

portant point. Also have a governor attachment. The most of the governors that are made now are good. I believe that 6-inch wheels under the logs will run easier than 3 inch. THOS. MALCOLM.
Bruce Co., Ont.

Delighted With Windmill.

To the Editor FARMER'S ADVOCATE:

I sometimes hear farmers asking if windmill power is a good power for a farmer. I will give my experience. A year ago last fall I had a geared windmill put up for me, a 12-foot wheel, with a mast grinder, which I think is the handiest for a farmer; at least, I would not change for a floor grinder. I can grind and pulp at the same time. I do not know how much more power it has. I have been delighted with it from the first day I used it. I have a large hopper which holds 15 or 20 bushels at one time, which I find very handy, as I can fill it up and do some chores round the barn while the windmill runs itself. It is very important that farmers should post themselves before buying, as they get taken in sometimes. I have never written to a paper before, but as I am writing to the FARMER'S ADVOCATE, I feel that I am writing to an old friend; the longer I read it the better I like it.
Russell Co., Ont. JOHN McDONALD.

Windmill Bearings.

To the Editor FARMER'S ADVOCATE:

I was much pleased with the letter from Mr. W. J. Anderson on windmills. I have been studying up the question of farm power, and I think it would be a good idea if you could get more letters like Mr. Anderson's. Some agents try to represent to the farmers that graphite bearings are a grand thing; that these boxings won't heat if they are allowed to run without oil. Others tell us that graphite bearings are no benefit, and that there is nothing better than the babbitt boxing. If you could publish the testimony of some unprejudiced expert it would be a great benefit to the farmers who have no means of ascertaining whether the ball or roller bearings, the graphite or common babbitt is the best for ordinary farm purposes. I believe that several of the best windmill firms have discarded the ball and roller bearings. If you could publish the testimony of some experienced expert on the subject, you would confer a boon on the farmers.
Middlesex Co., Ont. DAVID LAWRENCE.

A Wise Provision.

CORN AND MILLET FOR FORAGE.

A recent visit to the Asylum farm, near London, Ont., reminded us of a few precautions taken last year by the farm manager, Mr. Murdock, to meet the contingency of a possible drouth and consequent scarcity of pasture during late summer and early fall months. Early in May two and a half acres of corn were sown with the grain drill, every spout running. The ground was harrowed and rolled, and about July 1st the crop was commenced to be fed out to the fifty head of cattle, chiefly cows, in order to supplement the failing pastures. The 2½ acres lasted till August 15th, keeping up the flesh and the milk in a remarkable degree. The corn was very succulent, but being so, it combined well with the dry grass of the pasture fields.

About June 20th Mr. Murdock had nine acres of clover sod plowed and sown with Hungarian grass and millet in equal parts, about half a bushel per acre. The seed was slow in germinating, but when once up it came on rapidly, and before the first of August it was ready to pasture. At that time the grass fields were parched and brown, while the field of green millet seemed like an oasis in the desert. Fifteen working horses were turned in during nights and Sundays from that time till cold fall weather forced them to be housed. They suffered no ill effects in any way, but did remarkably well, gaining in flesh while working hard, on a medium grain ration, and the saving of hay was very considerable. After the horses were taken from the field in the autumn the cows gathered a lot of feed, as the crop kept on growing up afresh as it was eaten off. The wisdom of such a precaution must commend itself to every farmer, but more especially to those who were compelled to draw on their winter fodder before the summer of 1899 had ended. Even though the extra feed is not needed, it need not be lost, as it is always well to allow the pasture fields to meet the winter with a good covering of grass for the benefit of the land and the early pasture of the following spring; or if thought better the corn and millet could be cured for winter fodder, to take the place of hay or straw as the case might be.

Kicking Cow Remedy.

SUBSCRIBER, Huron Co.:—"We have a valuable cow which has the habit of retaining part of her milk. We would like to know if there is a remedy for it? As no one gave the remedy for a kicking cow that we use, I will give it: Take a rope about 3 feet, or long enough to put around the off leg and then twist it four or five times and then tie it securely around the near leg. A cow will soon get used to it, so that you can milk her outdoors with this rope on."

The Construction of a Concrete Wall.

