

T. A. WARREN.

Churn.

No. 63,969.

Patented April 16, 1867.

Fig. 1

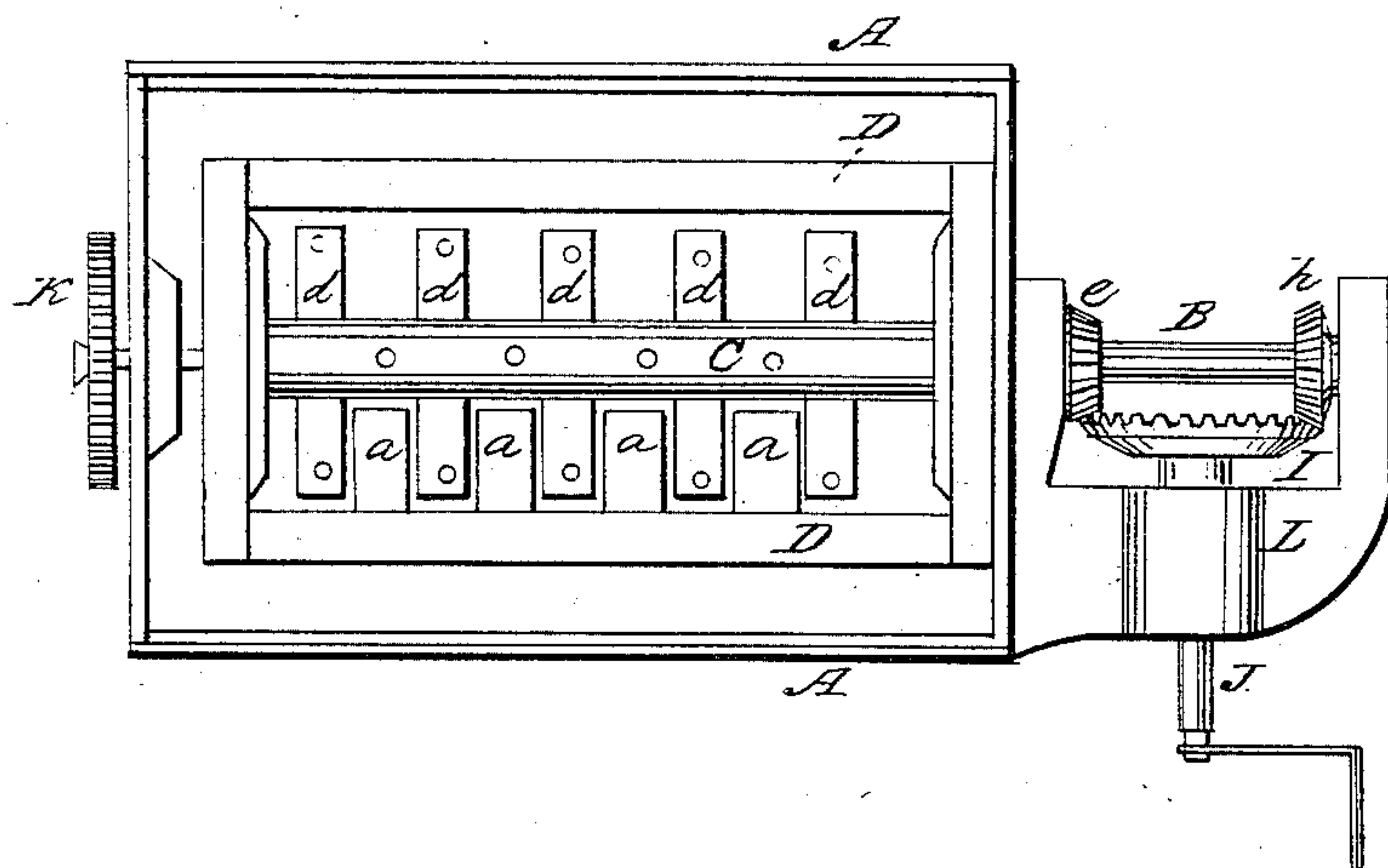
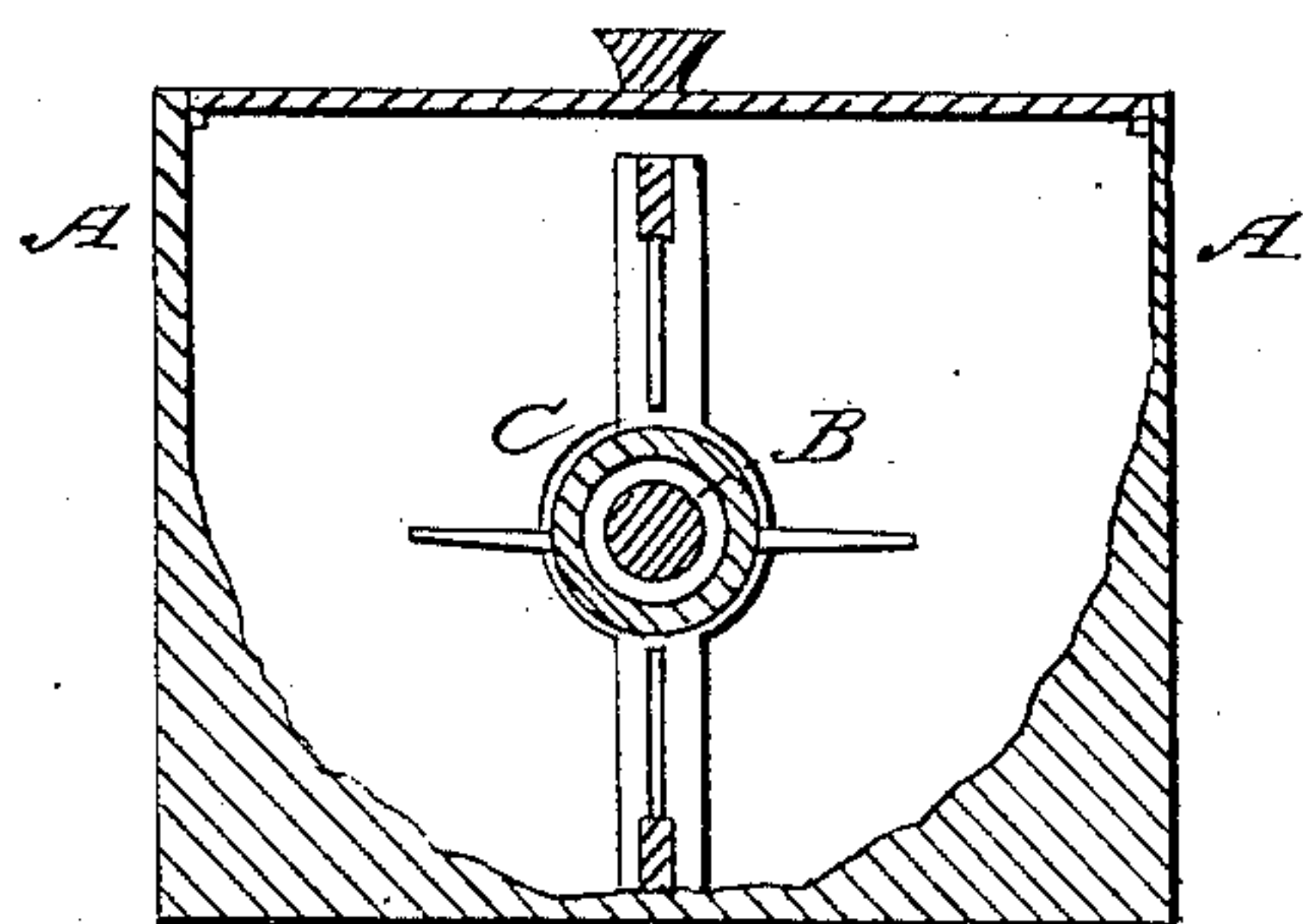


