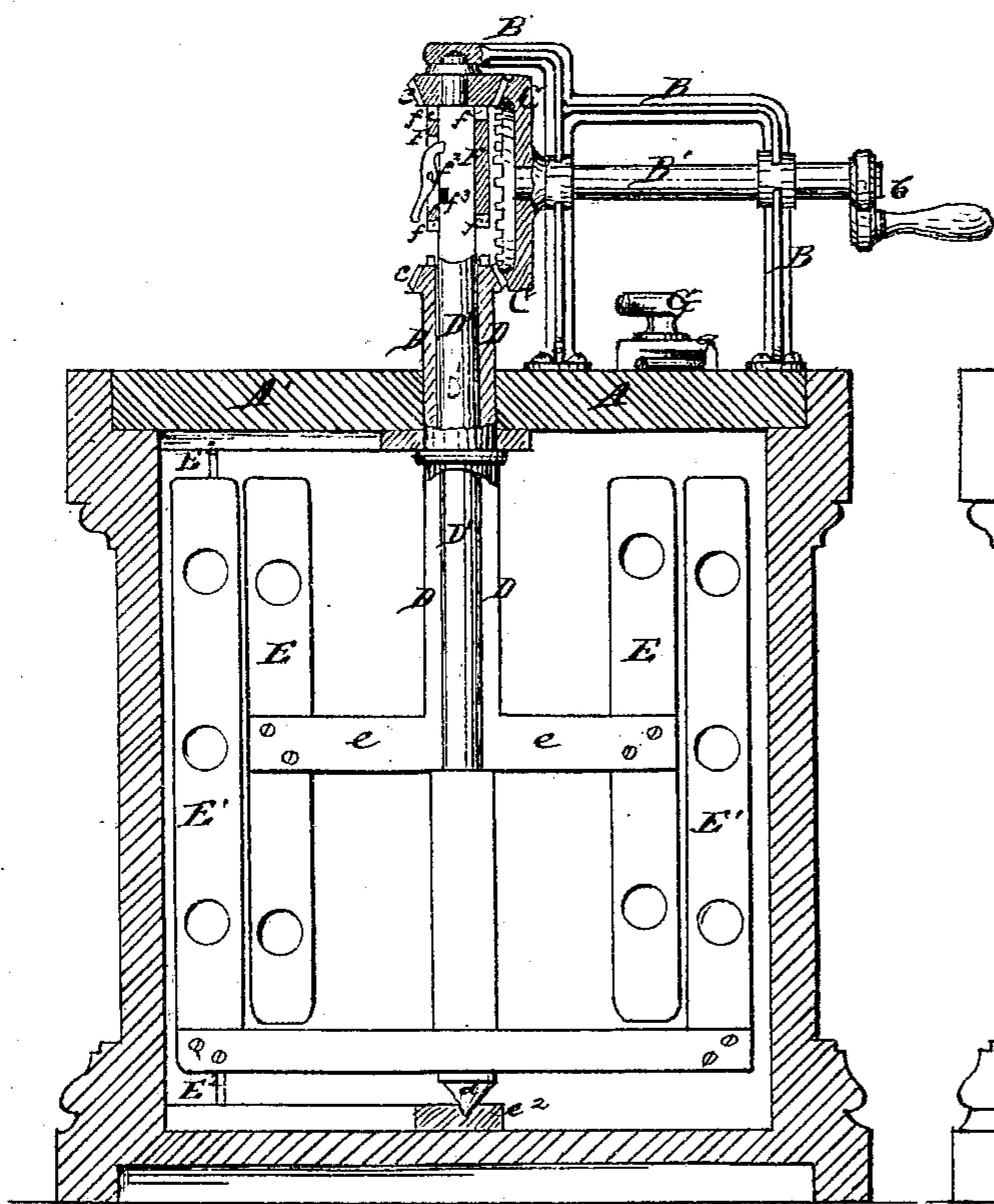
