hodgert, and the conclusion that we have come to is that the location, height above ridge, and adjustment of the wind-

mill has a very great influence upon its capacity for work. A bush or high bank a hundred rods away may have a marked influence upon the currents of air. We are led to believe that there is still much to learn regarding air currents—the source of power—so that we cannot judge other mills from the work done by our own.

Homemade Horse Power Construction.

STONEDIKE, Ontario Co.:—"In an issue of the FARMER'S ADVOCATE there was a description of a homemade horse power with the driving wheel at top of axle. If any readers who have tried that style of power would give me information through these columns on the following points, I shall feel much obliged. The information might probably help others also. 1. What diameter of wheel do you find most convenient? 2. What is the length

with wheel at top of axle, as the horse or horses are hitched direct to the arm where the rim with drive-chain is. 1. We find 18 feet a very convenient sized wheel where a person has room, as on a double threshing floor, or one end of mow, and if room does not permit of that size, 16 feet will answer. With an 18-foot wheel a horse will make about 5 1/2 revolutions per minute, and we have our box geared to make about 250 revolutions per minute. It is a large sized one and we just use one horse. 2. We hitch whiffletree to arm about 11 inches from outside of rim. 3. One axle is rock elm, the other is beech, but any sort of wood that is handy will do for one of these, as I got an old buggy hub, one that has the bands up to the spokes and are riveted together (the kind that is commonly used now), and took the long band off, and made a small axle on the bottom end so that this band

would fit it tight, and drove the band on, and put in four screw nails in the rivet holes to be sure it would not move, so that there is no danger of it wearing out at the bottom end, where all the weight and strain is, and it runs a great deal easier with it on. For arms we have birch 2 x 6 inches, and for rim good elm, 1 1/2 x 7 1/2 inches, with a half inch board in center, bolted together with 3 bolts, with washers under head and nut. 4. We took logs to the mill and got them cut 11 inches square at one end, and 4 inches square at the top; we made the axle octagon, from 18 inches from bottom to top, with axle at top, and planed it, to look neater and lighter to handle. 5. We have not found any wear so far. The only part I see at all likely to wear out is a piece of hardwood plank 14 inches square, with a hole in it for the axle to work in and on, and chain or rope, but that is very slight. 6. As regards making power over again, the only improvement I would make would be to plane the arms, and the lumber that is in the rim on one side, that would be for the top and bottom sides of rim, and paint the whole thing. 7. We support the axle at the top by fastening a plank with hole in it to the beams for top of axle to work in, and the bottom with a piece of hardwood plank 14 inches square with hole in center, kept in place by nailing a strip 1 x 3 inches to floor around it, and find it gives good satisfaction, as it never moves; the plank is not nailed.

FRANCIS A. HAYDEN.

Huron Co., Ont.

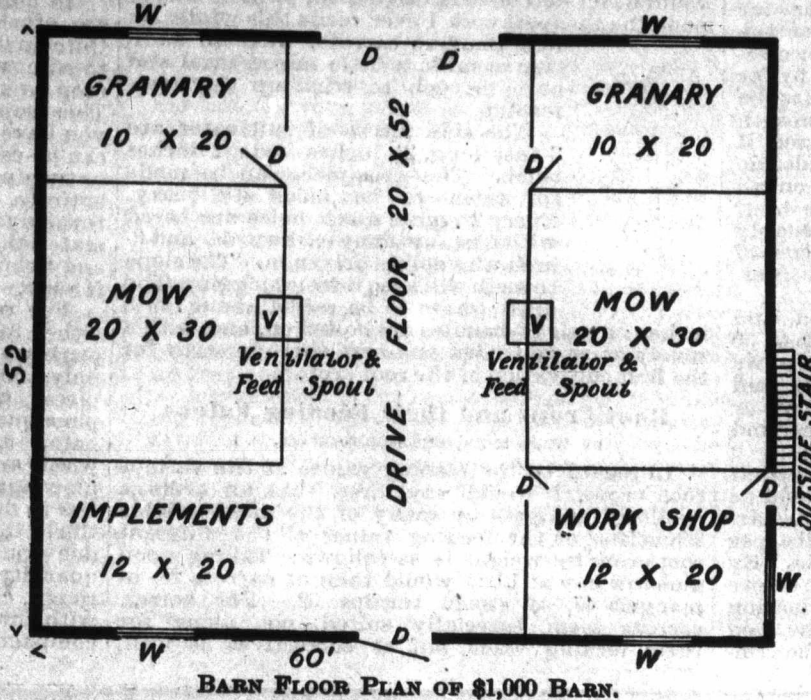
The diameter of our wheel is 16 feet, which best suited our barn. This size gives the horse a larger circle to travel, and gives more speed to the machinery. The arm to which the horses are hitched is of the same length as the main scantlings in the wheel, viz., 16 feet, or 8 feet on each side of the post. The axle of our wheel is beech. Rock elm would be better than maple, being harder to split; but of all I would prefer birch, if procurable. We have a stick of square timber for axle 14 x 14 inches. When I saw the word "durability," I was doubtful whether you understood that the wheel is inside the barn and not exposed to weather; or whether it referred to the wear and tear of the machine. I have seen these wheels placed outside and held in place by braces at the top. Well, there is no wear and tear of any account if the horses are steady. As for improvements, we have not found any of much account that could be made, unless it were to have a grooved wheel instead of the notched scantlings. The axle is supported at the top by an iron gudgeon driven into the top of the log and passing into a hole in an elm plank bolted to two sleepers or beams under the mow. It must be seen that these are held firmly in place. At the bottom also there is an iron gudgeon driven into the log; and this passes into another plank, which is trimmed off at each end and side to prevent too much friction from the weight of the post and wheel. This plank is also bolted firmly to the floor. The gudgeons are one and a quarter inches in diameter and about a foot long. We are well pleased with our wheel and have but little bother with it. The floor on which the horse travels would be better to be double planked and the top ones nailed firmly in place.

