

any ice on the sap the barrels on end is the most convenient way of handling it. If there is no ice on the sap we have a strainer on each barrel, composed of a piece of strong linen, with a float in each barrel. Have a tank at the sugar house large enough to hold a load of sap. As soon as the load comes in it is emptied into the tank. The team goes out for another load and one man attends to the fire and dips the sap up into the feed trough before the next load comes in. A strainer made of gray cotton is hung in the feed trough and the sap passes through it as it is dipped into the feed trough.

Next comes the boiling. We use a modern evaporator, 14 feet long and 40 inches wide, with a corrugated bottom, so that the cold sap passes from the feed trough through an automatic regulator which regulates the depth of the sap in the evaporator. This automatic regulator is placed at the front of the evaporator. The sap passes backwards and forwards across the evaporator, and by the time it gets to the back end of the evaporator it is into syrup. The thickness of this syrup is regulated by a tap in the back end of the evaporator.

When the syrup is ready for draining off open the tap enough to allow the syrup to run off slowly, just so that the cold sap will be running in at one end and running out syrup at the other end. This syrup should pass through two thicknesses of flannel cloth and be allowed to settle for twelve hours.

We have a galvanized pan thirty inches square and twelve inches deep to finish the syrup in. When the syrup has settled for not less than twelve hours, pour it over carefully into the finishing pan. Be careful not to allow any of the sediment which has settled to the bottom to pass into the pan. Have a stove in the sugar house and a strong stand, as large as the pan and the same height as the stove set on casters. When the syrup is ready set this stand close to the stove. One person can easily move the pan of syrup on to the stand and move it back from the stove.

When the syrup is poured into the pan after being settled, and while it is yet cold, add one quart of sweet skim milk to every four gallons of syrup. Allow it to simmer slowly for a few minutes. The action of the milk on the syrup will have the effect of raising the skim to the surface. This is removed with a skimmer. The purity of the finished article depends greatly on the perfection with which this part of the process of purifying is performed. Boil until it is thick enough. The way to know when it is boiled enough is: When the syrup is allowed to drop off the dipper, when the drops hang to the dipper until they are so large that they reach right across the front of the dipper and stick to it.

[Many successful syrup makers use a saccharometer. This involves putting syrup in a narrow pail, but we find it very uniform and accurate—ED.] If it is not boiled to this stage the chances are that it will sour when the hot weather comes, and if it is boiled past that stage it will be very apt to go to candy.

When you have it boiled to that stage strain it through a flannel cloth while it is boiling hot, for if it gets cool it will not go through the strainer. It is now ready for market, and a very good way to market it is in one gallon cans. They can be made of cheap tin, and do not come very expensive. What we require for our own use we put up in three-gallon cans and keep in a cool place. We use about sixty gallons every year and have no trouble keeping it in good shape until the new crop is ready. We have no trouble disposing of all our surplus syrup at \$1 per gallon.

It is needless to say that the first and most essential part of sugarmaking is cleanliness in all its details, and if this is not observed a poor article of syrup will be the result.

The greatest drawback to the sugar business is the amount of adulteration practiced. We often see it exposed for sale on our markets with very little, if any, sap of the maple tree in it.

Wants Information re Soiling.

In reviewing, I wish to state that I am much pleased with the *ADVOCATE* and think every number better than the preceding one. The last number (Jan. 15) contains a vast amount of useful information. Although I may not be classed amongst the successful farmers, yet I have been experimenting to find the best mode of saving and applying manure, and I find that putting the horse manure in the cow stables every day and hauling from cow stables every other day and spreading on the land intended for roots is by far the best mode I have tried yet. As long as the snow is not too deep or the ground too soft this plan cannot be improved on. Manure from box stalls is not as good as cow and horse manure mixed, as it can not be spread evenly and dries out much faster in the spring. Cut straw goes farther than long, and where straw is scarce will pay to cut, especially if one has a power mill to drive the cutting box.

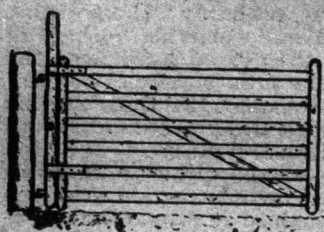
I would like if you could publish experiences from those who practice partial or total soiling, especially the latter. I intend to try the system and would be much pleased to have some advice from those who have tried. If you do not think it would be in the interest of the public generally to publish, would like if you could furnish me with the address of some parties who practice soiling.

