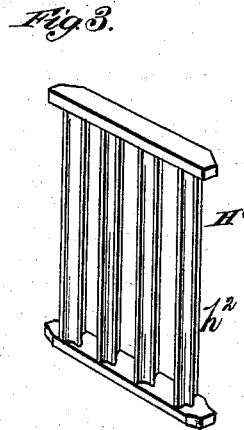
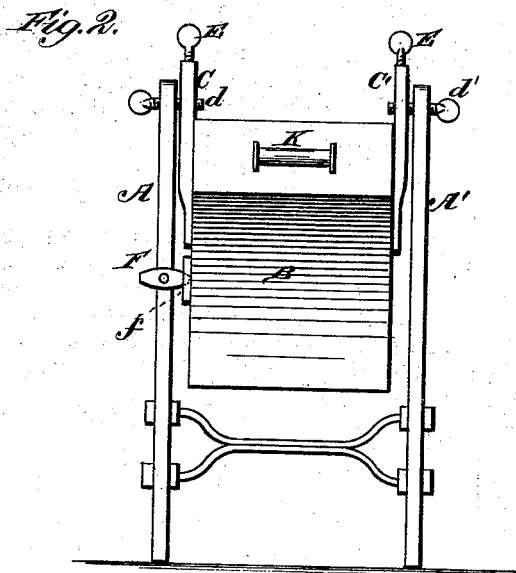
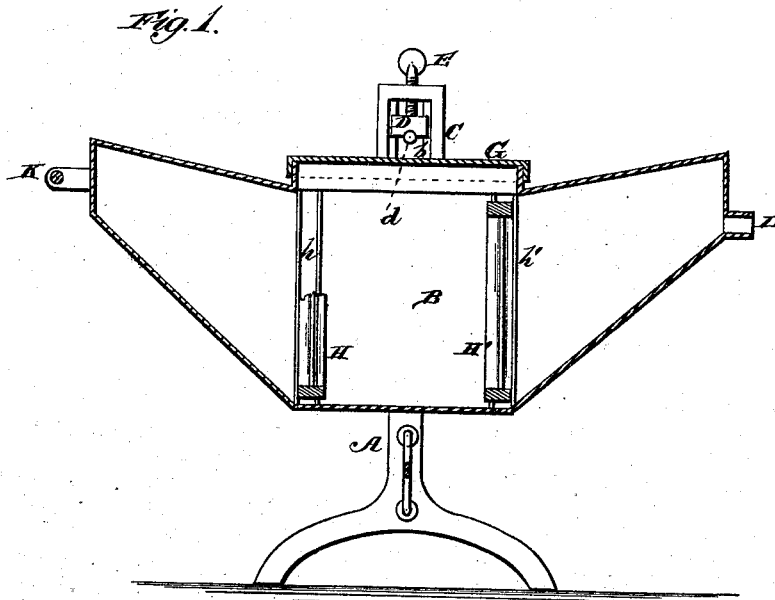


J. KNOX.  
Churn.

No. 217,387.

Patented July 8, 1879.



WITNESSES  
*Robert Emmett*  
*W. M. Swaine*

INVENTOR  
*James Knox*  
*Gilmore, Smith & Co.*  
ATTORNEYS

# UNITED STATES PATENT OFFICE.

JAMES KNOX, OF HEBRON, NEBRASKA.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **217,387**, dated July 8, 1879; application filed April 12, 1879.

*To all whom it may concern:*

Be it known that I, JAMES KNOX, of Hebron, in the county of Thayer and State of Nebraska, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a longitudinal sectional view of my churn. Fig. 2 is an end view of the same, and Fig. 3 is a perspective detail view.

Identical parts in the drawings are indicated and referred to by the same letters.

This invention relates to churns; and consists in the improvements in the construction of the same, hereinafter fully described, and particularly pointed out in the claim.

A A' are standards for supporting the churn-body B. C C' are hangers attached to the churn-body, and extending above the same, and provided with the V-shaped ways b. D D are sliding boxes, fitting in the ways b. E are thumb-screws passing through the top of the stirrups or hangers C C', and engaging the sliding box D. By adjusting these screws the sweep of the churn-body may be regulated to

suit the operator, by lengthening or shortening the point of suspension of the churn-body.

F is a lock-button, for engaging the recess f on the arms of hangers C C', to prevent the rocking motion and hold the churn-body at rest at will. G is the cover of the churn, and H H' are breakers, which are inserted in the ways h h' of the churn-body. The bars h<sup>2</sup> of these breakers are concave upon their four vertical sides, with the corners set in the direction of the flow of cream when the churn is in motion. These concave surfaces cause the cream to be forced into currents transverse to the flow of the cream, thereby greatly increasing the agitation of the mass.

K is a handle for rocking the churn by, and L is an opening for drawing off the buttermilk, and d d' are the threaded pins in the standards which support the churn.

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

In a rocking-body churn, the sliding boxes D D, in combination with the thumb-screws E, hangers C C', and studs d d', as and for the purposes substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES KNOX.

Witnesses:

JOHN J. MALOWNEY,  
O. H. SCOTT.