First lay a platform of lumber on the ground, about 12 feet square, beside the pile of gravel. The gravel should be clean and sharp, in size from wheat grains to goose eggs. Don't use sand, as it takes more cement and makes no stronger wall. Get a small box that will hold more than a sack of cement—that is, 80 lbs.—empty a sack of cement into the box; then take five shovels of gravel to one of cement; use the square-mouth, short-handle shovel, as it cleans the platform better than other shovels; put the gravel and cement, one to five, as described, in the gravel and cement, then turn it over, start at a pile on the platform, then turn it over, start at the one side, then turn it back again. Be sure to turn the whole pile every time, then make a hole in the center large enough to hold, say, two pails of water, then turn your shovels with the back away from you, shove the gravel and cement mixture into the water, not breaking the edges to let the water run out. After piling it up in the center as before, then turn it over once more, this time using the sprinkling can if it is not wet enough. When the concrete is wet enough, you will know by taking a handful and squeezing it in the center of the hand as you would a snowball. If it stays as you press it, it is ready for the wall; if it falls down in the hand, it is too dry; if the water runs out, it is too wet. If you get your concrete right, you will have the first part of your trade learnt. Then we will suppose you have got the foundation dug out; if not, you will dig it twenty inches wide and about twenty inches deep, four inches inside and four inches outside of your building lines. Fill this up with concrete and stone, build in all the stone you can, as long as you keep them in from both edges about two inches; after filling up this trench in this way, set up scantling any size, as long as they are long enough to go to the top of your wall, one on the inside and one on the outside. In a twelve-inch wall they would have to be eighteen inches apart, so as to allow two two-inch plank and two inch wedges; inch wedges to knock out to let plank back from wall when raising plank to build next round of concrete. If you have twelve-foot planks, put uprights six feet apart. To make the corner, take two planks and nail them together edge to side to make a square, stand this up on the outside corner, and nail braces to keep them to their places. Nail all braces to the inside of your building; they are out of the road of getting the concrete to the building. Some use bolts instead of the uprights; but for a new beginner I would advise the uprights and wedges. Then start to fill in between those planks with the concrete. Remember to ram it well; you cannot ram it too much; put in a row of stones in the center, remembering to have two inches from the stone to the plank. Always go around the wall in this way, and don't forget to ram well. I have been working for the Estate of John Battle, of Thorold, Ont., for some years, and will endeavor to show the total cost of work and material of some of the buildings that I have built. Take a barn 44x76, wall 10 feet high, with a 12x30 root-house at back; it took 81 bbls. of cement and \$48 to build it. This gravel was the very best. It was Lake Huron gravel, and hardened like iron. Another barn, 44x60, wall 10 feet high, the gravel very fine, not stone enough; it took 80 bbls. cement and \$40 to build it, so you will see that it is not an expensive wall for the farmer. A cubic yard of gravel will build 27 cubic feet of wall; one barrel of cement will build 30 cubic feet of wall, and one man can build 40 cubic feet of wall in a day, so you can figure up your own wall how much it will cost you, and you will bear me out that a cement concrete wall is the cheapest that you can build. The older they are, the stronger; not like other material such as lime mortar to build with, as age does not strengthen them.
Huron Co., Ont. A. E. HODGERT.

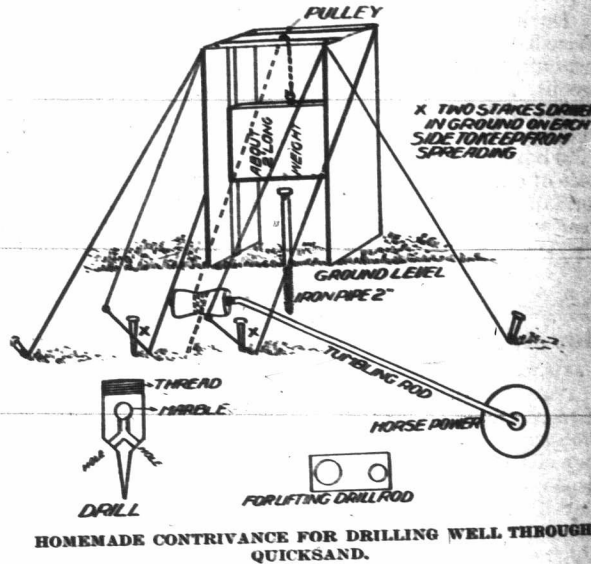
Turnip Fly Preventive.