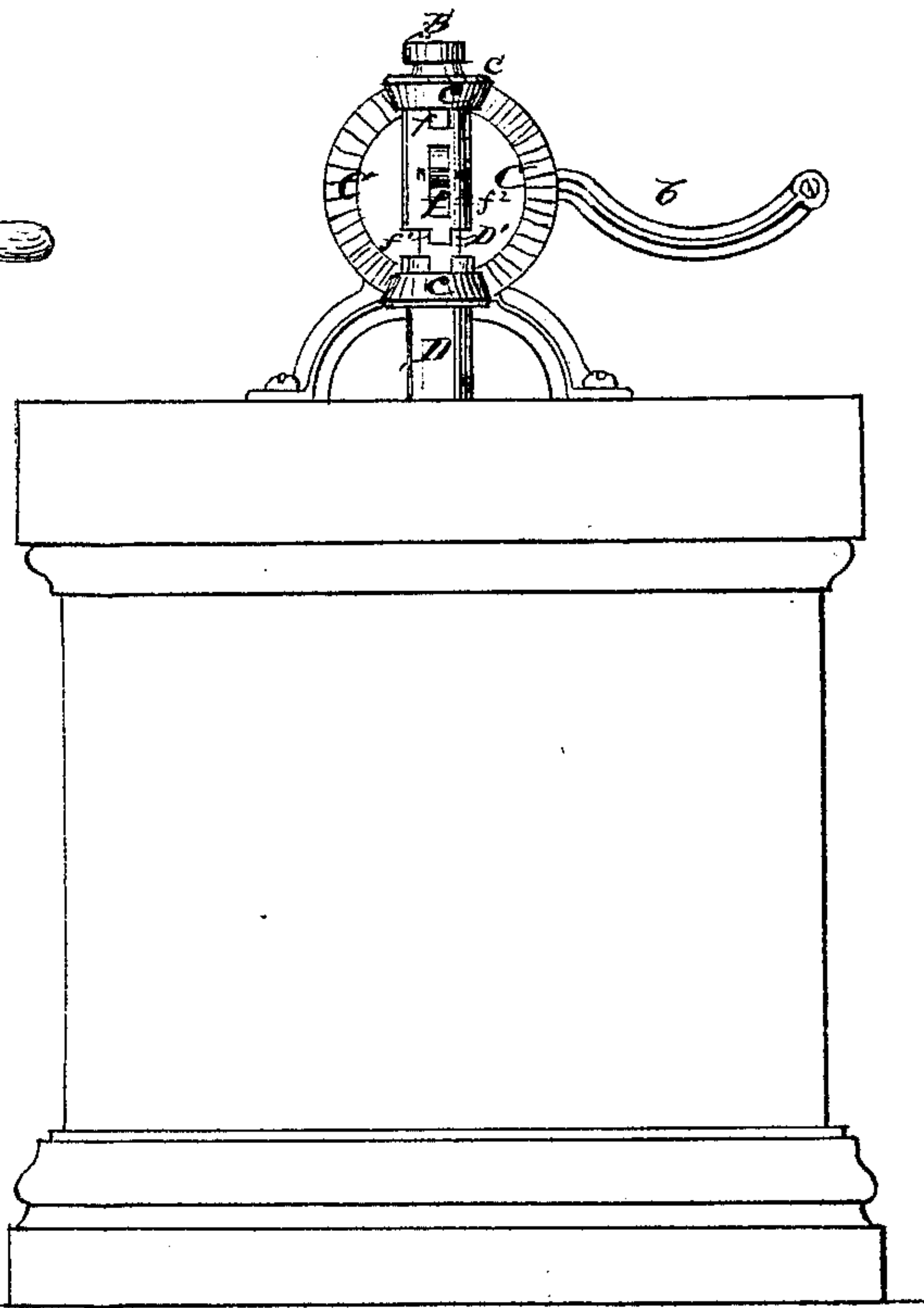


