## Maple Sugar Making.

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Each man has his own idea of a sugar house. While one good sugar maker has a house with two rooms, one for storing wood and the other for boiling and canning, another man, who is more particular, has his woodshed apart from the main building, besides having his storage in one room, his evaporator in another, and still a third room in which to can his product or finish it off into sugar; so that we can offer you only a few general directions in regard to the sugar house, as well as the sugar bush, and the detail can be filled in according to one's own preference.

We emphasize this point, that the wood should be kept apart from the boiling room, so that the steam will not dampen the wood, and the dust arising from splitting wood, etc., will not get into the sap in storage or evaporator. The boiling room should be perfectly clean. The wood should be under cover, and, if gathered in the fall and stacked up in the shed, it will have time to dry and give forth its best heat when used. If we wait until late in the winter before gathering wood, it necessarily will be somewhat damp, perhaps soggy, and we cannot obtain a bright blaze and strong heat.

It is a good plan to have the fire-box of the evaporator over lower ground than the back end. Build a brick or stone ash-box beneath the ash-pit, in order to raise the arch to its proper level. If the ground is not sloping, a hollow may be scooped in the ground for this purpose, the idea being to rest the fire-box of the arch on a stone wall built about a foot high. This raises the feed doors one foot above the level of the ground in front of it, so that stooping is not necessary in order to put in fuel, and much tiresome labor is saved; and, also, we will have a deep ash pit for the ashes to accumulate in, so that they will not have to be removed as often as if there were no place for them. Now then, having this low ground on which to stand while firing, if we wish a floor we lay it through the rear end of the sugar house, beginning either at the front or back end of the fire-box of the arch, and there is then no danger of the floor igniting, as there is when the fire-box rests upon the floor. The best sugar makers have their sugar houses floored, and many of them even go to the added expense of ceiling them—making them warm and comfortable; the warmer the boiling room is kept the faster the steam will pass away. These points, of course, are unessential. But a good sugar house should always have a ventilator nearly or quite as long as the evaporator, and built in the roof directly above it, so that the escaping steam will rise straight up and pass away, thus aiding evaporation, instead of hanging in a thick cloud low down and passing out through the doors and windows, which, by the way, should always be shut.

Whatever evaporator is used the top of it should be perfectly level, and in building the sugar house the direction of the prevailing winds and the surrounding hills should be carefully considered, in order to set the evaporator in a position where it will obtain the best possible draft. The fuel doors of the arch should always face the direction from which the prevailing winds come. We advise building a little room outside of the boiling for a storage room; it removes the sap from the heat of the boiling room, so that it is less liable to sour.

IF THE SUGAR HOUSE

can be built on a side hill, advantage can be taken of it in placing the storage tank on the upper side of the house, as the bottom of the storage tank necessarily must be above the level of the top of the evaporator. And then as we bring the sled load of sap just gathered to the side of the sugar house, we will be above the level of the storage and can let it run right from the gathering tank directly into the storage. If, however, we are on level ground, it will pay to build a rise of dirt or timbers on which to drive up and unload the tank of sap.

On the right hand side of the evaporator there should be plenty of room to set syrup cans and pails in which we draw off syrup for settling, and still have plenty of room to pass about the evaporator. If we build a small finishing-off room at this side of the evaporator, it is much more convenient, and we would recommend a room large enough to hold a sugaring-off arch and a sink for washing utensils, and in which to set the cans and keep them in store if necessary.

THE STORAGE AND GATHERING TANKS

should both be made of metal and not of wood, as the wood increases the tendency of the sap to sourness, and in fact the sap should not touch wood after it has left the tree. Tin is the best material of which to make the tanks, although galvanized iron will answer for the gathering tank, as the sap does not remain long in it. We have been warned time and again against the use of galvanized vessels, if the sap was to stand in them any length of time, and particularly against the boiling of sap in galvanized iron pans. This has been the advice of all who have looked into the matter closely among our leading sugar makers and chemists. You never use a galvanized iron vessel in which to cook any other article of food, do you? No more should we boil sap in a galvanized iron pan.