The Irish Farmer's Gazette has the following reference to a pest which, in some seasons, causes no little damage in Canada: "The turnip fly annually causes a loss of thousands of pounds to the farmers of the United Kingdom. For its size, the fly—or as it should be more correctly called, the beetle—is one of the most destructive insects known to agriculture, and the rapidity with which it is capable of decimating a field of turnips has earned for it an unenviable notoriety among farmers in all parts of the kingdom. Various remedies have, from time to time, been recommended as a preventive of or as a cure for attacks of this insect. Few of these have been found of much practical use; but we are now assured by a correspondent, who has put the matter to a very exhaustive test during the past few years, that soaking the seeds in turpentine before sowing is a most reliable preventive. Our correspondent has experimented in various ways with this remedy, and has invariably found it to give most satisfactory results. The treatment is simplicity itself, as it merely consists of immersing the seed in turpentine for four or five hours shortly before sowing. This is not, of course, a new remedy, but as we are not always writing for the same circle of readers we have thought it well to mention it at this season, as there may be many among our younger friends who have not already heard of it. The correspondent to whom we have referred has found from repeated experiments that the best results are obtained when the seed has been steeped for about five hours."

Plan for Sinking Water Pipes Through Quicksand.

To the Editor FARMER'S ADVOCATE:

SIR,—In answer to J. C., Dundas, Ont., I would suggest piping, as I have two on my farm, both about 100 ft. deep, one flowing 3,500 gals. per day, the other 150 gals. per day. I will try and give details and sketch of how it was done, as plainly as possible: 1st, take two pieces of plank, 2 in. thick, 8 in. wide, about 18 or 20 ft. long, with a 2x2 in. strip nailed on the center of each plank to act as a guide strip for the weight to run up and down; and, 2nd, two pieces of plank, 2 in. thick, 8 in. wide, and a little longer than the others, to be bolted to the top of former pieces, same as shown in sketch. These pieces are to receive the drum at bottom. The two uprights are braced across the top, as shown in sketch. The distance between the uprights depends on the size of the drop-weight, which is a round or square block of hardwood with two pieces of wood driven into it on each side to guide it up and down the guide strips, with a loop driven into the top of it to hook the rope on for lifting it. The drum is the same, a round block of wood with two pieces of iron driven into each end for it to revolve on. The drum is revolved by horse power, or any other power handy. The drum has a slight hollow, as shown on sketch. The center dotted line shows the rope in place; the outside lines are only stay-ropes. If you notice, the two upright pieces are not fastened together at bottom, so as you can spread them to remove the weight. The first length or two of 2-in. iron pipe is driven in the ground, with a socket or connector on the end that enters the ground; on the other end, where the weight strikes it, screw on a cap, drive the pipe down into the ground by one man taking a couple of turns of



the rope round the drum, tighten, and taking slack rope as weight rises, then give slack on drum quickly and let weight drop on top of pipe. A man guides it into the ground, and until there is only about two feet above ground. If it goes easily, screw on another length, drive it down, then take off cap and remove weight; pour some water into pipe, put in drill-rod, which is 1-in. pipe connected together, as required with the top left open, screw on the drill to the bottom; lift drill-rod the same as weight, hoisting it up and letting it drop at short distances, increasing the drop as it makes its way down; also, keep turning round so as to drill perpendicularly; draw it up once in a while and unscrew drill off end, letting the mud run out. If the 2-in. pipe drives hard, drill down ahead of it, and then drive it down. You must not lift drop weight too high at first till you get used to it; also, drill-rod. The piece of iron which lifts the drill-rod is about ½-in. thick, with one hole a little larger than the socket or connector on the drill-rod, the other large enough to receive the hook on the end of rope. When the plate is lifted on the end of the drill-rod and the rope is slackened it allows the drill-rod to drop through it. Of course, the deeper you go down the drill-rod has to be lengthened by screwing the pipes together, and unscrewed as removed. The drill is like a socket on one end, with a chisel on the other, with one hole bored on each side of it, with a third bored from top to meet the other two. Set a marble over the hole. It has to be large enough so that it can't pass the bar—a small piece of iron ½ in. or 3-16 in. thick, driven across the top of marble to keep it from going up into the pipe. Don't place it so close that it won't let the mud and gravel pass. The object of this well is to carry you past the quicksand to the gravel bed or to a vein of water. If ill-luck should so happen that you should want to draw your pipe, you can do so by placing two jack screws, one on each side of the pipe, with something heavy fastened round the pipe and projecting over on each side to receive the screws; then jack-up the same as you would a building, shifting it down as the pipe is drawn out of the ground. Two-inch pipe driven down into blue clay to the depth of over 100 ft. has been raised to the surface as good as new.
York Co., Ont. JAS. H. H.