

A. G. SEARLS.

Churn.

No. 34,784.

Patented March 25, 1862.

Fig. 1.

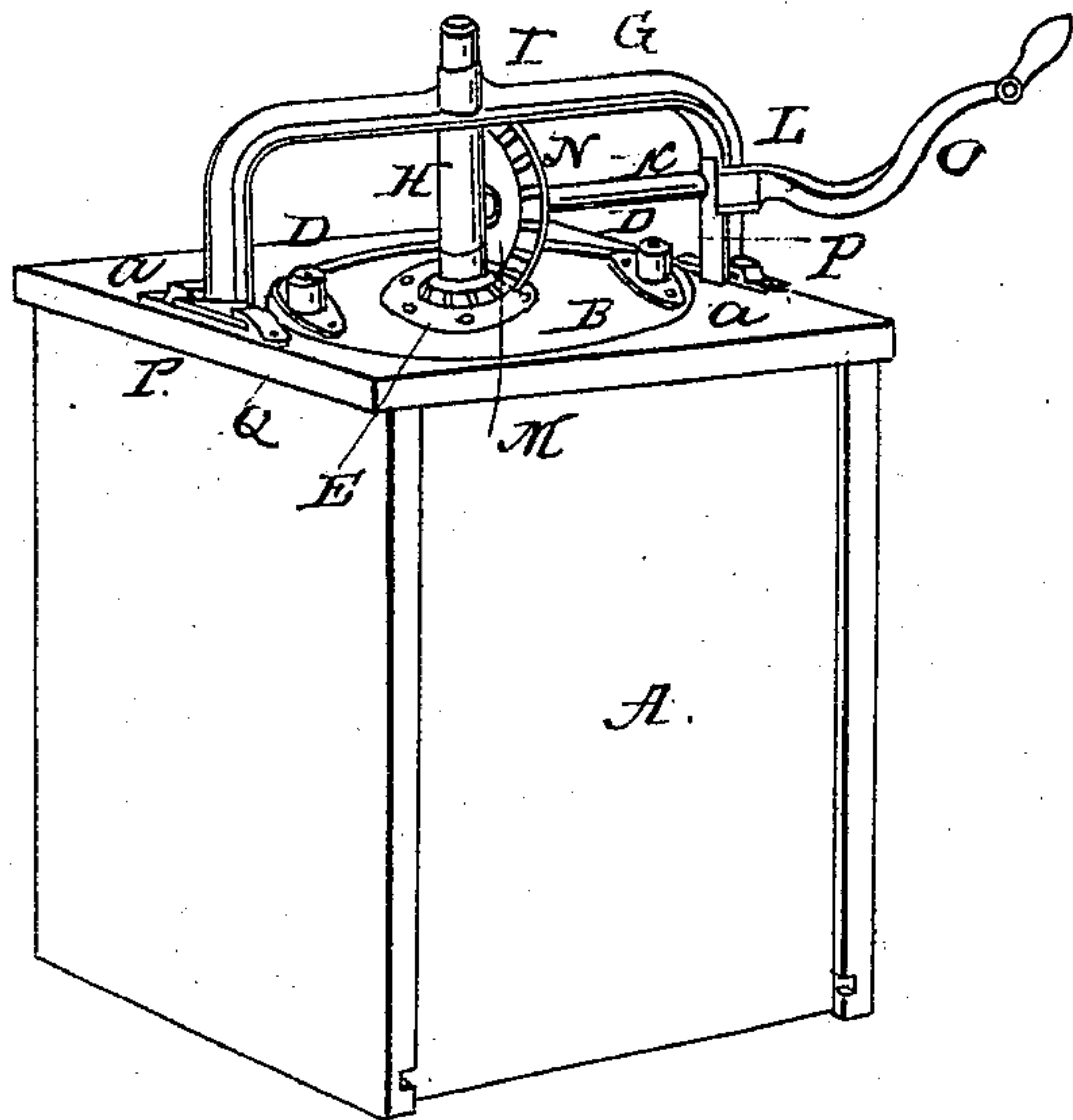


Fig. 2.

