No. 850,241.

PATENTED APR. 16, 1907.

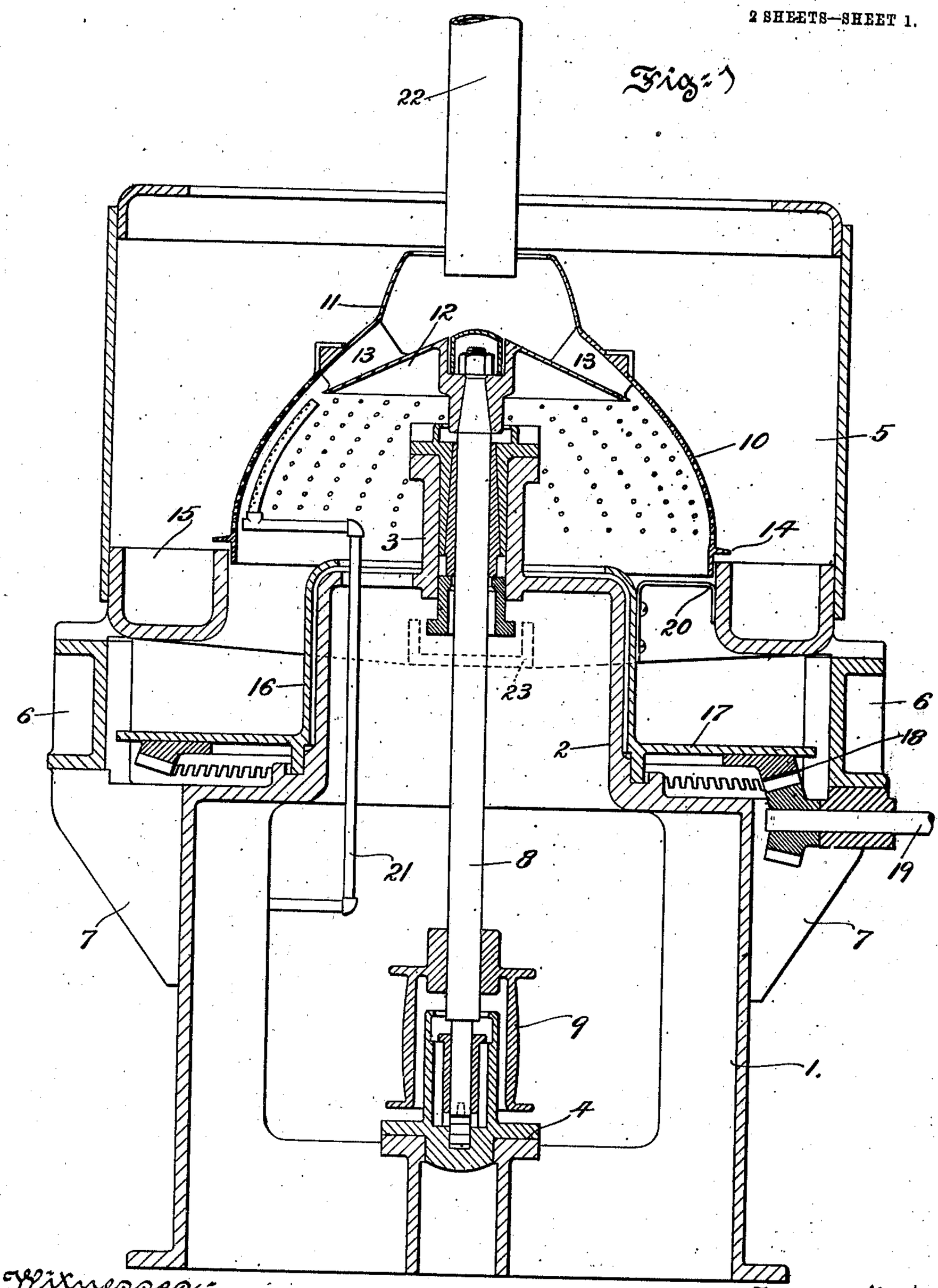
H. G. MORRIS.

CENTRIFUGAL MACHINE.

