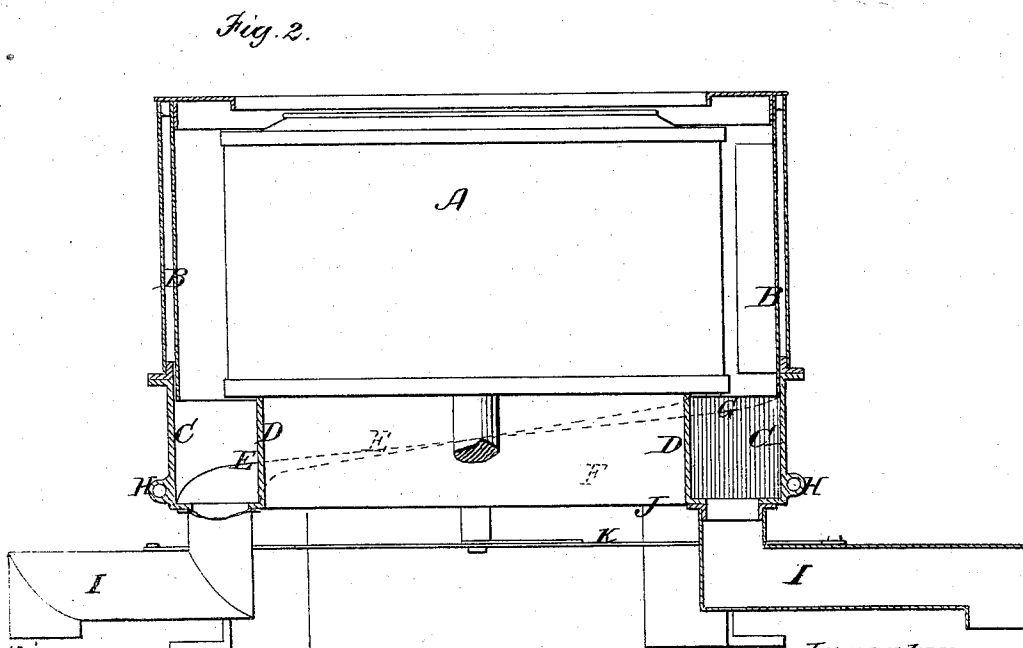
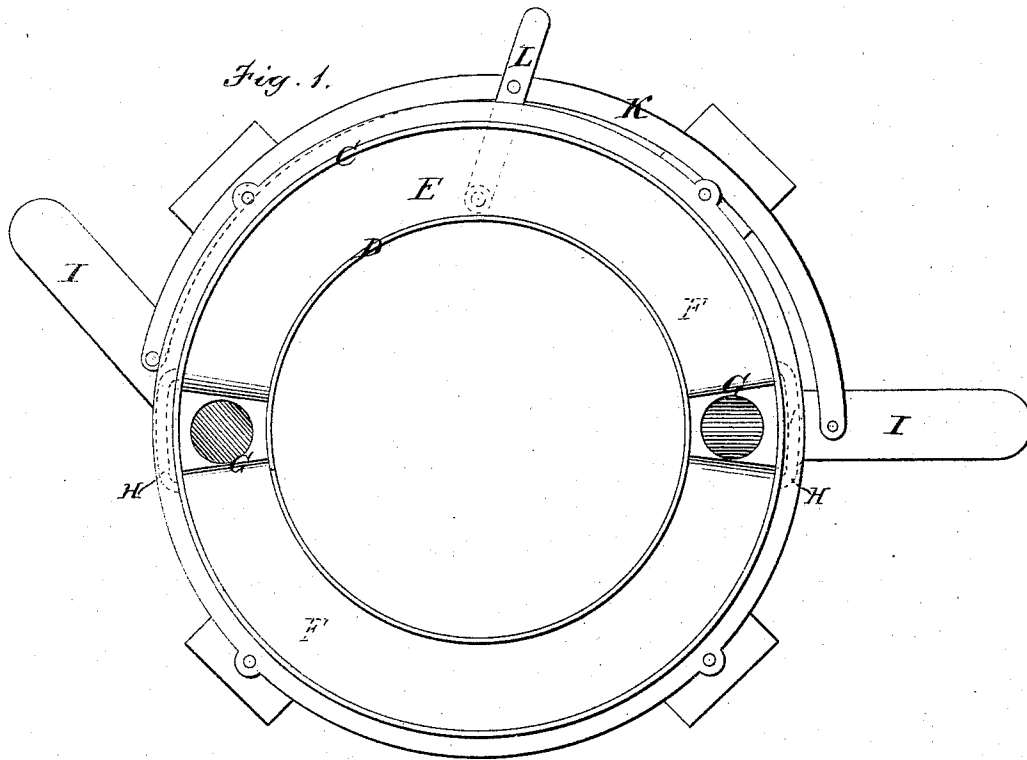


