

J. C. DAMAN.

CHURN.

No. 175,043.

Patented March 21, 1876.

Fig 1

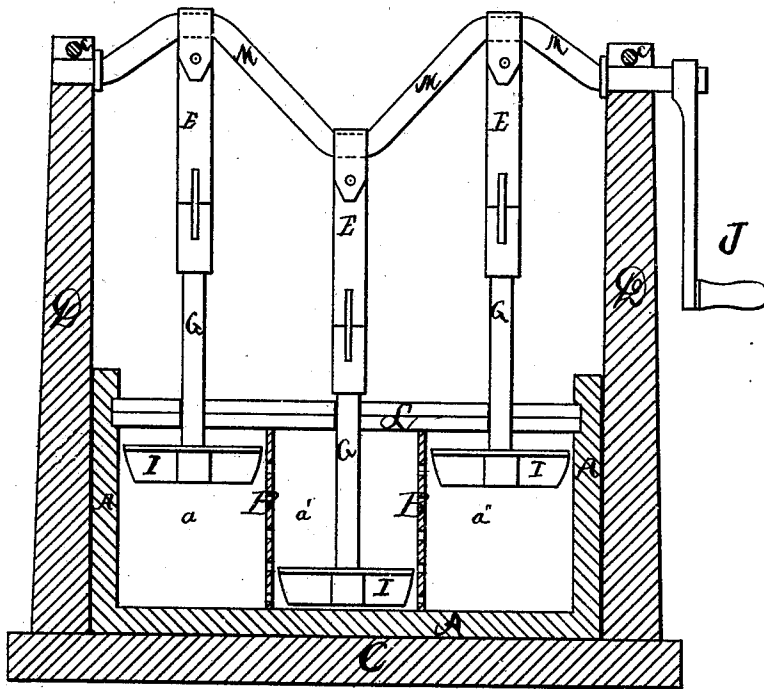
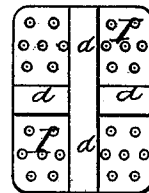
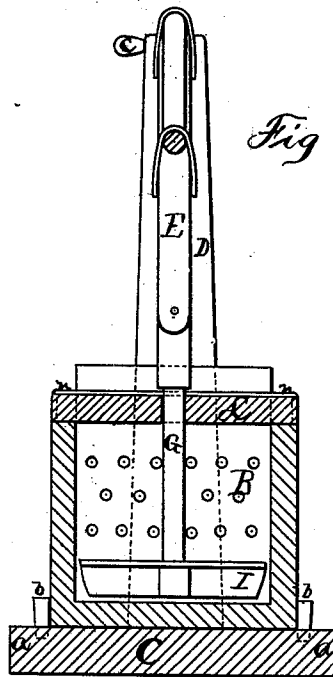


Fig 2

Fig 3



WITNESSES

Mary J. Utley.
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UNITED STATES PATENT OFFICE.

JAMES C. DAMAN, OF ELK POINT, DAKOTA TERRITORY.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **175,043**, dated March 21, 1876; application filed November 27, 1875.

To all whom it may concern:

Be it known that I, JAMES CHANDLER DAMAN, of Elk Point, in the county of Union and Territory of Dakota, have invented a new and valuable Improvement in Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my churn. Fig. 2 is a transverse vertical sectional view of the same, and Fig. 3 is a plan view of the dashers.

This invention has relation to improvements in churns; and it consists in a churn-tub, having transverse perforated metallic partitions in combination with reciprocating perforated metallic dashers, all as hereinafter shown and described.

In the annexed drawings, the letter A designates a churn-tub, which is preferably of rectangular form, and is made of wood or other suitable material. The interior of this tub is provided with transverse perforated metallic partitions B B, arranged at suitable distances apart, for a purpose hereinafter explained. C designates the platform upon which my improved churn is supported, the sides of which are provided with extensions a, having perforations which are designed to receive pins b, by means of which the tub is secured to the platform. D designates uprights, rigidly secured to the ends of the platform C, the upper ends of which standards or uprights are notched for the purpose of affording bearings for the journals of a triple crank-shaft, M, which is prevented from upward displacement therefrom by means of pins c passing through the standards just above this shaft, or by any other suitable means. To this shaft are attached, in the usual well-known manner, one or more pitmen, E E, to the lower ends of which are pivoted the upper ends of dasher-rods G G. The lower ends of these dasher-rods are provided with transverse strips of wood d, upon which are secured perforated metallic dashers

I I, which are of such a size as to conform to the size of the compartments in the interior of tub A, above described, wherein they are designed to be received.

J designates a crank-handle attached to one end of the shafts in the usual well-known manner, by means of which my improved machine is operated, the rotary motion of the shaft being transformed into a vertically-reciprocating motion of the dashers.

The advantage gained by this construction is, that the dashers being alternately reciprocating and the partitions and dashers perforated when the machine is in use, the two end dashers will descend into the churn, while the central dasher will ascend therefrom, thereby forcing the cream in the side compartments through the perforations into the central compartment and the reverse.

By this means the cream is forced through the perforations from one compartment to the other, thus rapidly breaking up the butter-cells and separating the oleaginous from the watery parts of the cream with but little effort on the part of the operator. In practice the watery parts will be drawn off through a stop-cock, which I design to apply near the bottom of the tub.

In order that the dust may not enter the churn, or the cream be dashed out of the same, I have provided cream-tub A with a lid, L, made in two sections, which slide inward toward dashers I I in grooves or guides, and a clamping device, n, which holds the lid against casual separation. g g designate perforations made in the lid N for the admission of dasher-rods G G.

I am aware that a churn, provided with a vertical perforated partition, dividing it into two chambers, each of which is provided with a vertically-reciprocating dasher, which alternate with each other in their movements, and which are made in the form of a cross, and do not fill up the entire cross-section of the chambers in which they reciprocate, has heretofore been employed, and I therefore lay no claim to such invention. I am aware that a churn divided into two cream-receptacles by a perforated partition, in which receptacles two dashers of a cruciform shape are made to reciprocate, as shown in Letters Patent granted

M. M. Coombs, dated February 18, 1873, No. 136,035, has heretofore been employed, and I therefore lay no claim to such invention, as in Coombs' construction no currents of cream, flowing in opposite directions, impinging against each other and breaking up the butter-cells, are found.

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

The cream-tub A, provided with the two perforated partitions B B, and compartments a

a' a'', in combination with the alternately reciprocating and perforated dashers I, each fitting in cross section the chamber in which it operates, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JAMES CHANDLER DAMAN.

Witnesses:

H. H. BLAIR,

J. S. TALCOTT.