APPLICATION FILED JAN. 4, 1907.

2 SHEETS—SHEET 1.

Fig. 1



Witnesses:

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Inventor:

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Atty.

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2 SHEETS—SHEET 2.

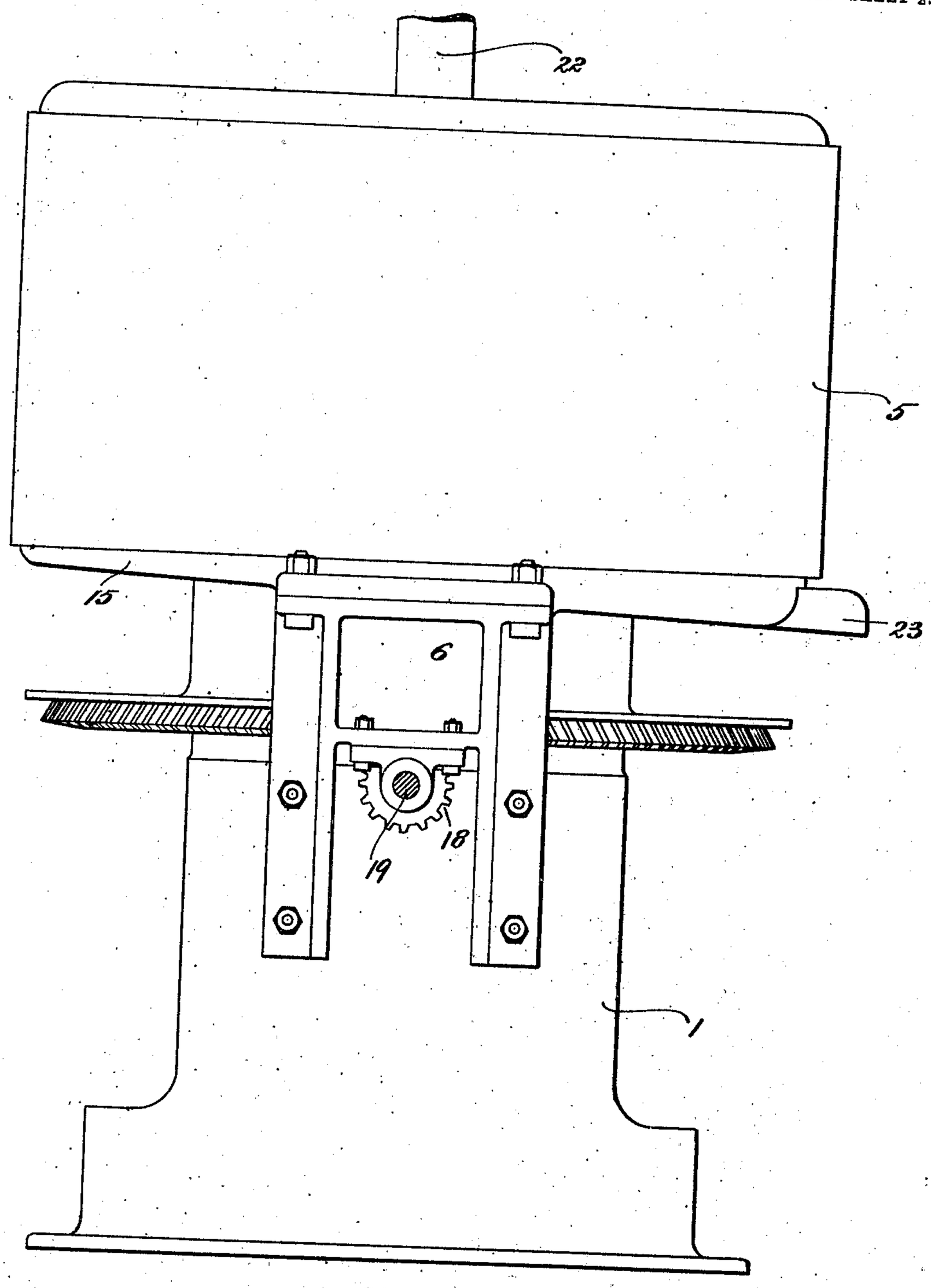

Fig. 2.

