mainly to determine at what time the saccharine matter was sufficiently matured to make crystallized sugar.

On the 11th of September the stalks appeared in the right stage, and the cutting, grinding and boiling were commenced, and continued with little intermission until the whole was completed. stalk at one revolution of the horse. The method pursued in this operation, was to keep a sufficient number of hands in the field to strip the leaves or blades, and cut off the tops as small one I use, giving them a quicker motion by fast as the stalks were wanted for use; this labor was generally performed by boys. being at a little distance from the mill, the horse their velocity is equal to about one-sixth the veused for grinding was put before a light waggon, locity of the horse; or in other words, a corndriven to the field, the stalks were then cut and stalk six feet long, will pass through between the placed upon the waggon,-taking care to keep rollers in the same time that the horse will walk them straight and in order-driven to the mill thirty six feet. The grinding is a beautiful operand ground without delay. A load of this kind ation, the amount of juice contained in the stalk in a light waggon, with lumber box, will make a is surprising to every one. The stalks in passing batch of fifteen to twenty gallons; this would be through the mill are crushed very fine, and the ground in about thirty minutes. Lime water was juice entirely separated from them by the presmixed with the juice while it was running from sure of the rollers. the mill. The juice is then strained through a fannel cloth into the pan, and heated, rather mo- and to some extent an unsuccessful operation. derately, to the boiling point, when the scum is All the various methods recommended by differremoved with a skimmer; then boiled rapidly ent persons who have made some experiments on for a few minutes. The syrup is then removed corn-stalk sugar, and all that my own experience from the fire, and again passed through the flan- in clarifying maple sugar could suggest, failed of nel strainer, when the boiling is finished as rapidly producing fully the desired effect. as possible.

taking the sugar from the fire, could not possibly here. Unless the juice of corn-stalks can be clabe performed in less than two hours; and if the rified, it is vain to expect a pure article of crystalbatch was larger, would often exceed three. Five lized sugar. All the obstacles to the complete batches were made in one day, from which one success of this enterprise are met at this point; hundred pounds of sugar were produced,

ends, lapped and rivetted at the corners; would mill, one gill to fifteen gallons, was thought to hold about twenty-five gallons, five and a half produce the best effect. But experiments were inches deep, but from fifteen to twenty gallons is made with various other things, such as milk, as much as would boil to advantage. The pan eggs, charcoal, &c.; these were used separately is placed upon an arch of brick, so that the fire and combined, but nothing appeared to raise the comes in contact with only the bottom.

more difficulty. Some drawings and descriptions are given by Mr. Ellsworth, but ittle more could be known from them than that there n'ast be improved the taste, but there are very many obthree rollers, so placed and put in motion that the jections to this process-the length of time restalks in passing between them should receive two quired for the operation is a sufficient one. crushings.

dimensions and with the strength required, so that was a square yard of good new fiannel, of fine the work of crushing the stalks should be perform- texture ; so great is the amount of mucilage, or ed with certainty and despatch, was no easy task. very minute particles of the corn-stalk contained I flatter myself that I have in this been tolerably in the juice, that the strainer has to be rinsed in successful. The rollers and iron-work, patterns, water once or twice in straining a batch. &c., for my mill, were made by J. A. Langworthy, second time straining is rendered more difficult of Rochester, at a cost of sixty-five dollars. The by the juice being hor, as the hands have to be whole weight of iron is about nine hundred used in forcing it through the cloth. As knowpounds.

the horse-power. The iron rollers being placed except to pass the juice through a coarse strainer Lorizontal, it was necessary to have a horse-pow-1 to remove some of the larger impurities. Some

The object of these successive experiments was | er wheel and gearing in order to give them motion. If the more simple, and it would seem at first view, less expensive forms, given in Mr. Ellsworth's Report, had been adopted, placing the rollers perpendicular, the horse passing around them, the rollers must have been of large diaraeter in order to take through the length of corn-These large rollers, when made of iron, would have been very expensive, and probably not work as fast as the gearing. In my mill the circumference of the The corn-field rollers has such a proportion to their motion, that

Clarifying.—This has been to me a difficult, In all the failures which have been experienced to produce This process, from the cutting of the stalk to crystallized sugar. The cause should be sought but that they will be completely overcome, there The Boiler.—The boiler or pan, 1 made of a cannot be the least doubt. Lime water applied sheet of Russian iron, turned up at the sides and to the juice as soon as it comes forth from the scum as well and render the juice as clear and Mill .- To construct this was a matter of much well-flavored as the lime water. One experiment was made by filtering the juice through sand and charcoal. This rendered it very transparent and

Straining.-This operation is performed both To plan and construct a mill, with the proper before and after clarifying. The strainer used The ledge and experience are gained on the subject About one-half of the expense of the mill is in of clarifying, the straining will be dispensed with,