

M. C. PENNOCK.

Churn.

No. 216,885

Patented June 24, 1879.

Fig. 1.

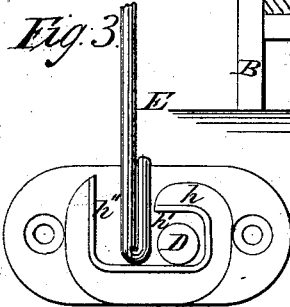
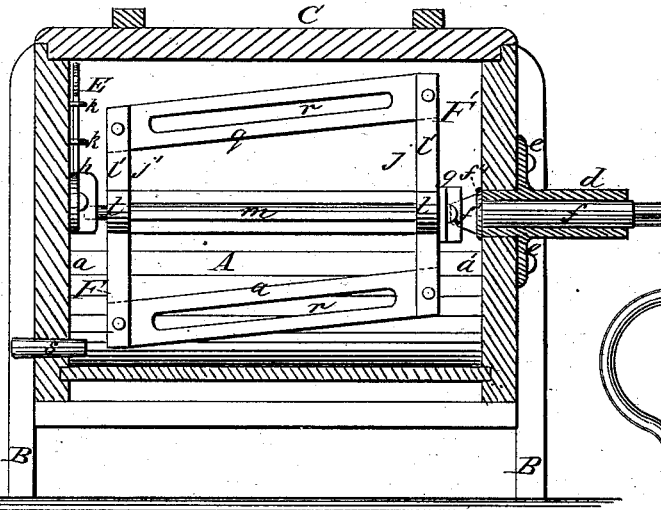


Fig. 2.

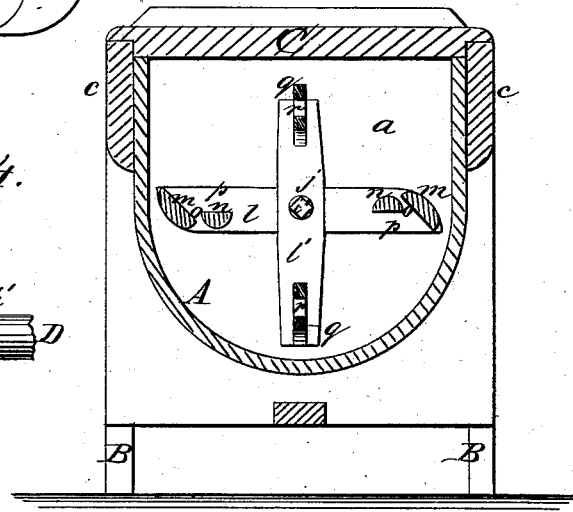


Fig. 4.

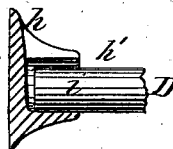


Fig. 5.

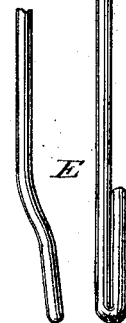


Fig. 6.



WITNESSES:

A. Schehl.
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INVENTOR:

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BY

ATTORNEYS.

UNITED STATES PATENT OFFICE.

MORRIS C. PENNOCK, OF ALLIANCE, OHIO.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **216,885**, dated June 24, 1879; application filed January 28, 1879.

To all whom it may concern:

Be it known that I, MORRIS C. PENNOCK, of Alliance, in the county of Stark and State of Ohio, have invented a new and useful Improvement in Churns, of which the following is a specification.

The invention consists in combining, with the radial ends of dash and the slotted journal-bearing, a fastening and adjustable screw and a tail-pivot bearing with open slots and retaining-wire, all as hereinafter described.

In the accompanying drawings, Figure 1 is a vertical and longitudinal section of the improved churn. Fig. 2 is a cross-section of the same. Figs. 3, 4, and 5 are details of the tail-pivot box and retaining wire or pin, and Fig. 6 is the tail-pivot.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A is the body, rounded on its under side, with the sides extended up straight. The ends are closed by plates *a a'* let into the body forming the end casing, to which the upright supporting-legs B are fastened at each corner.