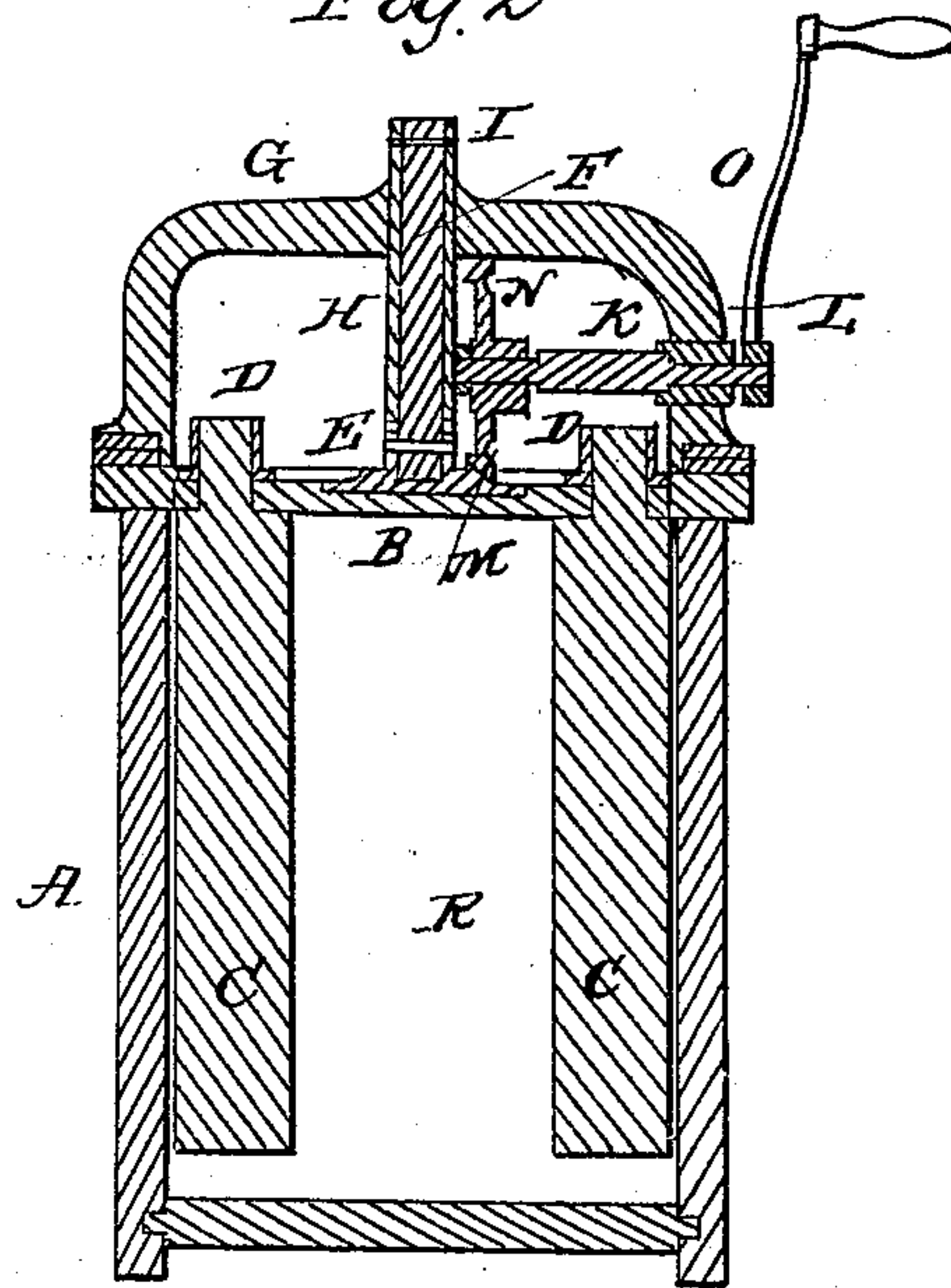


Fig. 3.

