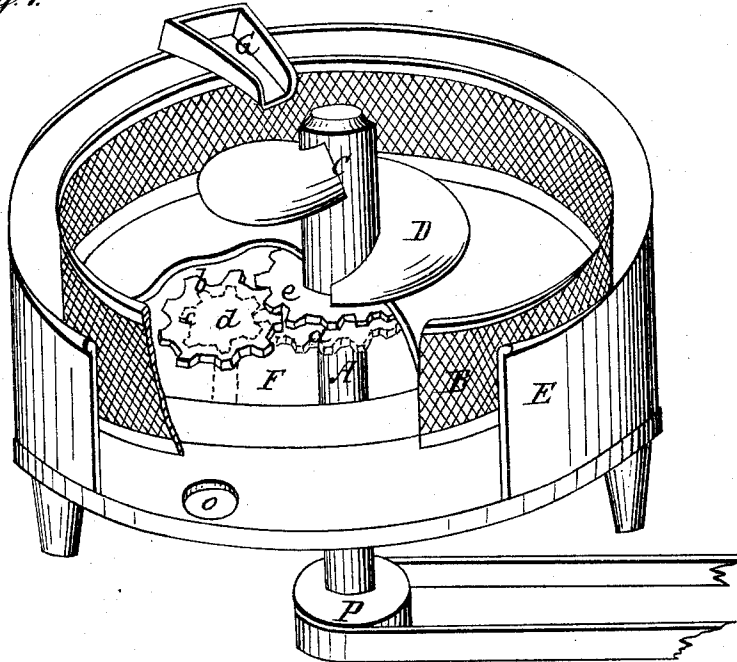


J. D. BROWNE.  
Centrifugal Sugar Machine.

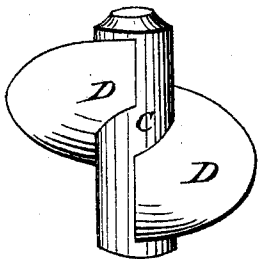
No. 55,461.

Patented June 12, 1866.

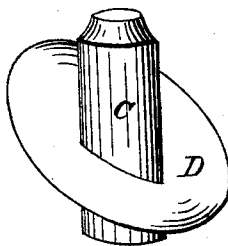
*Fig. 1.*



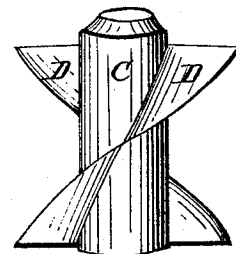
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:

*John Marchworth*  
*Vincent Schwarz*

Inventor:

*John David Browne.*

# UNITED STATES PATENT OFFICE.

JOHN D. BROWNE, OF CINCINNATI, OHIO.

## IMPROVED CENTRIFUGAL-MACHINE.

Specification forming part of Letters Patent No. 55,461, dated June 12, 1866.

*To all whom it may concern:*

Be it known that I, JOHN DAVID BROWNE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Centrifugal Sugar-Separating Machines; and I do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the screen and deflectors, part being left open to show the movement under the bottom of the screen. The under wheels are represented by red lines. Fig. 2 represents a deflector of two spirals; Fig. 3, a single oblique deflector; Fig. 4, a double oblique deflector.

The nature of the invention consists in giving to the screen and distributor separate motions, so that they may be driven at different velocities to each other, to deposit the sugar more equally; also, in making the deflectors of the distributors oblique or spiral to the axis of rotation, by which means the feed is made automatic, not requiring the point of supply to be varied.

To enable others skilled in the art to fully understand and construct my improvement, I will proceed to describe it.

A is the main shaft, to which the motion is to be given, on which is attached a cog-wheel, *a*. *b c* are two cog-wheels of different diameters, attached together on spindle *d*, which will revolve on the stand or frame F. One wheel, *e*, (shown by red lines,) gears into wheel *a* on the shaft A. B is the screen, on the under side of which a cogged wheel, *e*, is fixed,

which gears into wheel *b*. C is the distributor fitting on the main shaft A. D is the deflector of the distributor C, the face of which is made oblique or spiral to the axis of rotation. E is a tub or receptacle to receive the sirup, the bottom of which is inclined so that the sirup will all drain through the opening *o*; G, pipe or trough for supply; P, pulley on shaft A to receive the motion.

The main shaft A being put in motion, the wheel *a* on it causes the wheels *b c* to revolve, which also gives motion to the screen B, through the wheel *e*, at a different velocity from the shaft A, which carries the distributor C, the speed variable by the size of the diameters of the wheels *a b c e* employed.

Operation: The machine being in motion, the sirup is allowed to run in the supply-tube G, which, in falling on the distributor C, is thrown off tangentially onto the screen B by the centrifugal velocity, the height of the distribution being regulated by the obliquity of the deflectors D without the necessity of varying or giving motion to the point of supply, thus rendering the feed automatic.

What I claim as my invention, and desire to secure by Letters Patent, in the construction of a centrifugal sugar-separating machine is—

1. The separate or variable motion of the screen and distributor, as herein substantially described.

2. The oblique or spiral deflector, as herein described, and for the purpose set forth.

JOHN DAVID BROWNE.

Witnesses:

HERM. MARCKWORTH,  
VINCENT SCHWAB.