We now have our sugar house built, the evaporator placed in position, and the storage tank ready to receive the sap when it shall be gathered, and we start out to scatter

THE BUCKETS

through the camp. A few years ago our leading sugar makers recommended a 15-quart tin bucket with straight sides. Now they have almost unanimously adopted a bucket with flaring sides, so that they can be easily nested when packed away. We strongly urge that sap should be gathered often, even in small quantities, and should not stand any length of time, but should be gathered and boiled in quickly to make the best product. The only reason for a large pail is to insure against loss of sap during a heavy run in the night time, or on the Sabbath day. Boiling should begin promptly upon the first arrival of sap, and the evaporator should be of sufficient capacity to boil away sap as fast as it is gathered. There are probably more different

KINDS OF SPOUTS

in use than any other article of sugar making. Whatever you do use a metal spout. The outer bark of the tree should be cut off within a radius of two inches about where you are to tap. Then a hole should be bored one or two inches deep, of a proper size for spout used. It is best to tap the tree about two or three feet from the ground on the side most exposed to the sun, and, if possible, it should be done at the point where the bark is fresh and runs perpendicularly. As to number of spouts to a tree, we would advise but one spout to a tree when covers are used, and, if it is necessary to tap a tree a second time, Mr. W. I. Chamberlain's advice is good, viz.: "To retap the old hole and use a larger spout." But if no cover is used, it is a good plan to put the second spout a little to one side of the old one.

The tree tapped, spouts driven and buckets hung on them, either by holes in the bucket or loops made for the purpose, we come to the question of covers. And here, perhaps, is one of the questions which is most discussed by sugar makers, whether there should be covers or not, and of what material.

WE THINK A COVER SHOULD BE USED.

If the majority are to be relied upon, and those our best sugar makers, then covers must be used in order to exclude rain, snow, dust, leaves, bark and insects, which are invariably found in the sugar camp; and then, many rightly claim that the sunlight and atmosphere have a tendency to color the sap as well as to sour it. The best cover yet invented, to our knowledge, is the "Record" cover. This, however, is somewhat expensive, the price being $8 per hundred. Various other covers have been made and tried, but none which would keep their place against the wind and still be convenient when emptying the sap. If the buckets are hung from loops, this question of covers will be a troublesome one, as we must have one which will allow entrance for the spout. If, however, the buckets hang on the spouts by a hole in the bucket, then the cover which we would recommend would be a square wood cover with a cleat nailed on each side to keep the cover from warping and prevent the wind from blowing it off. Such covers can easily be made at home, or obtained from the nearest sawmill. There is an advantage in wood covers, as one side can be painted one color and the other side another color, and each time a pail is emptied the cover is turned, so that by having a system as to which color at what time means an empty or a full pail, we will easily know in passing along whether a pail has had attention or not. The cost of boiling away rain and snow water gathered from uncovered pails often amounts to more than the price of the highest priced covers; besides, rain-water sap yields an inferior product.

Now, then, the trees tapped and all ready for operation, we start to gather the sap with gathering tank securely fastened to the vehicle used, much in the same way as you would a milk can on a wagon.

A WORD ABOUT STRAINERS.

We have a double strainer in the top of the gathering tank—a coarse and a fine one of wire cloth. It is a good plan to have the sap pass through another fine strainer just as it runs into the storage tank. The syrup should also be strained as it is drawn off from the evaporator, by passing through a homemade strainer of cloth, with the nap on the inside of the strainer in order to arrest particles of dirt and hold them.

It is not our intention to speak here of boiling sap. Different evaporators require different attention. We must, however, insist upon having good fuel and a good draft properly adjusted, whatever mode of boiling we use. Now the question comes, after the sap has been boiled to a syrup.

WHETHER IT SHALL BE CANNED OR FINISHED OFF INTO SUGAR.

If it is to be canned, the only caution we would suggest is to be sure and have good cans. It is not necessary that they be expensive, but be sure they do not leak and that they hold a full gallon. We urge this last point, as there are cans put upon the market which do not hold quite a gallon and there are others which hold over a gallon, and we wish to speak at all times when we see anything which leads to shortage, deception or adulteration on the part of maple sugar makers, inasmuch as the strong point for the sugar maker is, pure maple syrup, honestly made and honestly sold. But, in finishing off syrup, it is necessary to know whether the syrup is of the right weight. If too thick, it will crystallize in the cans after a few months standing, and if too thin, it will not keep well. Of the two, we prefer the former. The thickness can easily be told by drawing off a gallon and weighing it. When of the correct weight it should be 11 pounds when cold. (We advise cold canning.) A short experience in testing this will show that the correct point can be determined by the waxy flakes, about three-fourths of an inch, which will hang from the end of the scoop just as the syrup reaches the right point. There are also sacchrometers upon the market which can be bought for $1, which will enable the beginner to test his syrup, but these are not reliable as a scale. Now, suppose our syrup is ready to can, we observe this caution in filling the cans: they must be full, so that there will be no air in them, and the air may be excluded entirely if the can is held by its handle while being filled, not allowing the bottom to rest on the table. We fill entirely, even to the upper edge of the screw-top, and then seal with the screw-top before resting it on the floor or table.