The plates *c c*, placed in contact with the sides of the churn and fastened to the end casing, give strength to the sides.

The end casing and side pieces project slightly above the body of the churn, forming thus a rabbet, into which the rabbeted edges of the top C fit, thus holding the top against displacement.

The body A is cut from a solid block of wood in the proper shape and size, and in a manner to allow the grain to run lengthwise of the churn. By having it all in one piece straining and cracking are avoided.

At the front end of the churn a sleeve, *d*, is passed through the casing and head, and secured by bolts or screws passed through its flange *e* into the casing. Through this sleeve is passed the crank-shaft *f*, having on its inside end a flange, *f'*, which bears against the end of the sleeve, and from this is a prismatic projection, *f''*, to engage the similar-shaped socket made in the piece *g*, attached to the head of the dasher.

At the opposite end of the churn, on the inside, in the same axial line as the sleeve, is

fixed the tail-pivot rest or socket *h*, composed of the horizontal and vertical open slots *h' h''*.

D represents the tail-pivot, composed of the bearing *i*, threaded body *i'*, and square head *i''*. This tail pin or pivot is screwed into a bored hole in the arms of the back end of the dash, at their junction, from the inner side outward, the threads cutting into the wood, and thus forming their own nut. Not only does its round end serve as a pivot, but the screw working in the arms holds them firmly together at that point, while the dasher is made adjustable. This tail-pivot is screwed through the dasher-head, so that its bearing end projects beyond the end of the dasher, and is placed in the horizontal slot *h'*, when the churn is to be used, by slipping it down through the vertical slot *h''*, and when in place a retaining wire or pin, *E*, held in staples *k*, is pushed down, so as to cross the horizontal slot *h'*, and thus retain the pivot in its bearing, as clearly shown in Fig. 3. To take the dasher out, this pin is drawn up and the pivot is moved side-wise and then upward.

By the pivot having a screw-connection with the dasher it can be used to tighten the joint of the crank-shaft *f* by simply screwing it out. This forces the flange on the shaft against the adjacent end of the sleeve tightly and prevents leakage.

The dasher is composed of two heads, F F', each formed of arms *l l'*, placed together at right angles. Arms *l* are joined at their middle, but arms *l'* are not. These are fixed to arms *l*, so that the short arm in head F is opposite the long arm in head F', as clearly shown in Fig. 1.

Arms *l* are joined at their extremities by paddles *m*, fixed thereto at an obtuse angle, and having their outsides rounded or convex. Adjacent to these are paddles *n*, with their faces parallel to the edges of the arms, and with a narrow space, *o*, between them and paddles *m*. The two together form a trough-like space, *p*, in the face of the paddles.

The arms *l'* are joined at their extremities by flat paddles *q*, the faces whereof are parallel with the arms, and are provided with longitudinal openings *r*. These paddles, it will be observed, are inclined to the axis of the dasher,

on account of the unequal lengths of the arms; to which they are attached.

The churn is operated by a crank applied to shaft *f* in the direction of the trough-like space *p*, so that the paddles *m n* strike the cream and throw it forward until it rushes back through the spaces between the paddles and the sides and ends of the churn, and as the flat paddles *q* come in contact with it they throw it alternately toward opposite ends of the churn. When the butter is brought, by reversing the motion of the dasher the convex sides of the paddles *m* and *n*, working as a cam near the sides of the churn, quickly gather the butter and press it into a solid mass, from which the buttermilk can be drawn off through the spigot-hole *s*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the radial ends of the dash and the tail-pivot bearing *h*, of the fastening and adjusting screw *D*, as shown and described.

2. The tail-pivot bearing *h*, with open slots *h' h''* to receive tail-pivot *D*, and provided with retaining wire or pin *E*, to hold the pivot in the horizontal slot, substantially as described.

MORRIS C. PENNOCK.

Witnesses:

CHARLES S. KEITH,
ARTHUR WRIGHT.