No. 121,755. *John Cochran Jr.*  
*Improved Churn.*

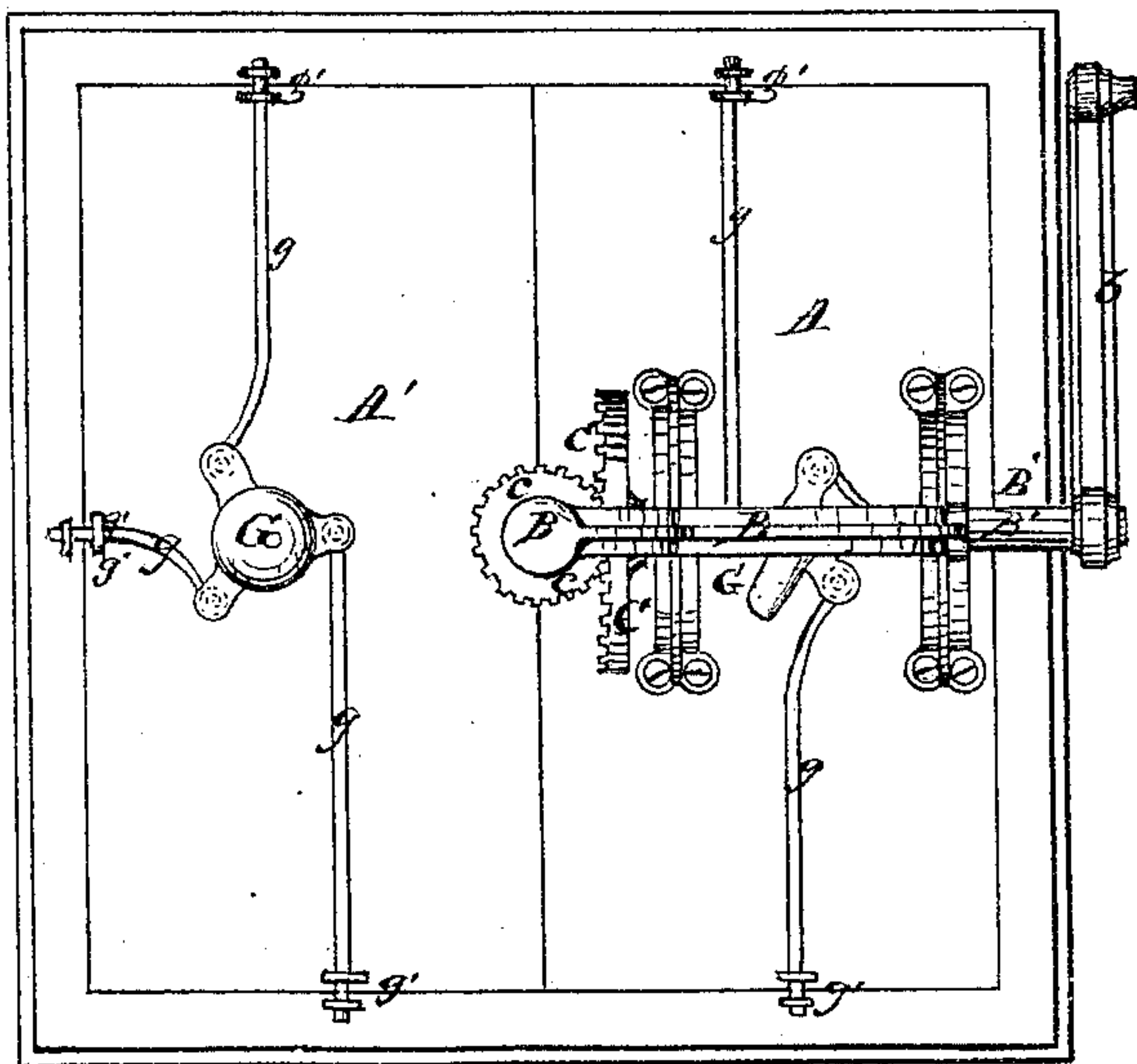
Patented Dec. 12, 1871.



