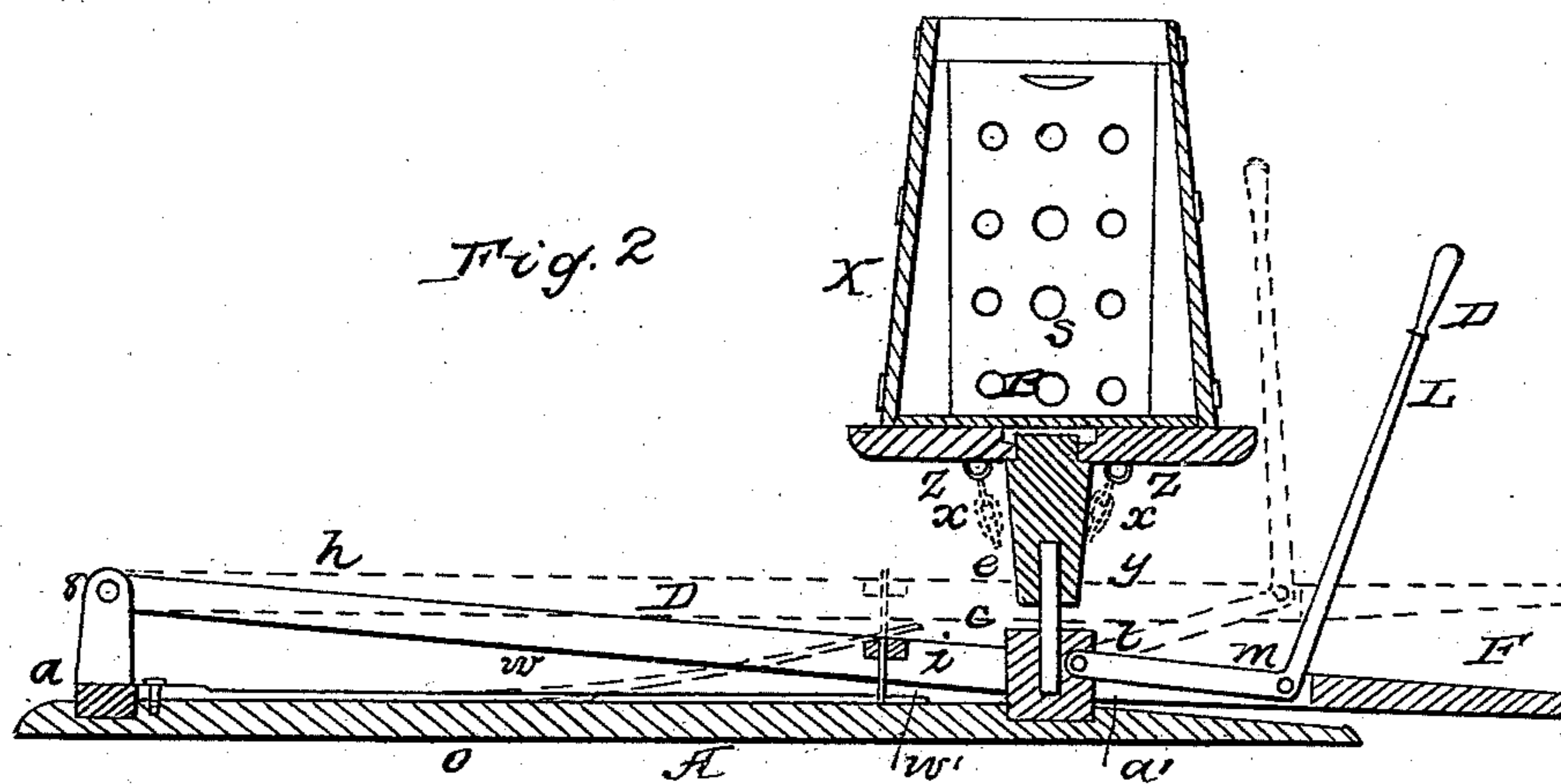
