

J. C. JOHNSON.  
Improvement in Churns.

No. 128,730.

Patented July 9, 1872.

Fig. 1.

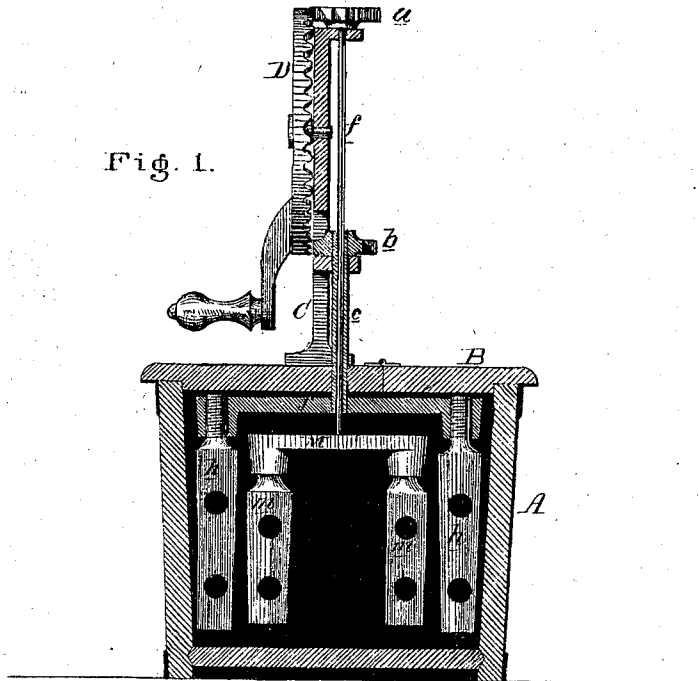
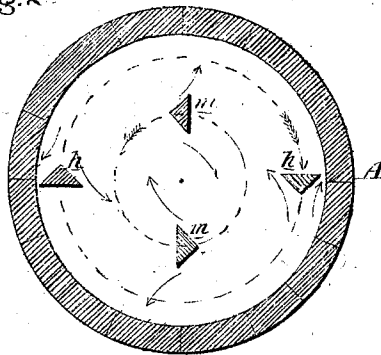


Fig. 2.



Witnesses.

*J. Foster*  
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Inventor.

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# UNITED STATES PATENT OFFICE.

JOHN C. JOHNSON, OF UNIONTOWN, PENNSYLVANIA.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 128,730, dated July 9, 1872.

Specification describing certain Improvements in Churns, invented by JOHN C. JOHNSON, of Uniontown, county of Fayette, State of Pennsylvania.

My invention relates to that class of churns in which two sets of suspended beaters are rotated in different directions; and consists of a churn in which the beaters are so constructed and arranged as to insure a rapid circulation of counter-currents of cream within the churn.

In the accompanying drawing, illustrating my invention, Figure 1 is a sectional elevation of a churn with my improvements, and Fig. 2 a sectional plan view.

To the cylindrical or tapering body A of the churn is fitted a lid, B, consisting of two sections, to the larger of which is secured a standard or frame, C. On a stud on this frame turns a toothed wheel, D, which gears with pinions *a b*, the latter at the upper end of a hollow shaft, *c*, and the former at the end of a shaft, *f*, which passes through the shaft *c*; both shafts turning in projections on the frame, and extending through the lid into the vessel A. To the lower end of the tubular shaft is secured a cross-bar, J, at the opposite ends of which are sockets for receiving the ends of detachable vertical beaters or dashers, *h h*, which are perforated, as shown in the drawing; and to the lower end of the shaft *f*, which extends below the hollow shaft, is a shorter cross-bar, M, having sockets, to which are fitted the shanks of dashers *m m*, similar to the dashers *h h*. Each dasher has three sides or faces, and it will be seen, on reference to Fig. 2, that the

dashers are so arranged that when traversing in the direction of their arrows one of the sharp edges of each dasher will be foremost. Owing to this arrangement the cream contained within the vessel A will be thrown by the inclined faces of the dashers both outward and inward as the dashers traverse their circular paths, and as each pair of dashers traverses in a different direction a series of currents, in the directions indicated by the arrows, back and forth across the vessel, will be created, causing such a thorough commingling and attrition of the particles as will insure the speedy rupture of the small sacks containing the butter.

When, toward the completion of the operation, it is desired to "gather" the butter, the shaft *f* may be raised until the pinion *a* is out of gear with the driving-wheel when the dashers *m m* may be rotated or vibrated alone.

Should it be desirable to remove a dasher it can readily be detached from the cross-piece and another substituted.

I claim as my invention—

The combination, in a churn, of the three-sided dashers *m m h h*, traversing in contrary directions with their edges foremost, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN C. JOHNSON.

Witnesses:

DANL. F. COOPER,  
MARSHALL N. LEWIS.