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UNITED STATES PATENT OFFICE.

HENRY G. MORRIS, OF PHILADELPHIA, PENNSYLVANIA.

CENTRIFUGAL MACHINE.

No. 850,241. Specification of Letters Patent. Patented April 16, 1907.

Application filed January 4, 1907. Serial No. 350,706.

To all whom it may concern:

Be it known that I, HENRY G. MORRIS, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Centrifugal Machine, of which the following is a specification.

The object of the present invention is to provide a simple, efficient, compact, and reliable centrifugal machine adapted to effect a continuous separation as of sugar and molasses.

To this and other ends hereinafter set forth the invention comprises the improvements to be presently described, and finally claimed.

In the accompanying drawings, Figure 1 is a view, principally in central section, of a centrifugal machine embodying features of the invention; and Fig. 2 is an elevational view of the same.

In the drawings, 1 is a stationary housing provided with an upwardly-extending neck 2, which carries at its top a bearing 3, and this housing is also provided at its base with a bearing 4, properly alined with the bearing 3. 5 is a casing arranged above the housing and supported, as shown, by means of four legs 6, (the number being unimportant,) rising from brackets 7, connected with the housing 1. A spindle 8, mounted in the bearings 3 and 4, and driven, as by a pulley 9, carries at its upper end an inverted perforated dome-shaped basket 10, having its walls curved to conform to a line of rapid descent for the sugar under the combined influence of centrifugal force and gravity. At its top the basket is provided with a fitting 11, having an intake-opening and having a dome-shaped baffle-plate 12, connected with the fitting by webs 13, spaced apart. The baffle-plate is connected with the spindle 8. At the base the basket is shown as provided with a flange 14.

15 is an annular stationary trough arranged around the lower rim of the basket and at the base of the casing 5 and carried by the four legs 6. On the top of the housing 1 and around the neck 2 thereof is arranged an open-top revoluble part 16, provided with a table 17. The table 17 is rotated by means of a rack and pinion 18 through the intervention of a suitable shaft 19. The rotary part is shown as provided with one or more scrapers 20.

21 is a pipe useful for conveying steam or water, and it may, as shown, be connected with the housing 1 and permitted to pass through an opening in the top thereof and through the open end of the rotary part 16 and then properly positioned so as to discharge through a perforated end upon the interior of the basket.

22 is a pipe for delivering raw sugar through the top of the fitting 11.

In use the raw sugar is introduced through the pipe 22 and passing over the baffle-plate 12 reaches the inner wall of the basket 10. The molasses passes through the basket and flows into the trough 15, which may be inclined, as shown, toward a spout 23, from which it is discharged. The sugar descends on the inner wall of the basket and falls upon the rotating table 17, from which it can be readily removed, as by means of a scraper or otherwise. The scraper 20 prevents undue adherence of the sugar to the wall of the trough.

I do not limit myself to the treatment of sugar, as the machine is applicable to the treatment of other materials.

What I claim is—

1. A centrifugal separator comprising a dome-shaped perforated rotary basket, a fixed annular trough around the outside rim of the basket for receiving molasses, a rotary table beneath the inside rim of the basket for receiving sugar, and feed connections arranged centrally of the basket and including a dome-shaped baffle-plate for introducing raw sugar, substantially as described.

2. A centrifugal separator comprising a fixed housing and a superposed fixed casing and legs for supporting the latter above the former, a revoluble spindle journaled in the housing and extending into the casing, a dome-shaped basket arranged on the upper end of the spindle and provided with a centrally-disposed intake having a baffle-plate, a trough in the casing around the rim of the basket, and a rotary table mounted on the housing beneath the casing and basket, substantially as described.

3. A centrifugal separator comprising a dome-shaped perforated rotary basket, a fixed trough around the rim of the same, a rotary table beneath the basket, and a scraper carried by the table and operatively arranged in respect to one of the walls of the trough, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

HENRY G. MORRIS.

Witnesses:
WM. J. JACKSON,
K. M. GILLIGAS.