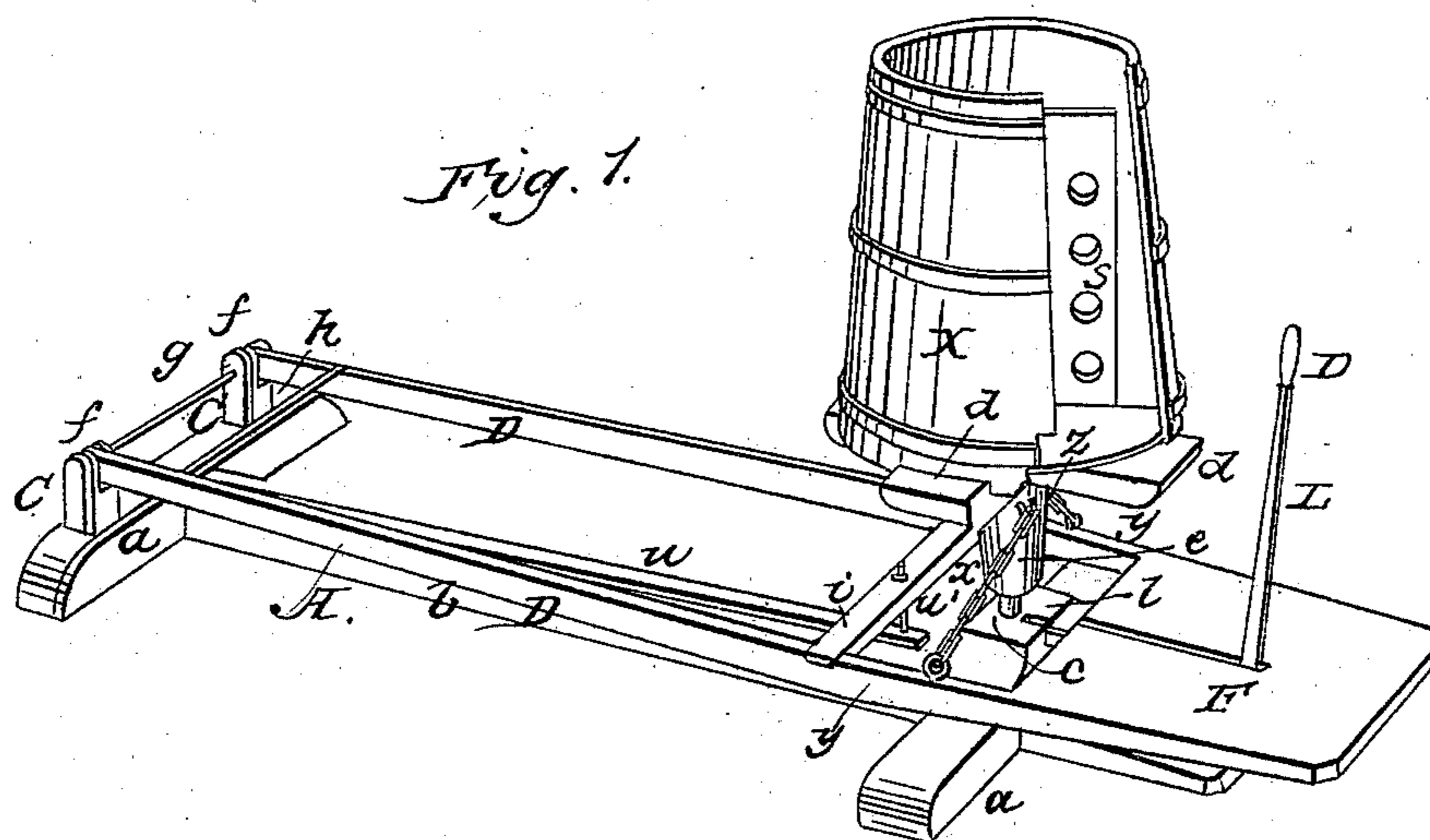


