G. W. HAWK.

Churn.

No. 63,515. Patented April 2, 1867.

Fig. 1

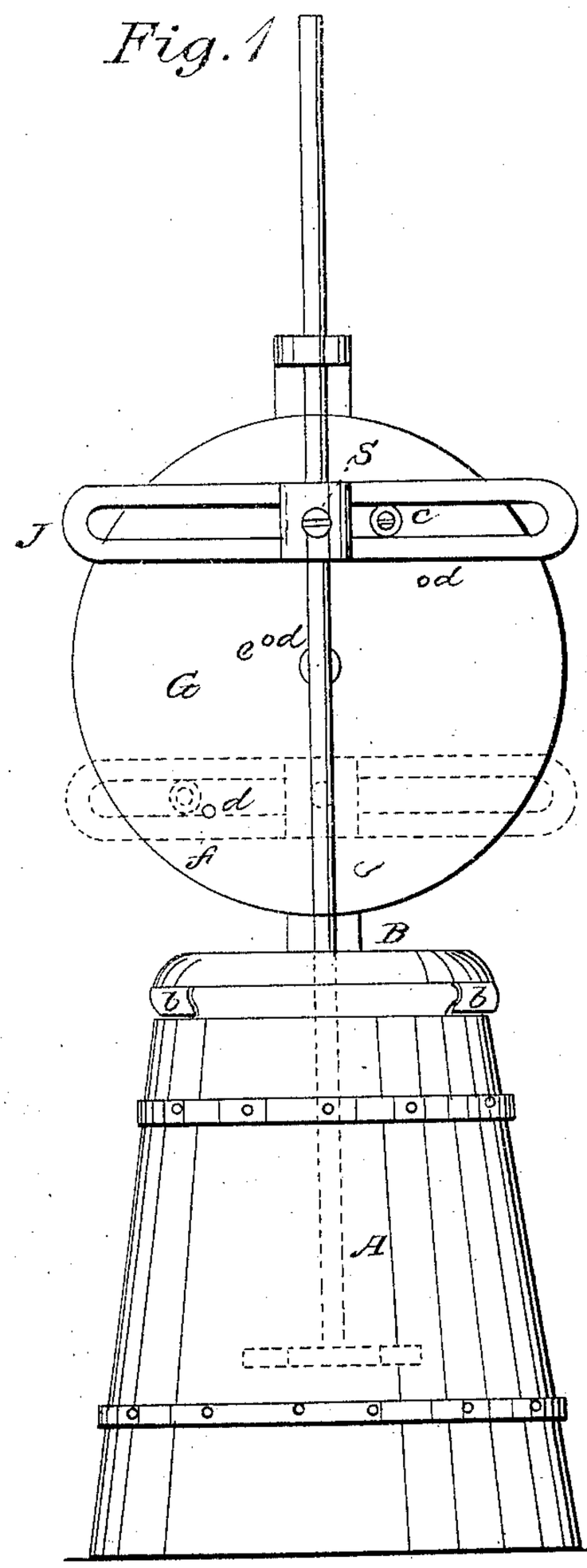


Fig. 2

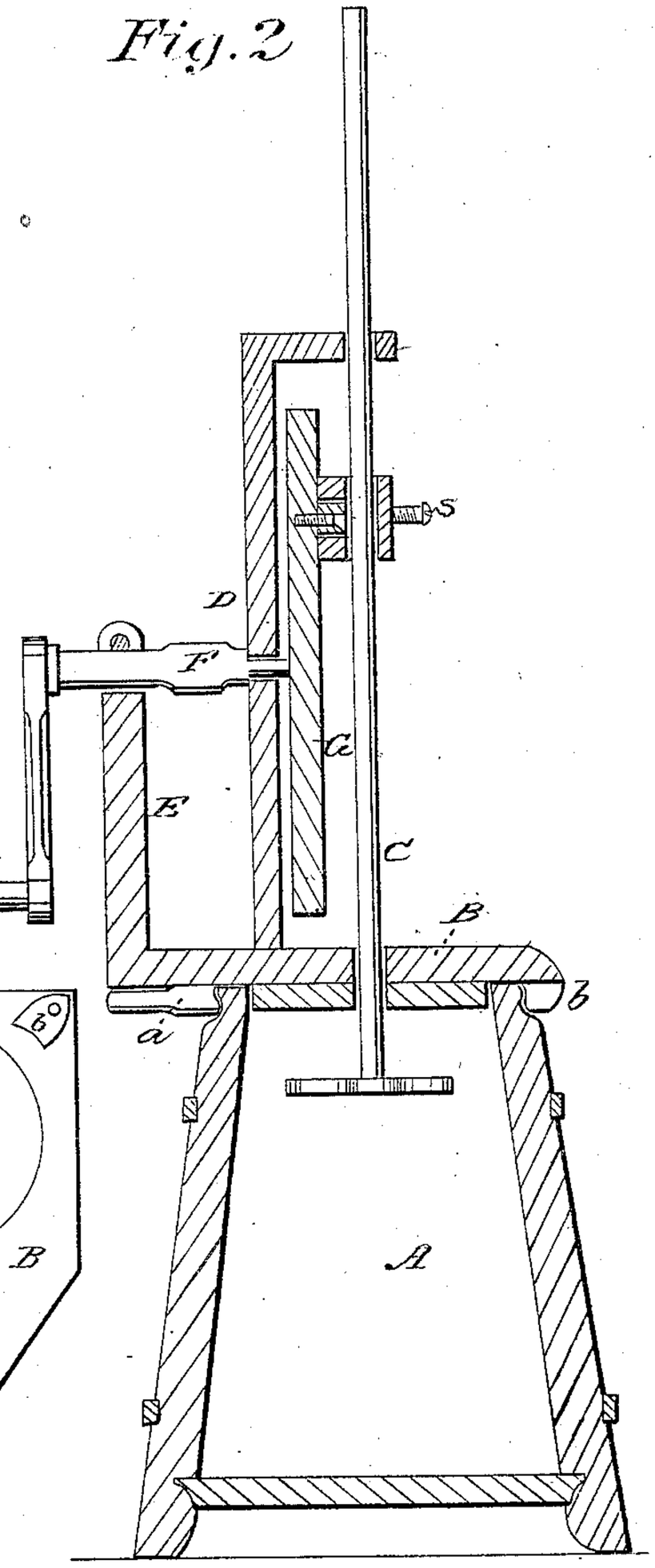
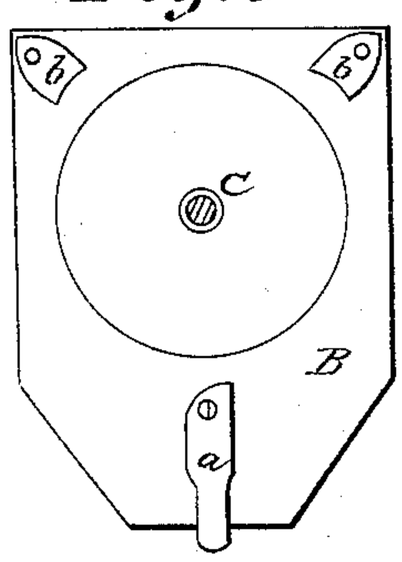