EACH CAN SHOULD BE LABELED FOR TWO REASONS.

The law requires it in most States, and it advertises the goods. (We will furnish labels to our customers at cost.) The label should, however, invariably read, "Pure Maple Syrup," or "Pure Rock Maple Syrup," made and sealed by—(with the maker's name underneath.) Many makers leave a date place in which they write with ink the date on which the can was sealed. If the product is to be finished off into sugar, it should be done at your sugar house. Do not carry the syrup in for the housewife to finish off on the kitchen stove. We have spoken of the finishing-off room under the head of the sugar house, and, as the modern evaporator, tanks, buckets, etc., all fully justifiy the expense that is put into them, so we find that it pays to have a separate sugaring-off arch right at the sugar house, and a pan particularly for this purpose, just as the evaporator is for the syrup. The syrup, directly after drawing from the evaporator, can be put into this finishing-off pan and stirred into finished sugar, boiling it until it begins to grain, or it can be made into cakes or run into pails. Sugar-makers in the east prefer to finish into pails, as it keeps better than in small packages; then, when it is re-boiled with water for table use, it has a fresher flavor than canned syrup. Also, syrup may sour, sugar cannot. Or, if to be sold as confection, it should be done up in little cake tins, allowing five or six of these to a pound of sugar. We have among our customers those who sell sugar at from 15c. to 20c. per pound, when done up in this way, but they grain it more than it is ordinarily grained, and take great pains in having it look nicely when sent to the store. The following suggestions made to us a short time ago are well worth remembering: Whatever you do, remember to have your syrup of the correct weight; to have it pure and clean; to have it properly labeled; and remember that it is a luxury, and obtain a good price for it. Do not rely on the local dealer to dispose of it. Work up your own private customers.

Right here we would urge, while we have said very little in regard to the necessary care to be taken, that no one can make a success of sugaring without good care and attention.

DIRT SHOULD NEVER CREEP INTO THE SAP

while gathering or in storage, or in the syrup in the evaporator, or after it is drawn off. Use every possible means to keep out dirt. At the end of the season, and even several times during the season, the pails and all utensils should be carefully washed with boiling water—particularly so the vessels in which the sap stands. Every successful sugar maker with whom we have talked, in order to learn his experience, has said, "Yes, sir, cleanliness in all particulars is as important as any other point in sugar-making—quite as important as the boiling apparatus." And please remember, as you are reading this, that we give you these suggestions, and that we are the men who are making the boiling apparatus used by the most successful sugar makers.

## Maple Sugar Making in the Province of Quebec.

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Perhaps no industry has undergone such a change in the last few years as the making of maple sugar and syrup, so much so that the yearly production is on the increase in spite of the low price of sugar, for no sugar or syrup can compare with it as a luxury. I have often thought how little we see about it in the ADVOCATE.

Mr. Caston contributed a very good account of the mode of making, etc., in the ADVOCATE of February, 1892, which I take as the Ontario style, which differs considerably from the improved methods of the eastern townships of the Province of Quebec. No doubt he has a different climate from ours, and second growth trees, or he could never run five hundred or six hundred trees with the sizes of evaporators described in the ADVOCATE. There are hundreds such pans in use here, only larger and made of tin. (Galvanized iron is a thing of the past.) Our trees are mostly the natural growth, and produce a much larger quantity of sap than second growth, requiring about fifteen imperial quarts of sap to make a pound of sugar. One-half or two-thirds of that amount from second growth will produce a pound. The sap comes in runs of a day, or perhaps two or three days, in which time a pound to the tree is often made. At such times it is a rush, and the pan must be equal to the occasion. Many sugaries here have 800 to 1,200 trees, and there are several in the township which have 3,000 and upwards. The improved evaporators