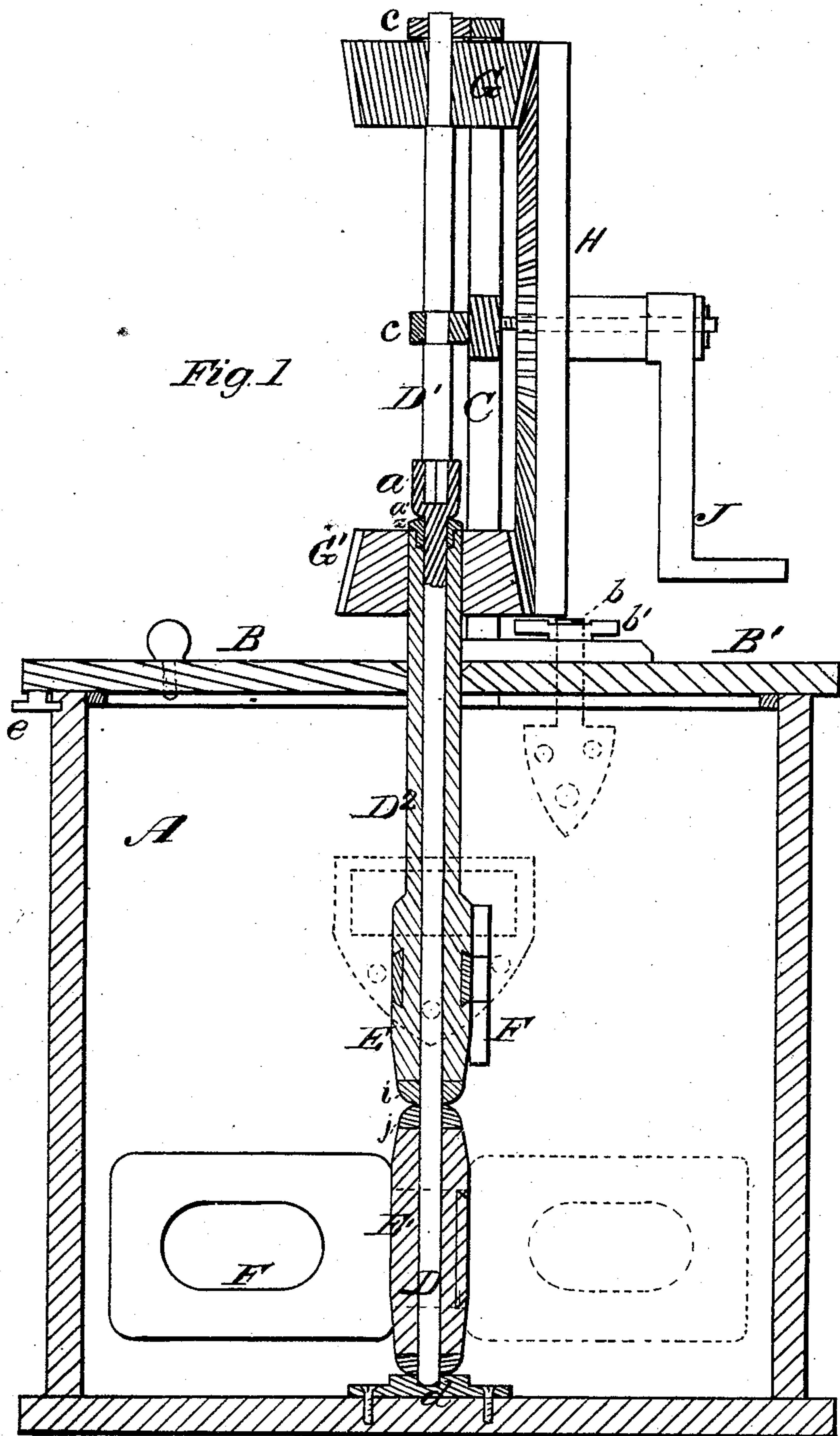


D. C. BAILEY.

Churn.

No. 160,139.

Patented Feb. 23, 1875.



Witnesses,
E. H. Bates
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UNITED STATES PATENT OFFICE.

DAVID C. BAILEY, OF SOUTH SALEM, OHIO.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **160,139**, dated February 23, 1875; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, DAVID C. BAILEY, of South Salem, in the county of Ross and State of Ohio, have invented a new and valuable Improvement in Churns; and I do hereby 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my churn.

This invention has relation to churns having dashers which revolve in opposite directions to each other; and it consists in two shafts having metal tips, and one revolving within the other, and carrying dash-blades, in combination with bevel-wheels on said shafts, which engage with a master-wheel having its bearing on a shaft which is secured to a frame on the churn-box cover, as will be hereinafter explained.

In the annexed drawings, A designates a churn-box of rectangular form, and B B' are the covers thereof, one of which is secured by a button, *e*, and the other is firmly held down in its place by means of screw-clamps *b b'*. On the cover B' is secured a frame, C, which affords bearings for the upper section D¹ of a dasher-shaft, D, and for a beveled master-wheel, H, on the hub of which is a hand-crank, J. The upper section D¹ turns in bearings *c c*, and carries on its upper end a bevel spur-wheel, G, which engages with the teeth of the master-wheel H. The lower end of the section D¹ is square, and is removably fitted into a socket, *a*, on the upper end of the shaft-section D. This socket *a* is an enlargement of

the inner shaft D, and its shoulder *a'* rests upon a metal bearing, *z*, which is let into a recess in the upper end of the outer shaft D². By this means the squared end of the shaft D¹ may be made sufficiently large to secure the requisite strength. The shaft-section D is supported in a step, *d*, on the bottom of the churn-box, and has secured to it a hub, E', carrying dash-blades F. D² designates a hollow shaft, the lower end of which is tipped with metal, as indicated at *i*, which tip bears on a similar tip, *j*, on the upper end of the hub E'. This hollow shaft is provided with a hub, E, to which dasher-blades F are secured, having the same shape as the blades on the hub E'. Shaft D² receives through it the rod D, and on its upper end a bevel spur-wheel, G', is keyed, which engages with the master-wheel H, below the center of this wheel.

From the above description it will be seen that when the wheel H is rotated it will communicate rotary motion in opposite directions to the two shafts D D², thereby causing the blades F to produce counter currents of the milk in the box A.

What I claim as new, and desire to secure by Letters Patent, is—

The shafts D D¹, in combination with the enlarged socket *a*, having a shoulder, *a'*, and the metallic bearing *z*, let into the upper end of the shaft D², substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID CORE BAILEY.

Witnesses:

WILLIAM F. BAILEY,
WM. T. NEIL.