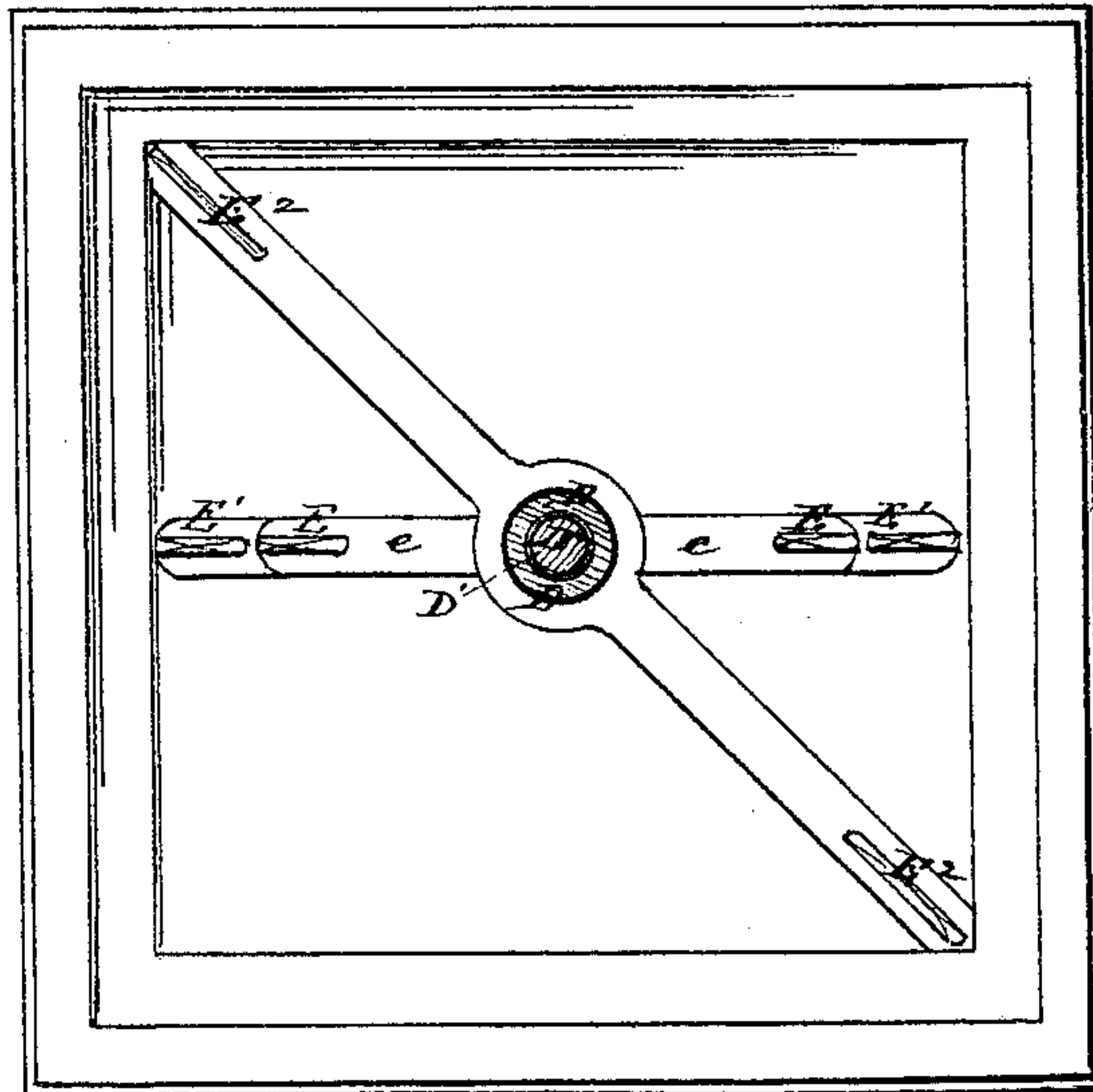
*Figure 1.*



*Figure 2.*



*Figure 3.*



*Figure 4.*

*witnesses:*

*J. M. Herthel.*  
*Robert Burns.*

*Inventor:*

*John Cochran Jr.*  
*By his Attys.*  
*Herthel & Co.*



# UNITED STATES PATENT OFFICE.

JOHN COCHRAN, JR., OF AUBURN, MISSOURI.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 121,755, dated December 12, 1871.

