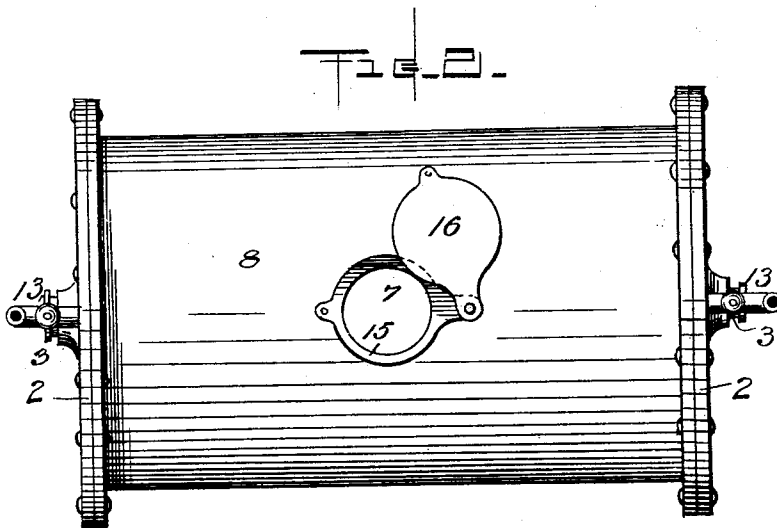
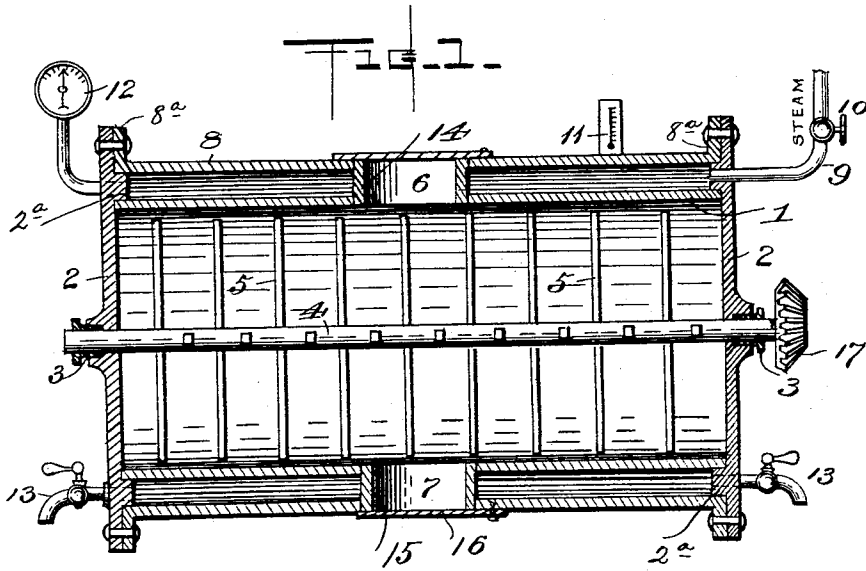


(No Model.)

J. A. LOMBAS.
MACHINE FOR AGITATING SUGAR.

No. 586,444.

Patented July 13, 1897.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH A. LOMBAS, OF LOCKPORT, LOUISIANA, ASSIGNOR OF ONE-HALF TO
PHLEGIE R. MELANCON, OF SAME PLACE.

MACHINE FOR AGITATING SUGAR.

SPECIFICATION forming part of Letters Patent No. 586,444, dated July 13, 1897.

Application filed March 5, 1897. Serial No. 626,027. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. LOMBAS, a citizen of the United States, and a resident of Lockport, in the parish of Lafourche and State of Louisiana, have invented certain new and useful Improvements in Machines for Churning Sugar; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improved machine for churning or agitating sugar after having been boiled to the proper density and previous to being introduced into the drying or centrifugal machine for the purpose of causing the sugar to crystallize or grain.

The object of the invention is to provide an improved construction whereby the sugar under a proper degree of temperature may be thoroughly agitated, causing the crystals to adhere and rapidly graining the sugar.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal sectional view of a machine for agitating and crystallizing sugar constructed in accordance with my invention. Fig. 2 is a bottom view of the cylinder discharge-pipe, showing the perforated pivoted gate or valve.

In the said drawings the reference-numeral 1 designates a cylinder closed at both ends by heads 2, formed on their inner faces with annular flanges 2^a. These heads are provided with stuffing-boxes 3, in which is journaled a rotatable shaft 4, provided with blades, paddles, or buckets 5, inclined at an angle to the axis of the shaft. The cylinder at its upper side is provided with a charging-opening 6, through which the sugar from the coolers is introduced, and opposite this opening is a discharge-opening 7. Surrounding said cylinder is a steam-jacket 8, formed at each end with flanges 8^a, bolted to the heads 2, which cylinder is provided with a steam-pipe 9, connected with a steam-generator, the

exhaust of a steam-engine, or other source of steam-supply, (not shown,) and provided with a stop cock or valve 10. At opposite ends of the cylinder is a thermometer 11 and a steam-gage 12. At the lower side of the said jacket are pipes 13 for drawing off the water of condensation.

Connected with the supply-opening of the cylinder is an open pipe 14, which passes through the jacket. A similar pipe 15 is connected with the discharge-opening, but the lower end of this pipe is provided with a pivoted gate 16, by turning which the pipe is opened to discharge the contents of the cylinder. The shaft 4 is provided with a cog-gear 17, which may be rotated by an intermeshing gear connected with any suitable motor.

The operation is as follows: Steam is admitted to the jacket surrounding the cylinder through the supply-pipe 9 at the proper temperature, so as to heat the sugar and bring the molasses to the proper consistency. The shaft 4 is then rotated, when the blades thereof will agitate and stir or churn the sugar, causing the graining to rapidly take place. When crystallization is completed, the contents may be withdrawn by opening the gate and introduced into the centrifugal machine.

Having thus fully described my invention, what I claim is—

In a sugar agitator and crystallizer the combination with the cylinder, the heads having annular flanges on the inner faces, the rotatable shaft provided with blades or paddles, of the jacket surrounding said cylinder, having flanges at the ends bolted to said heads, the steam-supply pipe, the pipes at the lower side of the jacket for draining off the water of condensation, the diametrically opposite supply and discharge pipes communicating with said cylinder, and the pivoted gate, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOSEPH A. LOMBAS.

Witnesses:

P. R. MELANCON,
ED. A. BARRID.