

a pipe into the defecating tanks, and from there into the evaporating pans. A strainer of wire gauze should be so placed that the particles of pith and cane may not be allowed to run into the tanks.

Two heating tanks, each of a capacity of a hundred gallons, to be used alternately, should be prepared to receive the juice as it flows from the tank at the mill; and these should be so situated that the juice may be let out of them into a cooling tank, which may be made of two inch plank, and of sufficient capacity to hold as much as the other two. The evaporating tanks may be made entirely of metal, or the bottom may be of sheet copper, and the sides of wood. These should be placed over a separate flue of a furnace, or, what is perhaps better, be heated by a steam coil or jacket arranged so that the steam may be turned off when the scum has formed on the surface. If however an open fire is employed, an arrangement should be made so that the heat could be turned off into another flue when the proper temperature is reached. The heaters should be of such a capacity that they will contain all the juice received from the mill in an hour.

The evaporater may be of any capacity or shape, provided a thin sheet of juice is spread over a large even surface, with a continual descent; but it must be so arranged that the scum, which forms immediately the juice enters, may be easily removed. Sometimes an endeavor is made to finish the sugaring off process in this pan, but it is best to have a separate furnace with a finishing pan attached; or if a steam jacket is used in the other tanks, it is only necessary to have one for this process also. Steam is found to be decidedly the best heat to use, as it is more under control, and not so liable to injure the sugar. The coolers, of which there should be two, into which the finishing pan discharges, should be close jointed wooden troughs, broad and flat, and large enough to contain a day's boiling; these may each be used on alternate days.

The crystalizing vessels may be tubs or half barrels, with plugs in the bottoms which may be easily removed, to secure drainage; these must be kept in a room of 80° or 90° fahrenheit. They should be placed so that they will drain into some convenient vessel to catch the molasses.

The necessary apparatus above described is in use in many of the neighboring States, from whence either they, or patterns of them, could be procured. One of our members who is going into the