

UNITED STATES PATENT OFFICE.

JOHN SPANGENBERG, OF JEFFERSON PARISH, LOUISIANA.

IMPROVEMENT IN DRAINING AND BLANCHING SUGARS.

Specification forming part of Letters Patent No. 6,199, dated March 20, 1849; antedated September 20, 1848.

To all whom it may concern:

Be it known that I, JOHN SPANGENBERG, of near New Orleans, in the parish of Jefferson and State of Louisiana, have invented or discovered a new and useful Process of Bleaching Brown Sugar, which is described as follows:

The common error among planters in the ordinary way of bleaching sugar, whenever it has been attempted in the progress of manufacture, is to put either the sirup while hot upon the cold sugar or apply the sirup when cold to the sugar in a warm or heated state. Sometimes, when the effort is made to bleach by the addition of sirup upon the sugar, both are mixed in a warm or hot state. This is also erroneous, and in all instances the mixing of sirup with sugar or putting or adding it to or upon sugar has been merely by sprinkling it. This will not effect the object which, as I claim, can only be accomplished by saturating the whole mass in a cold state. My method is this: The sirup, after it has arrived at what is termed "proof," or the condition of sugar, is then ladled or bailed out of the *tâche* or battery and thrown into coolers and allowed to remain until it is cold, after which it is "potted" or put into the hogshead or vessel, and the sirup is applied while both are in the cold state. When the hogshead, package, mold, or vessel is filled or potted up in the ordinary way to within, say, from six inches to two feet of the top, according to the quantity of the sugar to be saturated or the size of the vessel, continue to fill up the vessel to the top, or until it is full enough, adding as much cold sirup or liquor to the sugar as will saturate the whole mass. The sirup, running from the top of the sugar in a great body and percolating thoroughly through every part of it, will by its gravity and its general diffusion in a fluid state carry off a great deal of the coloring-matter of the sugar, and thus leave it more or less blanched, according to the purity of sirup and the quantity applied within the above limits.

The proportion of sirup depends upon its own density and the required whiteness of the sugar, so that it may be from five to thirty gallons of sirup for each thousand pounds of sugar, as the manufacturer sees proper to use.

Another method under this plan is to saturate the sugar as it is being put or potted into the hogshead or vessel by adding the sirup from time to time as the filling goes on.

The molasses may be first drawn from the coolers or not; but if first drawn or "bled" the sirup or liquor will have a greater effect in bleaching, as the coloring-matter is diminished before the sirup is applied.

To make the sirup or liquid to be used I take molasses and reduce it, with pure water, alcohol, spirits, or any other suitable liquid, to any degree of the "pèse-sirup," or saccharometer of Baumé below the density of molasses, which is about 40° of Baumé. This extent of range is necessary, as the precise strength between those points will depend upon the color required for the sugar, as the weaker the sirup within the degrees named the clearer will the sugar be.

It must be observed that in order to blanch or refine sugar a sufficient quantity of the sirup must be used to penetrate and saturate the whole mass; otherwise that part which has not been touched by the liquid will not be improved or whitened. The proportion of sirup is from one gallon to one gallon and a half to every hundred pounds of sugar, or, as said before, from five to thirty gallons of sirup to every thousand pounds of sugar, which is about the same proportion. The quantity to be applied will depend upon the degree of bleaching required. The liquor or sirup I use, or that may be used, in this process will cost the planter or manufacturer very little, as I make it from the ordinary molasses of the plantation, instead of taking refined or other more expensive sirups, and this is a great saving, not only to the manufacturer, but to the community, as by this reduction or absence of expense the article can be brought into market in a good condition and at a cheaper price. Sugars thus treated do not lose by drainage, and do not so readily absorb moisture or deliquesce upon sea-voyages, as they are relieved or freed of the molasses.

The difficulties heretofore have been among planters, first, to bleach sugars at all in large quantities; secondly, that when resort has been had to the use of sirups they have proved too expensive to be made general; thirdly,

that they have always been applied either while they or the sugar, or both of them, were in a warm or hot state and would not answer the object; fourthly, that no certain or defined density of sirup has ever been fixed upon or any range within any given number of degrees proposed or established as a guide or direction by which the proper density of the sirup should be made or regulated for the blanching of sugar; fifthly, that there was no known method of saturating the whole body of the sugar in the hogshead in the progress of the manufacture, so as to carry off the molasses. These are all obviated in the present improvement.

What I claim as my invention, and desire to secure by Letters Patent, is—

The method of bleaching and draining brown sugars on the plantation, as herein set forth—that is to say, blanching the sugar by a solution of molasses and water, both being in the cold state, and the operation being performed in the hogshead destined for the transportation of the sugar to market, thereby increasing the value of the sugar without a corresponding increase of expense, as herein set forth and described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

J. SPANGENBERG.

Witnesses:

A. E. H. JOHNSON,
W. FENWICK.