

that the cells may not be ruptured, but clean-cut. As the slices come from under the cutter, they are put into large tanks. Warm water is forced through the contents of these tanks or jars. By the action of the water, the greater part of the sugar contained in the sliced beets is dissolved. You know how quickly sugar will dissolve in water. The water containing the sugar in solution is then withdrawn from the tanks and taken to a measuring tank. The part of the sugar beet left over, that from which the sugar has been extracted, is called "pulp." This pulp is of no further use in the manufacture of the sugar, and is therefore thrown aside or taken to feed stock.

After the liquid containing the sugar has been measured, it goes to the mixer, where it is mixed with lime, and then put into a large tank for carbonation. Carbonation is the process of converting the lime and other impurities in the mixture into an insoluble form, by means of carbonic acid gas forced through the bottom of the tank. The mixture is then poured into a filter-press. A filter-press is simply a large strainer, by means of which the insoluble matter is retained, as the clear sugar solution goes through. This process is repeated a second time, after which the solution is treated with sulphur fumes. The syrup is then boiled down to remove the water contained in it. This is done by passing the syrup through four large boilers. What is left after the boiling is called thick juice. This juice is again boiled in a peculiar kind of pan, called a vacuum pan, and now becomes raw sugar. The raw sugar is then run into centrifugals, which are machines used for the purpose of separating the white sugar from the molasses. At this stage, the sugar is, of course, damp. By means of a granulator, this wet mass, which has the appearance of snow, is dried. It is then run through sieves to separate it into fine and coarse grained sugar, and is ready for the market, clean, white, crystalline sugar, such as we use every day on the table. Some of the sugar that we use has been made from sugar cane grown in the West Indies or in South America, some has been made from sugar beets grown in France and Germany and Belgium. We cannot tell the difference between the two kinds—there is none. We shall soon be using sugar that has been grown in beets by the farmers of our own Province.