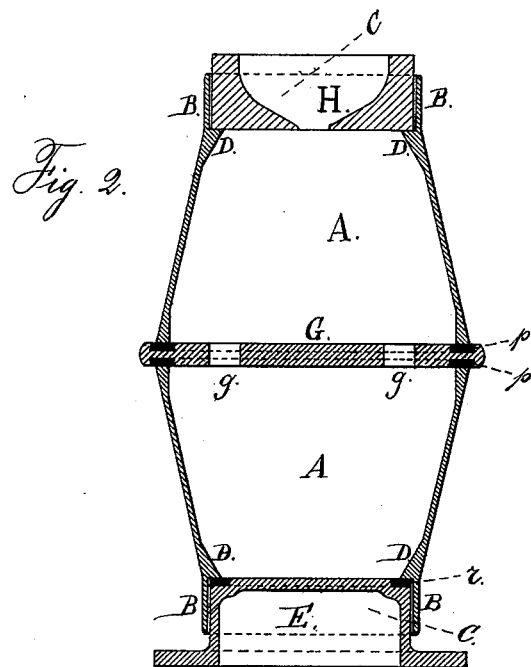
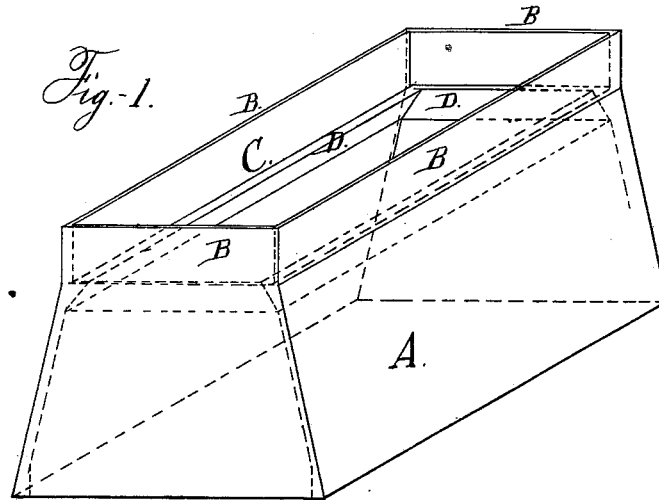


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Apparatus for Liquoring Block-Sugar in Centrifugal  
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No. 218,519.

Patented Aug. 12, 1879.



WITNESSES

*J. Schoenbeck*  
*John Helberg*

By

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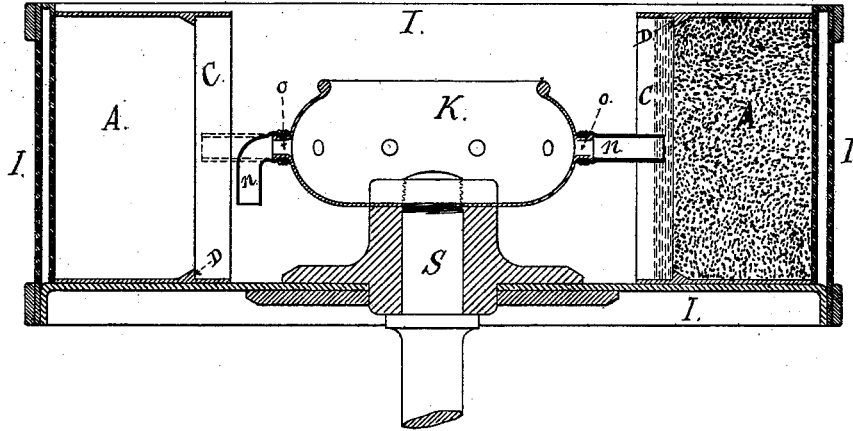
*Aug. A. Goubert.*

