

will always afford a market for a real nice article of maple syrup at a high price. We have already given some opinion as to Chinese cane, which will make excellent syrup, and will only make poor sugar, and that with much difficulty. Maple syrup is more easily converted into sugar—a very palatable but not very sweet sugar. It is never at best, worth over two-thirds the price of pure cane sugar for family use, while the syrup is quite the reverse. We had rather have a gallon of maple syrup than a gallon and a half of “golden syrup,” or two gallons “Orleans molasses.” Then maple syrup is made with very little trouble, while it requires much experience and great care to make good maple sugar.

Sap Buckets.—The most economical form and substance for sap buckets is tin, made of two sheets for the square sides and half a sheet for the bottom, with just taper enough to meet together when in stove. The tin should be rolled around a wire at the top, with a quirl in it for a loop to hang by, or else with a hole under the wire large enough to hang over a wrought nail head. Stub horse nails will answer. We say wrought, because they must be pulled out of the trees when the season closes.

Spouts.—There is nothing, in our opinion, so good and cheap as iron spouts. Scrap sheet iron, or hoop iron, swedged to a trough shape, and ground sharp at one end, so as to drive into the bark—never through it—below the cut from which the sap is to flow. This cut may be made with an augur, gouge or even an ax, if care is used to make only such a smooth, shallow cut as will soon heal over. Chopping great rough holes into trees to get the sap is an act as foolish as killing the goose that laid the golden egg.

Sap Boiler.—The best common sap boiler that we have ever seen is the shallow sheet-iron pan; but we have a description and drawing in *The Scientific American* of one patented last year that appears to be a great improvement. Let us suppose a great sheet of iron crimped into troughs and ridges, four or five inches deep and as wide, and these troughs so connected together at alternate ends, that by a working motion given to the boiler, the sap while boiling is made to run a thin stream over the fire, such a length of coursing back and forth that it is reduced to nearly a condition of syrup where it discharges.

This plan looks so reasonable that, if we owned a sugar-tree orchard, or intended to boil sorghum juice, we should think it worthy of careful examination.

Ratio of Sugar to Sap.—A letter before us gives the ratio of sugar to maple sap as follows: Sap concentrated 20 times makes what we call good syrup, and this syrup concentrated thus makes grained sugar, hard enough when taken out of a jar to require a stiff knife, which, as I calculate, is that sap concentrated 50 times in sugar.

1 qt. Water weighs.....	2lb. 2oz.		1 qt. Syrup weighs.....	2lb. 8oz.
1 qt. Sap weighs.....	2lb. 1oz.		1 qt. Sugar weighs.....	2lb. 9oz.

Can anybody tell us if this ratio is the same with cane juice? The writer also says that some maple trees are far richer in saccharine than others. Has this been sufficiently tried as regards the varieties of sorghum? It is very important that none but the sweetest should be cultivated. These are all matters to be thought of now, rather than in the boiling season.