I. M. WILLIAMS.

Churn.

No. 33,422.

Patented Oct. 1, 1861.



witnesses
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UNITED STATES PATENT OFFICE.

ISAIAH M. WILLIAMS, OF BLANCHESTER, OHIO, ASSIGNOR TO HIMSELF AND WM. P. WOLF, OF SAME PLACE.

IMPROVED MODE OF OPERATING CHURNS.

Specification forming part of Letters Patent No. 33,422, dated October 1, 1861.

To all whom it may concern:

Be it known that I, ISAIAH M. WILLIAMS, of Blanchester, in the county of Clinton and State of Ohio, have invented a new and Improved Method of Operating Churns; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form part of this specification.

My invention relates to the method of operating the churn; and it consists of an oscillating platform for receiving the churn, together with a pedal apparatus for imparting motion thereto, as will be described in detail below.

In the accompanying drawings, Figure 1 is a perspective drawing of the complete apparatus, including the churn, which is shown in its place on the platform. Fig. 2 is a vertical section taken longitudinally through the same.

Like letters of reference designate like parts in all the drawings.

A is the foot or base of the churn-stand, consisting of two cross-pieces $a a'$, joined longitudinally by the rail b , and properly secured together by halving and nailing, or otherwise, as may be found best or most convenient. An iron spindle c is firmly secured in the center of cross-piece a' , rising therefrom to a convenient height, and being finished off square or rounded at top.

B is an oscillating platform or table formed by two pieces $d d'$, crossing each other at right angles, and having a neck or stem e secured thereto below. A perforation e' in the neck e permits the whole platform to be set on the spindle c , upon which it may be rotated or oscillated.

From the cross-piece a two short standards $C C$ arise, each standard having a deep slot f formed in its upper end. $D D$ are long shafts extending from slots $f f$ in standards around outside of oscillating table B, and forward beyond the same, where they are joined together by the foot-board F, the whole forming a pedal hinged at $f f$ by the rod or pin g , passing through both uprights $C C$ and the ends of shafts $D D$. A rod h and rail i , joining shafts $D D$ behind the table B, give additional strength and firmness to the whole.

To the under side of oscillating table B, in the cross-piece d' , two staples $z z$ are driven, and also into the shafts $D D$ beneath, and at the side of same are driven two staples $y y$. These staples $z y$ are connected at each side by chain or cord x .

To the top of longitudinal rail b a spring w is secured, and the free end of said spring is connected with cross-rail i on pedal by means of a cord or chain w' . This spring may be either of wood or steel, or of other convenient material.

L is an L-shaped hand-lever, pivoted at its free end l in a slot in cross-piece a' , and also at its elbow m in the foot-board F of treadle. The free end n is formed into a handle of convenient shape.

The churn X may be in barrel shape, as shown, being cut out at bottom so as to set on the cross-pieces of oscillating platform, or it may be secured to the platform in any convenient and efficient manner. In the drawings the churn is shown divided vertically and diametrically by a perforated diaphragm s ; but it may be divided in any manner found to be efficient for producing agitation and breaking up of the cream, and as this specification refers more particularly to the method of operating the churn it need not be more particularly referred to here.

Having described my invention, I shall proceed to speak of its mode of operation. The cream having been filled into the churn and the cover secured thereon, a partial rotation is imparted to the churn (by hand) and platform. The platform in rotating raises the pedal by means of the chains $x x$. Now the foot being placed on the treadle F and pressed down brings back the platform and churn to their first position; but by virtue of *vis inertia* the churn and platform pass beyond this point and perform a partial rotation in the other direction, again lifting the treadle F. Another pressure with the foot causes the return rotation, and so on, until the churning is completed, it being evident that during the rapid changes of direction in the churn's motion the fluid contained therein will be violently agitated and quickly churned.

The lever L is merely for the purpose of enabling the implement to be operated by hand instead of by the foot, a back-and-for-

ward motion of the lever producing the same effects as an up-and-down motion of the foot. Note here that this method of converting a pedal motion into horizontal oscillation may be applied to the washing of clothes, as may very readily be seen, and I desire here to record my proposed application thereof to that purpose.

Having now described my invention and the mode of its operation, I proceed to state

what I claim as my invention, and what I desire by Letters Patent to secure—

Imparting to the churn X an oscillating motion by means of the platform or table B and pedal F, or by using the hand-lever L, substantially as set forth.

ISAIAH M. WILLIAMS.

Witnesses:

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