Fig. 3



Witnesses:

S. L. Coburn.

J. W. Hertzel.

Inventor:

George W. Hawk.

by Coburn Mans.

attorneys.

United States Patent Office.

GEORGE W. HAWK, OF CHICAGO, ILLINOIS.

Letters Patent No. 63,515, *dated April* 2, 1867.

IMPROVEMENT IN CHURNS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE W. HAWK, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Churns; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

My said invention consists in a novel mechanical device to be attached upon the top of an ordinary vertical churn, whereby the appropriate vertical reciprocating movement is imparted to the dasher by means of the rotation or revolution of a crank, the rotatory motion of the crank being converted into a reciprocating motion in the dasher substantially as hereinafter described.

To enable those skilled in the art to understand how to make and use my invention, I will proceed to describe the same with particularity, reference being made in so doing to the aforesaid drawings, in which—

Figure 1 represents a front elevation of my invention; and

Figure 2, a vertical central section thereof taken at the line *x* in fig. 1; and

Figure 3 is a bottom view of the platform B with churn cover attached.

Similar letters of reference in the different figures indicate the same parts in my invention.

A represents an ordinary vertical churn, the cover of which, fitting in the top, as shown, being secured in any suitable manner by screws or otherwise upon the lower side of a platform, B, resting upon the top of the churn, and being fastened thereto by means of suitable buttons or clamps, *a b*, so as to be readily removed or attached when desired. C represents the dasher-handle, which passes up through the centre of the cover and platform B, as shown. Upon said platform are secured the vertical standards D E, which have suitable bearings to support the shaft F, upon one end of which is fixed a wheel, G, or its equivalent, and upon the other end a handle or crank, H, whereby the said shaft and wheel are turned. The standard D extends up above the shaft F, and is provided with an arm, as shown, through which the dasher-handle passes, serving as a guide and support for said handle, keeping it in position while in operation. Upon said dasher-handle is arranged a transverse bar, J, provided with a slot, as shown, the handle passing through a socket in said bar, being secured thereto by means of a set-screw, as shown, so that the bar may be moved up or down on the handle and secured in any desirable position upon it, as hereinafter mentioned and for the purposes hereinafter to be set forth. Upon the face of said wheel G is arranged or secured a projection or pin, *c*, which may be provided with a friction-roller, if desired, which projects into the slot in the aforesaid arm J, as shown.

From the above-described mechanical arrangement it will readily be seen that by turning the wheel G by means of the crank H the dasher-handle is moved up and down by the action of the pin and roller *c* in the slotted bar J, which is secured upon the handle as aforesaid. It will be observed that the length of the stroke of the dasher depends upon the distance of the bearing *c* from the centre of the wheel G, and consequently it can be regulated as desired by attaching the said projection at different distances from the centre, as at *d*, *e*, or *f*. The slot in the transverse bar J must extend each side of the centre of the wheel far enough to provide for the projection *c*, when arranged at the most remote point of attachment from the centre of the wheel. Instead of a wheel, suitable arms revolving in the same plane to carry the pins *c* may be used. As the length of the stroke of the dasher is varied, as aforesaid, the slotted bar J is moved up or down upon the dasher-handle, so as to cause the dasher in its downward stroke to reach the desired point near the bottom of the churn. Instead of imparting the necessary motion to the wheel G, or its equivalent, by the means herein shown, any system of gearing or belts, or other appropriate mechanical contrivances, may be used. By the arrangement of suitable gearing in connection with the apparatus herein described, acting intermediately between the dasher and the point of applying the power, the relative velocity of the strokes of the dasher may be increased or diminished as may be desired.

Having described the construction and operation of my invention, I will now specify what I claim, and desire to secure by Letters Patent—

I claim the combination and arrangement of the churn A, and its cover, the platform B, the buttons or cams *a b*, the standard E, the crank F, wheel G, and transverse slotted bar J, when constructed and operating substantially as set forth.

G. W. HAWK.

Witnesses:

W. E. MARRS,

J. L. COBURN.