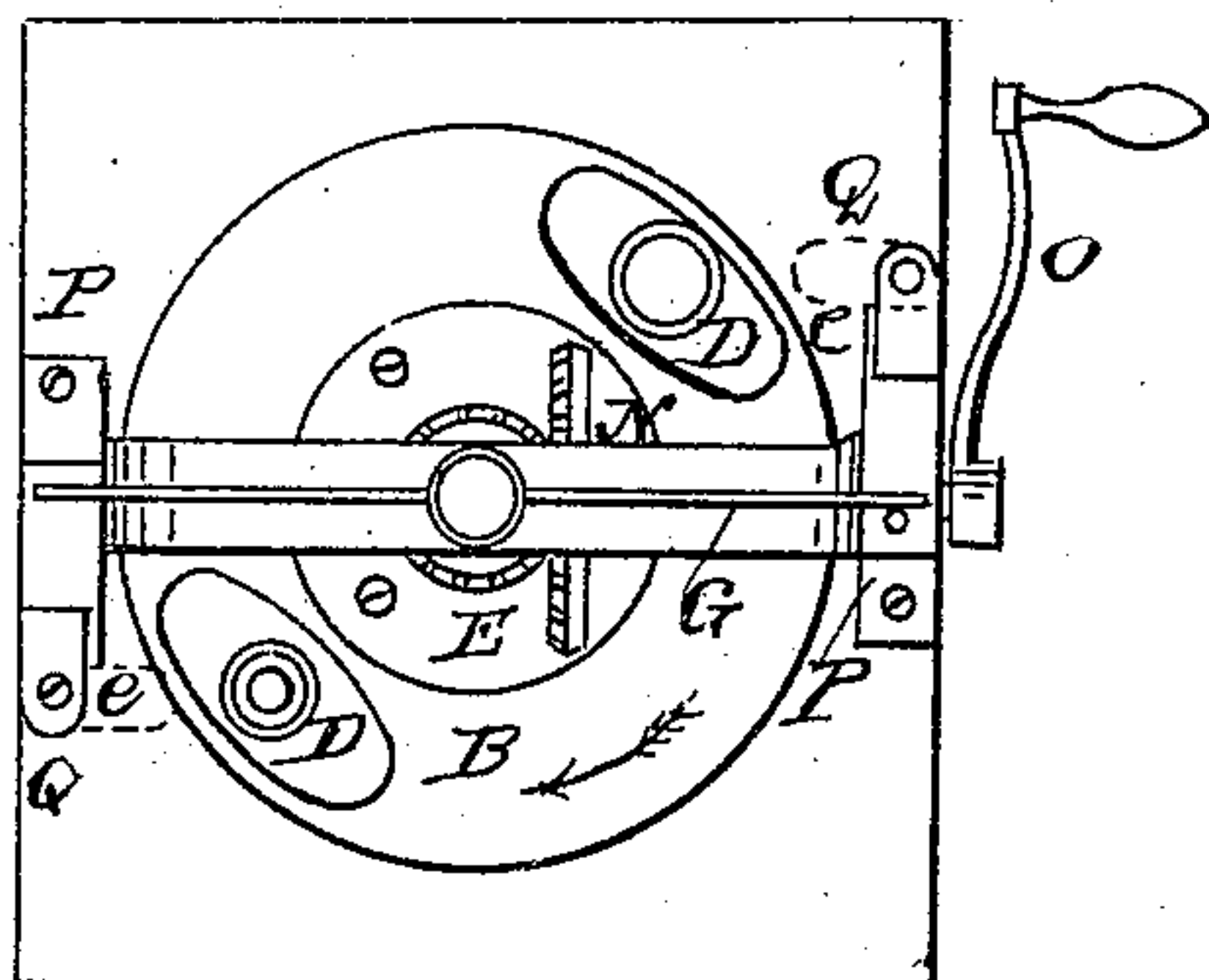
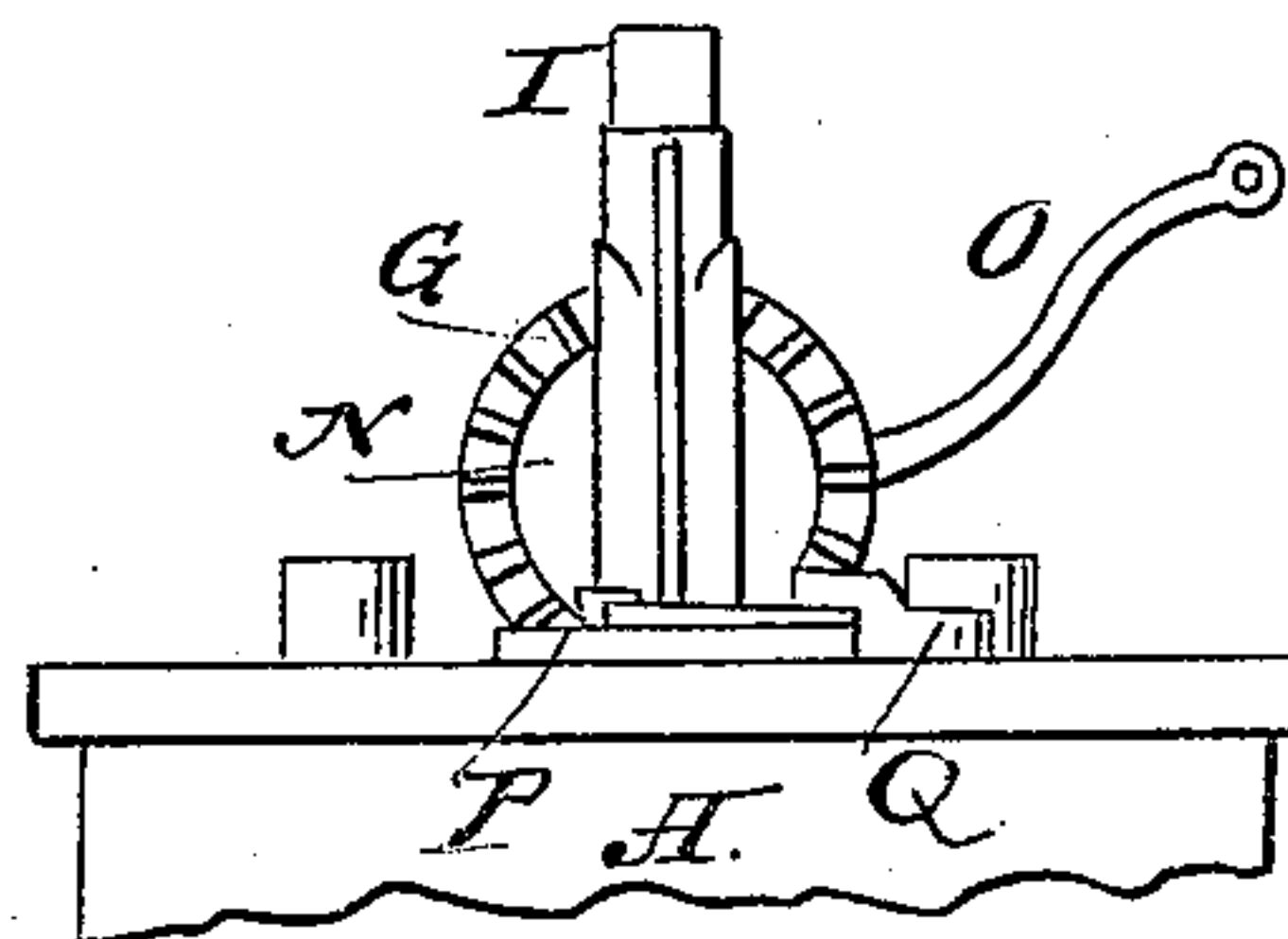