J. SPARROW.
Centrifugal Machines.

No. 138,705.

Patented May 6, 1873.



Witnesses.
C. F. [Signature]
W. K. [Signature]

Inventor.
J. Sparrow.
 by his Attys. *Hill & Ellsworth*

UNITED STATES PATENT OFFICE.

JOHN SPARROW, OF PORTLAND, MAINE.

IMPROVEMENT IN CENTRIFUGAL MACHINES.

Specification forming part of Letters Patent No. **138,705**, dated May 6, 1873; application filed March 19, 1873.

To all whom it may concern:

Be it known that I, JOHN SPARROW, of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Centrifugal Sugar-Machine; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a plan view of the base of the machine, and Fig. 2 is a central section of the same.

Similar letters of reference in the accompanying drawing denote the same parts.

This invention relates to that class of machines in which sugar, during the process of its manufacture, is separated from the sirup with which it is mixed in the state in which it comes from the vacuum-pan, by placing it in a hollow revolving drum with a sieve-like periphery, by the centrifugal action of which the sirup is thrown out through the sieve, leaving the sugar within the latter.

The invention has for its object to improve the construction of such a machine in such a manner as to facilitate the removal of the sirup thus separated from the shell in which it is caught immediately after its separation, and to direct it to the tanks provided for its reception. To this end the invention consists in the combination and arrangement of parts, which I will now proceed to describe.

In the accompanying drawing, A is the revolving perforated drum, into which the sugar and sirup are poured for separation, said drum being mounted in the usual vertical position, and requiring no further description as to its construction and operation. B is the usual cylindrical shell that incloses the drum A, said shell being attached to the base C in such a manner as to be detachable, to allow of the repair of the wire-netting of the drum without removing it. The base C is an annular chamber having an inner concentric wall, D, situated beneath the bottom of the drum A. Between the walls B C are placed two inclined planes, E, of equal dimensions, one on one

side of the annular chamber and the other on the other side, their width being equal to that of the chamber. The lower ends of these planes coincide with the bottom of the annular chamber, and between their upper ends and the said bottom are vertical partitions G, which completely separate the spaces beneath the planes E from those above them. These planes, together with their side walls C D, form curved channels, which receive the sirup as it falls from the inside of the shell B and conduct it to outlets at the feet of the planes E, the inclination of the latter facilitating the flow of the sirup. The spaces F beneath the planes E form heating-chambers, which are supplied with steam, water, or other agent through pipes H. The heat from this agent warms the planes E, and thus facilitates the running of the sirup and its separation into different grades. I are pipes opening out of the bottom of the annular chamber at the lower ends of the planes E, and between these ends and the partitions G, so that these pipes communicate solely with the sirup-channels and receive the sirup therefrom. The pipes I are set in collars fastened to the bottom J and turn therein. The pipes are connected by a curved bar, K, pivoted to each of them, and also pivoted to a lever, L, which is jointed at its inner end to the bottom J. By means of this lever and bar the pipes I can be turned simultaneously so as to direct the different grades of sirup into different tanks.

What I claim as new is—

1. The base of a centrifugal sugar-machine constructed with an annular chamber having one or more inclined planes, as aforesaid, and having also heating-spaces beneath said planes, substantially as and for the purpose described.

2. The combination of the base C, adjustable pipes I, connecting-bar K, and lever L, substantially as and for the purpose specified.

JOHN SPARROW.

Witnesses:

FRANCIS H. COFFIN,
CHARLES S. MURCH.