Huron Co., Ont. J. N. KERNIGHAN.

[NOTE.—Will those who have practiced total soiling give their experience and methods through the *ADVOCATE*.—ED.]

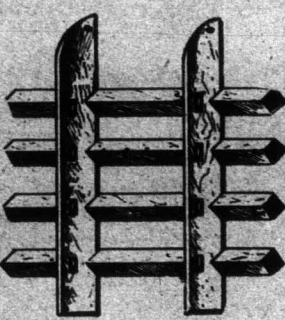
THE HELPING HAND.

An Adjustable Gate.



J. ARTHUR VANCE, Durham Co., Ont.:—"The above represents a gate which every farmer should have. It is especially valuable in the winter to raise it up out of the way of snow, but can also be used with advantage in summer to allow sheep or pigs to run under when cattle or horses are desired to be kept back. Standard B is attached to the post by hinges. The gate is made separate from the standard B and held to it by two iron straps of flat iron on the top and fifth bars. It fits around B loosely so that the gate can be raised or lowered easily. In standard B are a number of holes about six inches apart from the top of the standard downwards. These are to receive a bolt immediately beneath the top strap to hold it up. This gate is, I think, much handier than the one shown in Jan. 15th issue."

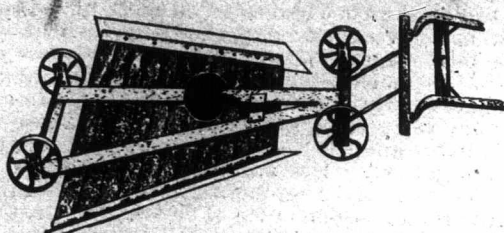
Combined Sled and Land Leveler.



D. P. L. CAMPBELL, Prescott Co., Ont.:—"The above illustration represents an improved land leveler and sled combined, which makes an excellent land leveler and by turning upside down it becomes a sled, on which harrows, seed grain, etc., can be conveyed from one field to another."

"Take four scantling, pieces seven or eight feet long and four inches square. The runners are made of two-inch plank, seven inches wide and four and a half feet long; one end being rounded like a runner and a hole bored through it, to which to attach a chain to draw the implement. "Mortises are made through the runners, two inches from the bottom, in which to place the nuts on the bolts used to secure them to the scantling. Use half-inch bolts, seven inches long. As one corner becomes worn the scantling can be turned, and this repeated until the four angles are worn off. The diagram renders further explanation unnecessary."

Homemade Corn Harvester.



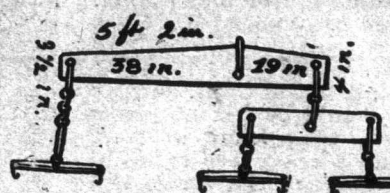
J. F. Brant Co., Ont.:—"The accompanying sketch may seem out of season, but the winter is not only the proper time to construct but to put all farm implements in repair. With very little expense and trouble a corn harvester like the accompanying representation can be constructed by any person reasonably handy with tools. Our harvester has worked well. We cut heavy Western as well as our native corn, three men cutting from six to seven acres per day without any trouble, laying it in convenient bunches for drawing to the silo or to shock. We seemed to take off our twenty-two acres as easily as four or five in the old way and the work equally well done. The expense is for the wheels, knives, braces for the shafts, axles, etc. We used old gang plow wheels and bean puller knives 4 feet long and 6 inches wide, which can be got of the manufacturer as cheaply as a blacksmith would make them and they answer a better purpose, being made of special quality of steel. To construct use four wheels as near 12 inches as possible; fit to them axle two feet long inside of wheels, with holes to lower or raise platform as described in cut. The frame is made of two oak planks 2 x 6 x 5 feet 6 inches long. Dress them to fit together in the shape of a V, 22 inches wide at rear end and 4 or 5 inches wide in front, with bolt through nose. Bolt the frame to the hind axle and fasten frame to front with king bolt so the front wheels will turn freely. Turn the frame upside down and in front of hind wheel nail a board across squarely on the frame 4 feet 3 inches long with wire nails long enough to clinch. Cramp the front wheels, and as close as possible without interfering with the front wheels fasten a board 2 feet 3 inches long. Fill in between the front and rear board with lumber (matched lumber makes the best platform). Trim the platform with straight edge and saw to 2 feet 3 inches in front to 4 feet 3 inches at the rear, having each corner of platform equal distances from center of axles. Draw a line 3 inches from edge of platform and level toward the edge, dressing with plane so knives will fit. This bevel throws the edge of the knives upward, making an easier and cleaner cut than if the knives were flat. Now turn the harvester over, put 1/2 in.