Fig. 2



Witnesses:  
F. Schuman  
V. Blockbridge

Inventor:  
T. A. Warren  
per  
Alexander H. Mason  
Att'y

# United States Patent Office.

THOMAS A. WARREN, OF GETTYSBURG, PENNSYLVANIA

*Letters Patent No. 63,969, dated April 16, 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, THOMAS A. WARREN, of Gettysburg, in the county of Adams, and in the State of Pennsylvania, have invented certain new and useful Improvements in Churns, and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon. In the annexed drawings, making part of this specification—

A represents the churn-box, which is intended to lie in a horizontal position. This box is provided with a curved bottom, which is either made corrugated, fluted, or irregular, by the securing of slats upon it. C represents a hollow shaft, which has a shaft, B, running through it. The shaft C is provided with arms or dashers, *d d*, and the shaft B with a rectangular frame, D, which is provided with arms or dashers *a a*. The two shafts revolve in different directions, and the arms upon shaft C cut between those of frame D. The frame D cuts very close to the corrugations on the bottom of the box when it revolves. L represents framework on the outside of the churn-box for supporting the gearing. The bevel-wheel I upon shaft J gears into the two bevel-wheels *e* and *h*, one upon shaft C and one upon shaft B, and serves to give motion to them in opposite directions. K represents a balance-wheel on the end of shaft B. The box A is provided with a suitable cover which is properly ventilated. In the drawing, only one set of arms is represented upon the frame D, but a series is intended to be used upon each of the side rails of said frame, and these arms, together with those of shaft C, are intended to be perforated with holes for assisting in the breaking of the globules of the milk or cream.

I am aware that two dashers have been used before in a churn-box, which revolve in different directions, hence I disclaim them; but having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement of the horizontal churn-box, provided with a curved corrugated or irregular bottom, with the shaft C and frame D provided with arms *d*, revolving in different directions, and with the wheel K, the whole being constructed and used in the manner and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 19th day of February, 1867.

THOMAS A. WARREN.

Witnesses:

JOHN S. HOLLINGSHEAD,

JOHN D. BLOOR.