Grey Co., Ont.]

HOWARD MILLS.

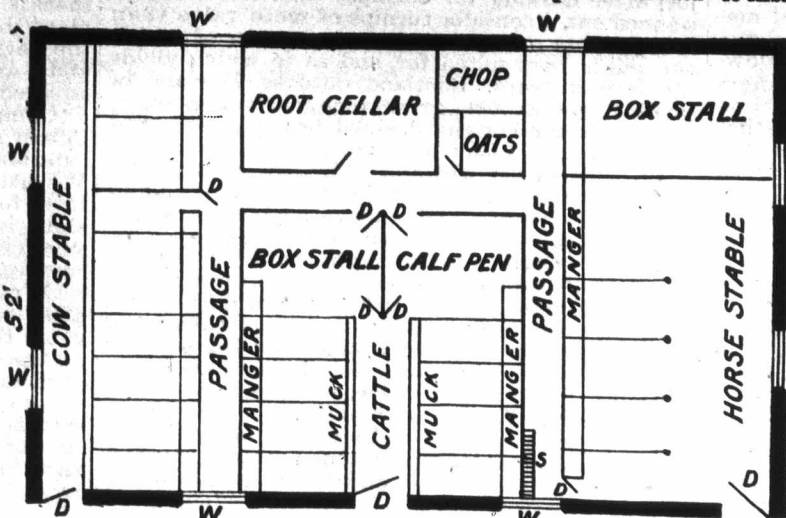
An Ohio Law on Barb Wire.

In Ohio people are not allowed to build line fences of barbed wire without the consent of the parties on adjoining land. The following is an extract from the Revised Statutes of that State dealing with this matter: "No person or corporation shall construct or cause to be constructed, in whole or in part, a partition fence from barbed wire, unless the written consent of the owner or lessee for three or more years of the premises be obtained. Whoever constructs or causes to be constructed a barbed wire partition fence without the consent contemplated in this section shall be fined not more than one hundred dollars (\$100) nor less than ten dollars (\$10)."



of arm to which horses are hitched from the axle? 3. What kind of wood do you use for axle? Of rock elm or maple, which would be the better? 4. What diameter should the log used for axle be? 5. How about durability. Where do you find the most wear and tear to be? 6. If you had to make the power all over again what improvements would you make? 7. How do you support axle at top and bottom so as to stand the strain of pull?"

[My power has the wheel at bottom of shaft and think it surpasses anything I have seen in shape of a cheap power. In answer to "Stonedike," I would say the diameter of my wheel is 15 1/2 feet; the larger the wheel the more speed secured. The length of arm would depend upon the size of wheel. As to kind of timber for axle, I think the rock elm would be the better. Diameter of axle should be 8 x 8, mine is 4 x 4. I think with care such a power should



BASEMENT PLAN OF \$1,000 BARN.

last 15 or 20 years. As to wear and tear, there is but very little providing everything is kept in good order. I do not know of any improvement, unless the rim would be made 7 or 8 inches wide instead of 4 inches; the wider the rim the less apt to sag between the arms. My axle is supported at top and bottom with pieces of white ash about 1 foot long and 8 inches wide, 1 1/2 inches thick at the bottom. It is fastened to floor with 3-inch wood screws. At top with same sized piece as at the bottom, nailed to a piece of plank long enough to reach from one overlay to the other.

Elgin Co., Ont.

CAMLY CHARLTON.

Our powers have wheel at the bottom and not top of axle, as it is handier to put the chain or rope on. I have one driven with a chain, and my brother one driven with a rope. We find the chain gives a little better satisfaction, as it does not expand or contract as a rope does and is not so apt to slip. And we believe they have more power than one