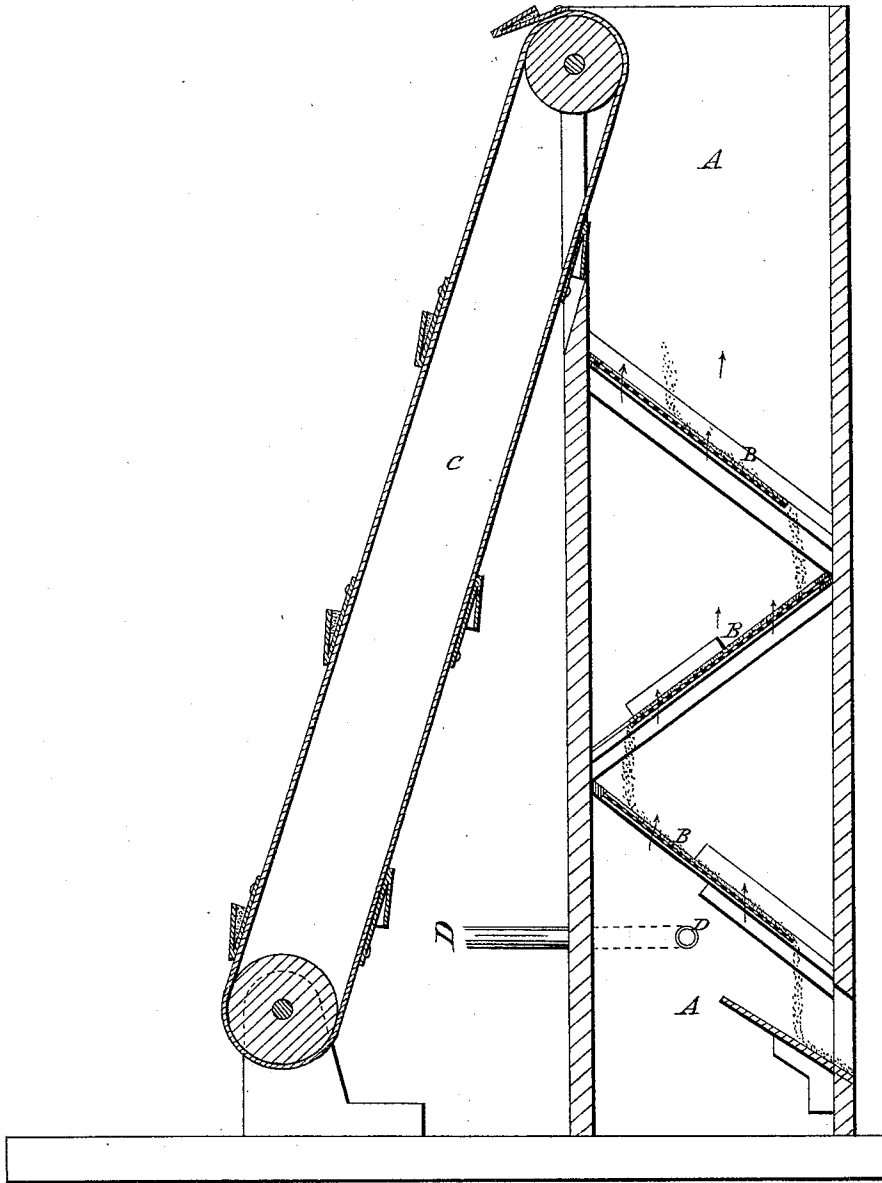


G. FINKEN.
Making Cube Sugar.

No. { 2,520. {
 { 33,524. {

Patented Oct. 22, 1861.



Witnesses:

James Laird
John Brown

Inventor:

Gust. Finken

UNITED STATES PATENT OFFICE.

GUSTAVUS FINKEN, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN THE MANUFACTURE OF CUBE SUGAR.

Specification forming part of Letters Patent No. 33,524, dated October 22, 1861.

To all whom it may concern:

Be it known that I, GUSTAVUS FINKEN, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in the Manufacture of Cube Sugar; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a vertical section of the apparatus used in performing my invention.

In the manufacture of cube sugar from what is known as "refined" or from other granular sugar much difficulty has been encountered, owing to the want of some practicable method of rendering adhesive the grains or crystals of which the sugar is composed.

The object of this invention is to overcome this difficulty; and to this end it consists in exposing the grains or crystals, preparatory to their introduction or while on their way to the molds or cube-forming apparatus, to the action of steam, by which their surfaces are subjected to the necessary degrees of heat and moisture to give them the requisite adhesiveness.

The invention may be performed in various ways, and the drawing merely illustrates that which I at present consider the most convenient.

A is an upright trunk, of quadrangular or other form in its horizontal section, fitted with number of screens, B B, so arranged one above another and inclined in opposite directions that the granular sugar delivered on the top one will roll down it and fall on the next one, and so pass from each to the one below it and from the lowest one through an opening in one side of and near the bottom of the trunk, from

whence it may be delivered directly to the molding apparatus. The meshes of the screens are not large enough for the grains or crystals of sugar to pass through.

C is an endless-band elevator, for conveying the granular sugar to the uppermost screen.

D is a steam-pipe entering the trunk below the lowest screen for the introduction of the steam, which ascends through the trunk and through the screens, passing through, among, and over the surface of the sugar, which is rolling down the screens in such manner that every grain will be subjected to its heating and moistening influences, and so have its surface brought to the adhesive condition necessary to permit the manufacture of cubes of sufficient tenacity to prevent their being easily broken or crumbled in packing or transportation.

I am aware that sugar has been treated with steam in other branches of the sugar manufacture—as, for instance, in Shutzenbach's method of claying—but such treatment has been to obtain different results, and has no connection with the manufacture of cube sugar. In view, however, of such uses of steam, I disclaim its use in all other branches and at all other stages of the manufacture than that hereinbefore specified; and

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

In the manufacture of cube-sugar, the preparation of the granular sugar for the molding or cube-forming apparatus by treatment with steam, substantially as herein described.

GUST. FINKEN.

Witnesses:

J. W. COOMBS,
JAMES LAIRD.