board 6 in. wide lengthwise over where the knives go, beveling the edge so as to fit without any projection or raise to catch the butts of the corn as it comes from the knives; then bolt the knives on the lower side of platform, letting the knives project outside of platform from 1 1/2 to 2 1/2 inches. A mowing machine seat and spring form the driver's seat. The rear seat should be nearly level with the platform; a bag with a little straw or a buggy cushion answers well; then every leaning stalk or sucker can be picked up and dropped behind in bunches. The shafts can be attached with hooks and eyes in axle or bolted to axle, then when not in use they can easily be laid away, but the shafts should fit the horse closely and not extend farther forward than the collar of the horse, otherwise they would catch the corn and pull it down. Use part of an old bag for horse's nose to keep him from eating the corn. The above measurements are for cutting corn from 3 feet to 3 1/2 feet. If wider or narrower rows are to be cut the platform should be made that much wider or narrower. To harvest successfully the machine must go the same direction the corn was cultivated the last time. With a machine like this a boy, two good men, and a steady horse, the knives kept sharp with a file every few rounds, solve the difficult problem of harvesting corn."

"A Stitch in Time Saves Nine."

JIMMY DACK, Muskoka, Ont.:—"Every one will agree that this maxim is as true as it is old. However, I suppose every one of us loses more or less every day by neglecting to practice it. Perhaps we work with dull tools, when a few minutes spent in sharpening them would save hours in the course of a day or two. Maybe we put off nailing a board on the garden fence until the old sow gets in and does a lot of damage. Sometimes it is something more serious. A few months ago I witnessed the loss of a fine heifer, which was so badly hurt with a grain cradle that she had to be killed. The cradle was left on a pile of straw instead of being hung up in its place."

Three-Horse Whiffletree.



ARTHUR BEER, Wentworth Co., Ont.:

"The above illustration of three-horse whiffletree explains itself. I consider it better than the one represented in Feb. 1st issue, because it requires just one piece more than the ordinary whiffletree."

DAIRY.

The Ontario Agricultural College Dairy School.

A few hours were spent some three weeks ago by a member of our staff at the Dairy School of the Ontario Agricultural College at Guelph, which was then and is yet in full operation, having some sixty students in attendance. We were disappointed upon entering to find no ladies among the white brigade, who, even without the refining influence of the absent class, seemed eagerly and quietly seeking out the hidden mysteries of the dairy business by the search-light of science and modern equipment, without which no country, however adaptable, is able to stay in the race, to say nothing of winning in the contest for the world's markets for butter and cheese. It is indeed a pleasure to spend some time with Prof. Dean and his staff, each of whom exhibit the utmost pleasure in acquainting visitors with the ins and outs of the intricate operations, which after all become quite simple when understood. We mentioned sixty students in attendance. Can that number possibly represent the number of would-be dairymen in the central portion of our Province who need the advantages afforded at this school, which belongs to the farmers of this country?

The new dairy building is divided into separating and buttermaking room, testing room, lecture rooms, dressing rooms, and the offices. The lecture rooms are supplied with the best dairy and agricultural papers published in Canada, the United States, and England. In the old dairy building is the home dairy department, the cheese-making room, and the engine and boilers for supplying the steam, heat and power. The general cleanliness, tidiness, order and system observed in every department, together with the snowy whiteness of the costumes of instructors and students, impresses one on entering with the suitability of such where refined food products are being manufactured.

The students taking the full course of cheese-making and buttermaking, separators, and milk testing (41) change every three days, thus going once around in twelve days. Home dairy students (7) remain in that department all the time, except they prefer instruction in cheesemaking, which they take as desired. There are also classes of specialists who take either milk-testing and cheese-making (5), or separators, buttermaking, and milk testing (7). These divide their time as they desire.

The Buttermaking is in charge of Mr. T. C. Rodgers, assisted by J. H. Findlay. The milk (4,000 to 5,000 pounds daily) when received is weighed in by the assistant buttermaker, assisted by students,