*To all whom it may concern:*

Be it known that I, JOHN COCHRAN, Jr., of Auburn, in the county of Lincoln and State of Missouri, have invented a certain new and useful Improved Churn; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to improvement in that class of churns in which two dashers are so arranged on separate shafts as to be rotated in opposite directions by suitable connection with bevel-gears; and it consists in so combining clutch devices with the shafts or rods of the dashers and the operating gears that said dashers may be readily set parallel to each other, so as to be revolved together, to facilitate gathering of the butter, or at right angles, or be revolved in opposite directions, as heretofore.

To enable those skilled herein to make and use my said invention, I will now more fully describe the same, referring to the accompanying—

Figure 1 as a sectional elevation; to Fig. 2 as a front elevation; to Fig. 3 as a top plan; to Fig. 4 as a sectional top plan.

The churn-vessel can be constructed of ordinary forms, usually circular or square, having proper lids A A'. To the lid A I secure the standard-frame B, which supports the driving-shaft B' having hand-crank b. To said driving-shaft I secure the large bevel-gear C, which gears with and communicates motion to smaller gear c secured to the upper end of dasher-rods D' and D', respectively. The dasher-shaft D is of hollow construction, (to allow for passage of the rod D',) and has attached at its lower end the inside dashers E, which, by the horizontal piece e, is supported upon a shoulder of the dasher-rod D', as shown in Fig. 1. The dasher-rod or shaft D' passes vertically through the collar-shaft D and center of dashers, supporting at its lower end the middle dashers E<sup>1</sup>, and is fitted, by its pivot end d, to revolve in the lower piece e<sup>2</sup> of the outside dashers or breakers E<sup>2</sup>. Said breaker E<sup>2</sup> is made to fit crosswise in position in the churn-vessel. In order to regulate the rotating action of the dashers E E<sup>1</sup> I have provided the upper square end of the shaft D' with a coupling-sleeve, F. Said sleeve is fitted, by its mortises f and teeth f',

to engage in two or more corresponding mortises and teeth or tenons of the respective gears c, as shown in Figs. 1 and 2. Furthermore, said sleeve F is arranged to slide loosely on the end shaft, and, by means of its spring-catch f<sup>2</sup> engaging in the notches f<sup>3</sup>, as shown in Fig. 1, is readily adjusted, in connection with either of the gears c, to operate the shaft and dashers, as desired.

When, therefore, the operator adjusts said sleeve in coupling with the top gear c the two inside dashers will rotate in opposite directions—that is, the dasher E rotates in one direction while the other set, E<sup>1</sup>, rotates in an opposite direction—thus producing an agitation practically effective in breaking up the fatty globules of milk. When said sleeve F is adjusted with the lower gear said dashers may be operated to rotate in the same direction, positioned at right angles from each other; or said dashers may be made to revolve parallel in position in order to combine and collect the butter formed.

The lids A A' are constructed detachable from the churn-vessel, as follows: To the knobs G secured to each lid I connect the wire fastening g, of the peculiar outline and form plainly shown in Fig. 3. When the churn is to be operated, the knobs being turned, said wire fastenings g engage in proper staples g' secured to the churn-vessel. The lids may be thus secured to the churn; and a detachment of the parts is easily effected by disengaging the fastenings from the staples.

I do not, however, claim any novelty in this method of constructing or arranging the lids.

Having thus fully described my said invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the bevel-gear C and clutch-gears c c, sliding toothed sleeve F, spring-catch f<sup>2</sup>, dasher-rods D D', and dashers E and E<sup>1</sup>, as shown and described, whereby said dashers may be set parallel and revolved together or at right angles to each other, as specified.

In testimony of said invention I have hereunto set my hand.

JOHN COCHRAN, JR.

Witnesses:

JOHN J. KNIGHT,  
JNO. L. POLLARD.

(45)