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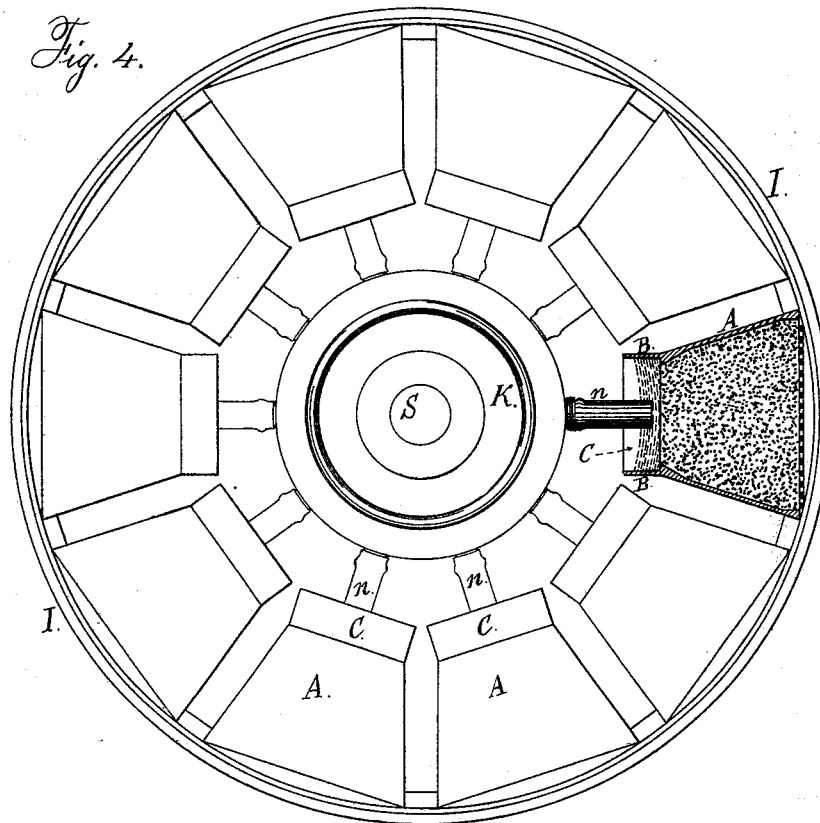
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*Fig. 3*  
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*Fig. 4.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

AUGUSTE A. GOUBERT, OF NEW YORK, N. Y., ASSIGNOR TO F. O. MATTHIESSEN AND WIECHERS SUGAR REFINING COMPANY, OF JERSEY CITY, N. J.

## IMPROVEMENT IN APPARATUS FOR LIQUORING BLOCK-SUGAR IN CENTRIFUGAL MACHINES.

Specification forming part of Letters Patent No. **218,519**, dated August 12, 1879; application filed August 16, 1878.

### *To all whom it may concern:*

Be it known that I, AUGUSTE A. GOUBERT, of New York city, in the county and State of New York, have invented a new and useful Improvement in Apparatus for Liquoring Block-Sugar, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My improvements relate to that class of centrifugal apparatus for liquoring hard sugar in which vertical and horizontal deflecting-plates are interposed between the molds and a central liquor-reservoir provided with spouts extending into the spaces between the deflecting-plates; and my invention consists in substituting for the movable deflecting-plates heretofore used in this class of centrifugal apparatus deflecting-plates which are cast upon or permanently fastened to the several molds, forming inward extensions thereof, and in combining such molds with a central reservoir provided with jointed or flexible spouts, which stand out radially when the machine is rotated, but drop downward when the machine is stationary, so as not to interfere with the removal of the molds from the basket and their reintroduction therein.

The accompanying drawings, representing a centrifugal machine embodying my invention, are as follows:

Figure 1 is a perspective view of a mold provided with my inner extension. Fig. 2 is a cross-section through two molds, showing the manner of arranging them preparatory to receiving a charge of magma. Fig. 3 is a central vertical section through the axis of a centrifugal machine, showing the molds in position to receive the cleansing-liquor, and showing the apparatus for conducting such liquor in equal quantities into the extensions on the inner side of each mold. Fig. 4 is a top view of the centrifugal machine.

On reference to the drawings it will be seen that the mold proper, A, which is made of cast-iron or other suitable material, is provided with the projection B, cast in one piece with the mold A, or otherwise so fastened as to form a permanent portion of the mold.

The projection B, running entirely around the inner edge of the mold A, forms the side

walls and top and bottom of an extension or mouth, C, which, not being filled with magma or sugar, is the primary receptacle for the cleansing-liquor discharged from the central reservoir.