Fig. 4.



Witnesses.

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A. G. SEARLS, OF CLEVELAND, OHIO.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 34,784, dated March 25, 1862.

*To all whom it may concern:*

Be it known that I, ALBERT G. SEARLS, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Churns; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section. Fig. 3 is a top view, and Fig. 4 is a sectional end view.

Like letters refer to like parts in the several figures.

The nature of my invention relates, first, to the attachment of beaters to a revolving disk or cover, in combination with a square casing; second, suspending the beaters by means of a spindle and arch resting upon the casing; third, the method of securing the arch to the casing.

A, Figs. 1 and 2, is the casing. This is made in a square form, the joints being grooved and tongued. The top is either nailed or screwed on, a circular piece B having been cut out of diameter nearly equaling that of the interior diameter of the body of the churn.

To opposite edges of the disk-cover B are attached the beaters C C, Fig. 2. The upper ends of these pass through a round hole in the cover B and through a thimble of the same diameter, (seen at D D,) which thimble is screwed to the upper side of the cover B.

The beaters C C are of sufficient length to reach nearly to the bottom of the casing A, and are about two and a half inches wide and three-fourths of an inch thick, with their greater diameter on a radial line from the center, their edges sweeping around close to the four sides of the casing.

To the center of the cover B is secured the bevel-gear E, from which rises the spindle F, Fig. 2. The arch G rests upon opposite sides of the casing, as seen in Figs. 1, 2, and 3. At the center of this arch G is a pipe-box H, through which the spindle F passes. The spindle F extends an inch or less above the

top of the pipe, and is inserted into a thimble I, which is secured to the spindle by a pin passing through both, so that they will both revolve together, the lower end of the thimble resting upon the top of the pipe-box H. In this manner the cover B and beaters C C are suspended upon the arch G by the spindle F and thimble I.

K is a crank-shaft the outer end of which rests in boxes L in one leg of the arch G. The other end of the shaft rests in a box M, attached to the side of the pipe H. This shaft carries the bevel-gear N, having a greater number of teeth than the gear E, by which means an accelerated motion is given to the spindle F, cover B, and beaters C C. This shaft is put in motion by the crank O, and can be revolved in either direction. The arch G is secured to the casing A by means of the step P and button Q. The step P has a recess at a, which receives one end of the base of the arch, the other end of the base being secured by the button Q, which can be turned, as seen and indicated by the dotted lines at e, Fig. 3. By doing this the arch G, cover B, and beaters C C can all be lifted up and removed.

In the operation of this churn the cream or milk cannot acquire a rotating motion, for the beaters sweep close to the sides of the casing, and the cream or milk by their motion is thrown into the corners and center alternately, thus receiving a large amount of friction, which has the effect to rupture the oil-cells, and thus produce a separation of the butter from the milk, the butter being collected in a ball in the center of the casing between the beaters at R, Fig. 2.

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

The attachment of the beaters C C to a revolving disk or cover B, in combination with a square casing A, as and for the purpose described.

A. G. SEARLS.

Witnesses:

J. BRAINERD,  
S. H. MATHER.