

J. R. Brown.

Centrifugal Sugar Machine.

N^o 59,956.

Patented Nov. 27, 1866.

Fig. 1

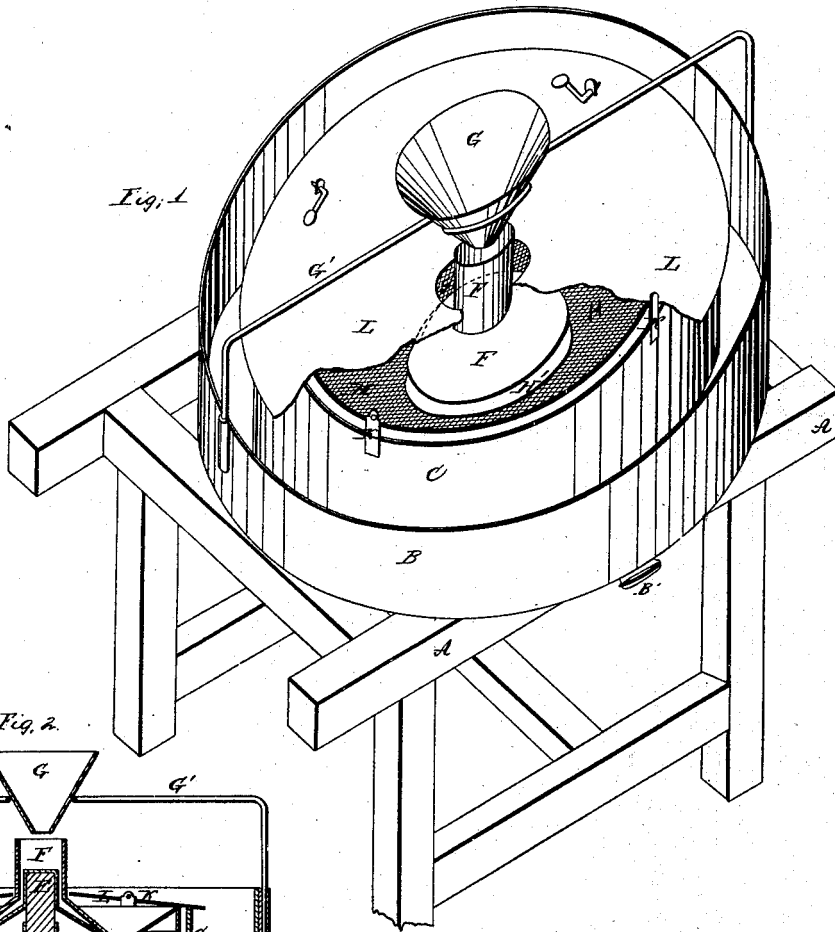
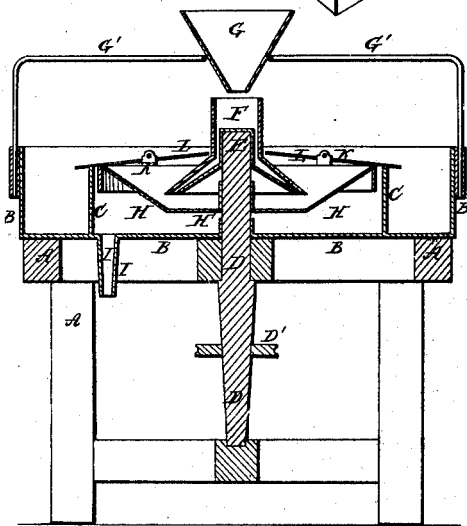


Fig. 2



Witnesses:
E. Olsson.
Lawrence Murphy.

Inventor,
J. R. Brown
by
D. P. Hollway & Co.
his attys -

United States Patent Office.

IMPROVED CENTRIFUGAL MACHINE FOR DRAINING SUGAR.

J. R. BROWN, M. D., OF WINCHESTER, INDIANA.

Letters Patent No. 59,956, dated November 27, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. R. BROWN, of Winchester, in the county of Randolph, and State of Indiana, have invented a new and useful Improvement in Machines for Separating the Crystals of Sugar from Sirup or Molasses; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings making part of this specification, in which—

Figure 1 is a perspective view; and

Figure 2 is a vertical section.

The same letters are employed in both figures, when indicating the same parts.

The following description will enable any person skilled in the art to manufacture this apparatus.

A is the main frame which supports the apparatus. On this frame rests the tub, B, with a tight bottom and vertical sides. Within the sides is a partition, C, so placed as to leave a space of sufficient capacity between it and the sides of B. The shaft, D, the end of which rests upon a suitable step, stands in a vertical position, rising through the bottom of the tub, B, through a vertical collar, rising above the bottom and not in contact with the shaft, D, which turns freely within it. To this shaft, at its upper end, is attached the cap, E, the top of which is fitted to the shaft, and the funnel-formed sides of which project downwards at an angle as shown. Over this cap stands another in the form of an inverted funnel, open above, and having flaring sides descending above, and slightly separated from those of the cap, E, and at a greater angle of inclination to the cap as shown in the drawings. The outer cap, F, is held in place by screws passing through it, and by ribs projecting from the inner cap, or in any other convenient manner. To the shaft, D, between the bottom of the tub, B, and the lower edge of the rims E and F, I fasten the cup H. The bottom, H, is horizontal, and made of a plate of tin or other suitable material, and the sides, H, are formed of woven wire and a foraminated plate, rising at an angle to the rim, which is near to but not in contact with the top of the partition, C. The cover, S, rests upon the legs, K, on the partition, C, so as to leave a space between the cover and the top of the partition and also the top of the screen, H, which is on the same level with the latter.

In operating with this apparatus the materials are poured into the funnel, G, and thence into the upper end of the cap, F, passing downwards. The shaft is caused to revolve at a high velocity by a belt on the pulley, D, or by gearing attached thereto, and by centrifugal force the fluid is thrown from the opening between the caps, (which I therefore call the distributor) in a horizontal direction, equally impinging against the inside of the walls of the screen, H. The sirup or molasses will flow through the screen into the tub, B, below, whence it will flow through the pipe, I, while the solid crystals of sugar, being too large to pass the screen, will be thrown off from the edge of the revolving screen, (which I call a separator,) and will strike against the lower side of the cover, S, and by it be deflected downward beyond the partition, C, and in the space between it and the sides of the tub, B, from whence it may be taken through an opening closed by the sliding door, B.

Having fully described the construction and mode of operating my improved apparatus, that I believe to be new and claim as my own invention, I designate as follows, viz:

1. The revolving separator, H, when constructed in the form of the frustum of a cone inverted, and having its outwardly inclined sides formed of wire gauze, or woven wire, and a foraminated plate, substantially as and for the purpose set forth.

2. The combination of the distributor F, E, shaft D, and separator H, when respectively constructed and arranged substantially as and for the purpose set forth.

3. The combination and arrangement of the tub B, partition C, outwardly flaring separator H, and cover S, arranged to act as a deflector, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

JESSE R. BROWN.

Witnesses:

S. N. BANNISTER,

JNO. B. ROUTH.