Each mold is provided with an inwardly-projecting shoulder, D, at the meeting-line of the mold A with the extension.

It will be seen that the shoulder D of the lower mold rests upon the top of the base-block E, and that the shoulder D of the upper mold affords a support for the funnel-piece H, the under side of which serves as a guide for the top of the charge of magma in the upper mold.

Between the two molds there is a division-plate, G, having in it the holes *g g*, for the passage of magma from the upper mold into the lower mold, and being provided with the packing-strips *p p*, for the purpose of making tight joints with the edges of the upper and lower molds. A packing-strip, *r*, is also provided on the top of the base-block E, which packs the joint with the shoulder D, and prevents leakage of the magma at that point during the filling operation.

The molds having been arranged in the position shown in Fig. 2, the sugar magma is poured into the funnel-piece H, from which it flows into the upper mold, and through the openings *g g* in the division-plate G, into the lower mold, and, gradually rising, fills up the two molds. After the magma has remained in the molds a sufficient time, and crystallization has taken place, the two molds are separated and detached from the funnel-piece H, the division-plate G, and the base-block E, and are then ready for introduction into the centrifugal machine. The molds proper are thus filled with crystallized sugar, and the spaces within the extensions remain empty, and thus constitute mouths for the reception of the cleansing-liquor.

The molds when thus prepared are to be placed in the perforated basket I of a centrifugal machine. Around the shaft S of the machine is placed a liquoring-reservoir, K, having upon the lower edge of its periphery a number of projecting nipples, O, corresponding to the number of molds, and respectively

located immediately opposite the mouths of the several molds. A rubber pipe, N, is tied or otherwise affixed to each nipple, and thus forms a flexible prolongation of the nipple. These flexible pipes drop down by their own gravity when the machine is stationary, and hence do not interfere with the placing of the molds in the basket. When the machine is set in motion the pipes N are thrown out horizontally in radial directions by centrifugal force, and the cleansing-liquor, being then poured into the central reservoir, K, is discharged in equal proportions through each one of the radiate tubes into the mouths or extensions C of the molds. When so discharged the cleansing-liquor immediately rises and forms a wall, covering the inner face of the sugar in the molds, and is hence forced evenly through the sugar by centrifugal action.

I do not broadly claim vertical and horizontal deflecting-plates in a centrifugal machine, as systems of movable deflecting-plates in a centrifugal machine for liquoring hard sugar form the subject of the invention of Walter R. Elmenhorst, of Jersey City, New Jersey, which is shown and described in his pending application for a patent therefor filed July 2, 1878.

It will, of course, be understood that the molds, instead of being sector-shaped in cross-section, as shown, may be made with parallel sides or otherwise; and that the mouth in all cases is formed by extensions or deflecting-plates applied or affixed to that end of the mold which in use is toward the axis of the centrifugal machine.

I claim as my invention, in centrifugal apparatus for liquoring hard sugar—

1. A sugar-mold provided upon its inner open end with the permanently-affixed deflecting-plates or extensions, forming the mouth C, as and for the purposes set forth.

2. The molds A, provided with the projection B, forming the mouth C, and provided with the inwardly-projecting shoulder D, as and for the purposes set forth.

3. The funnel-piece H, fitting the interior of the mouth C of a sugar-mold, and provided with an aperture through which magma can be poured into the mold, substantially as shown and described.

4. The combination of the molds A with the filling-pieces E and H, for employment during the process of filling the molds for the purpose of preventing the magma from filling the mouths C of the molds, and thus leaving a liquoring-chamber back of the loaf of sugar in each mold, substantially as described.

5. Sugar-molds provided upon their inner open ends with permanently-affixed deflecting-plates or extensions, forming mouths, substantially such as described, in combination with a central reservoir provided with radially-projecting spouts, for the purpose of discharging streams of liquor from the central reservoir into the mouths of the molds, substantially as described.

6. A central reservoir in a centrifugal machine provided with a series of flexible discharging-spouts, as and for the purposes set forth.

AUG. A. GOUBERT.

Witnesses:

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JOHN THIELBERG.