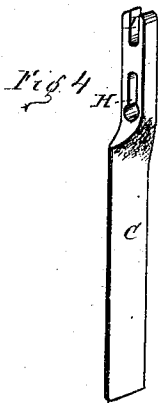
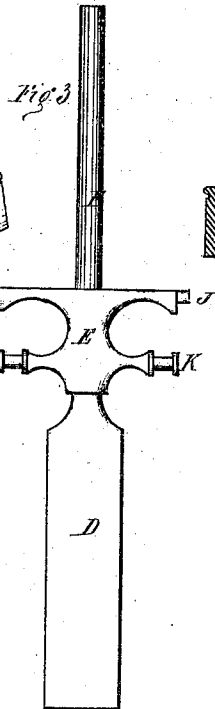
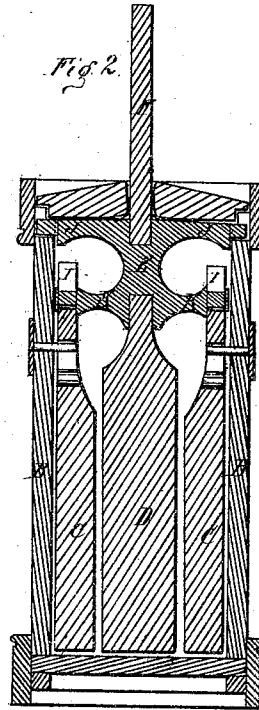
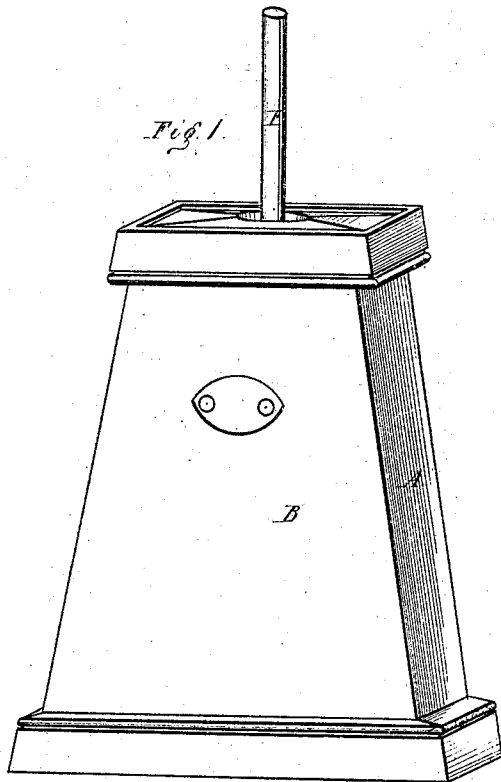


A. Z. A. Gifford,

Churn.

No. 110,968,

Patented Jan. 17, 1871.



Witnesses:

H. J. Treitz
A. W. Hart

Inventor:

Alden Gifford.
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United States Patent Office.

ALDEN GIFFORD AND ZENAS A. GIFFORD, OF SOMERSET, NEW YORK.

Letters Patent No. 110,968, dated January 17, 1871.

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 we, ALDEN GIFFORD and ZENAS A. GIFFORD, of West Somerset, in the county of Niagara and State of New York, have invented a new and improved Churn; and do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a perspective view of our improved churn; and

Figure 2, a transverse vertical section, showing the dashers.

Figure 3 is side or face view of the double-armed casting or metal socket-frame for operating the dashers, one of which, together with the handle or lever, is shown attached thereto.

Figure 4 represents, in perspective, one of the two dashers, which are pivoted to the inner wall of the sides of the churn.

Our invention has for its object an improvement in the construction of churns, whereby we are enabled to furnish the public a cheaper and more convenient and efficient machine than those heretofore known, and one also adapted to operate as a butter-worker; and

The invention consists in so arranging three or more dashers, in connection with a double-armed frame or socket that, when the latter is oscillated, the dashers shall move alternately in opposite directions, as hereinafter described.

In the drawing—

A A and B B represent the four sides of the churn-body, the former inclining inward from the base.

E represents a metal frame or socket, provided with two sets of horizontal parallel arms J J and K K, and with a socket for the insertion of the handle or lever F, and for the dasher D in its upper and lower ends.

These arms project on opposite sides of the frame, and the upper set J J forms trunnions, which fit in notches or recesses in the top of the sides B B, while the lower set K K is journaled to fit in the slots or

notches I I made in the upper ends of the dashers C C.

These dashers C C are pivoted to the sides B B of the churn by screws or bolts G G passing through key-slots H H. This method of attaching the dashers C C permits their ready removal.

The operation is as follows :

Cream having been placed in the churn, and the cover, which has a central oval opening for the handle F, being properly adjusted, the handle is vibrated or reciprocated in the arc of a circle, whose center is in the plane of the trunnions J J. This causes the arms K K to move the dashers C C on their pivots in a direction reverse to that which is taken by the dasher D, which is, necessarily, always the same as that of the frame E and handle F.

The vibration of the handle being continued, currents and counter-currents of the liquid are induced, and they become more or less violent, corresponding with the rapidity of the vibration.

The operation of the machine as a butter-worker is precisely similar; but, owing to the inclination of the sides A A, the dashers press or squeeze the butter against them, thus quickly effecting the desired result.

Having thus described our invention,

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

1. The combination, in a churn, of a double-armed socket-frame, E J K, dashers C C D, and handle or lever F, operating substantially as shown and described.

2. The dashers C C, provided with key-hole slots H H, and suspended from the pivot-bolts G G, in the manner shown and described.

ALDEN GIFFORD.
ZENAS A. GIFFORD.

Witnesses:

FREDERICK C. BURCHELL,
HIRAM E. BRIGGS.