

(No Model.)

W. & J. HURST.

CHURN.

No. 273,281.

Patented Mar. 6, 1883.

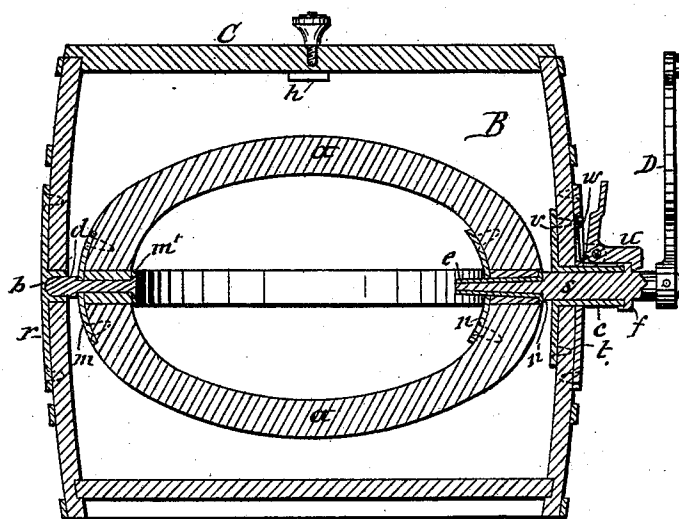


FIG 1-

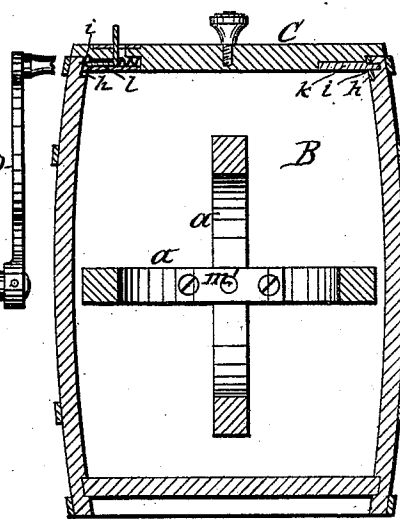


FIG 2-

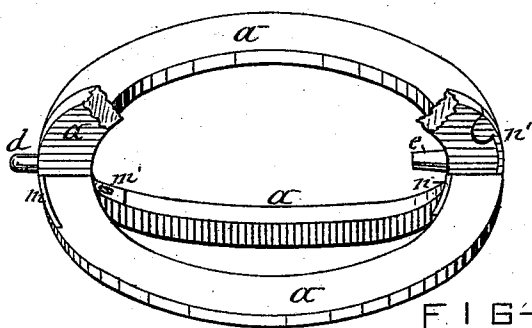


FIG 3-

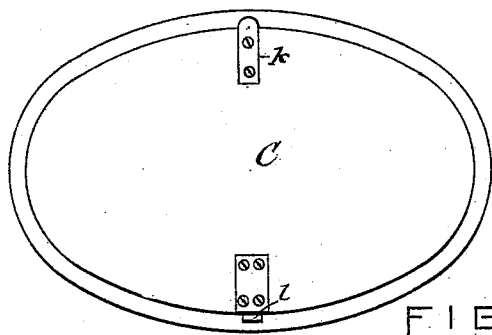


FIG 4-

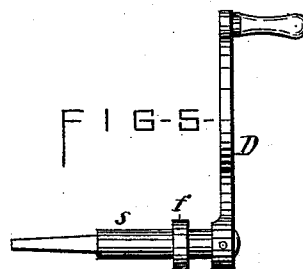


FIG 5-

WITNESSES—
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UNITED STATES PATENT OFFICE.

WILLIAM HURST AND JAKOB HURST, OF SYRACUSE, NEW YORK.

CHURN.

SPECIFICATION forming part of Letters Patent No. 273,281, dated March 6, 1883.

Application filed September 19, 1882. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM HURST and JAKOB HURST, of Syracuse, in the county of Onondaga, in the State of New York, have
5 invented new and useful Improvements in Churns, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to that class of churns
10 having rotary dashers operating in a stationary body or tub.

The invention consists in a novel construction and combination of its component parts, whereby the same is rendered exceedingly
15 strong, durable, and effective in its operation, as hereinafter more fully described, and specifically set forth in the claims.

The invention is fully illustrated in the annexed drawings, wherein Figure 1 is a vertical
20 longitudinal section of our improved churn. Fig. 2 is a vertical transverse section of the same. Fig. 3 is a detached view of the dasher-frame, with a portion of the bows broken away to better illustrate the attachment thereto of
25 the devices by which said frame is connected with the body of the churn, and which also serve to brace said frame. Fig. 4 is an inverted plan view of the cover, and Fig. 5 a detached view of the crank and spindle.

30 Similar letters of reference indicate corresponding parts.

B denotes the tub or body of the churn, consisting of bulged barrel of oval or elliptic form in cross-section, and provided with a removable head or end, C, which constitutes the cover
35 of the churn, said cover being secured in its position on the body B by means of two plates, *h h*, secured to the interior of the body at the upper edge thereof, and at diametrically-opposite points, said plates being provided with a
40 horizontal slot, *i*, with which engage a plate, K, projecting from one edge of the cover, and a sliding bolt, *l*, connected to the opposite edge of the same.

45 In the central or bulged portion of the tub or body B, which is to stand in an upright position, is pivoted horizontally, and on the line of the greater diameter of the tub, a rotary dasher-frame in the form of oval or elliptic
50 bows *a a*, joined on their longest diameter at right angles to each other, and conforming in their external contour to the transverse sec-

tion of the interior of the tub. One end of the said dasher-frame is provided with a gudgeon, *d*, which passes through the frame at the
55 junction of the two bows *a a*, and is fixed to a plate, *m'*, secured to the inner face of one of said bows. The outer end of the gudgeon protrudes through another plate, *m*, secured to the outer face of the other bow, said plates 60 being thus placed at right angles to each other and effectually tying the bows together. The other end of the dasher-frame is tied in a similar manner by two plates, *n* and *n'*, secured respectively to the inner and outer faces of 65 the two bows *a a*, the outer plate having fixed to it a square socket, *e*, which passes through the frame and through the inner plate, *n*, the latter serving to brace said socket. The described dasher-frame is pivoted horizon- 70 tally in the tub or body B, on the line of the longer diameter thereof, and about midway the height of the same, the pivotal bearing for the gudgeon *d* consisting of a socket, *b*, which is fixed to a plate, *r*, attached to the exterior 75 of the tub, and projects from said plate through the stave or wall of the tub. The opposite wall of the tub is provided on its inner side with a plate, *v*, which has an orifice and a sleeve or tube, *c*, extended from said orifice 8c through the wall of the tub and through a plate, *t*, secured to the outer side of the same.

A spindle, *s*, passing through the sleeve *c*, and having a square end entering the square socket *e* of the dasher-frame, completes the piv- 85 otal connections of said frame with the tub or body B. A crank, D, is connected to the outer end of the spindle *s*, for imparting rotary motion to the dasher-frame. The spindle is held in its connection with the dasher-frame by a collar, *f*, attached to the spindle at the outer end 90 of the sleeve *c*, and a latch, *u*, connected to the outer face of the aforesaid plate *t*. The aforesaid latch we construct in the form of a right-angled thumb-piece, pivoted at the angle on the plate *t*, and having on the end of its horizontal 95 portion a hook or downward projection engaging the outer face of the collar *f*. A spring, *w*, pressing against the rear of said thumb-piece, maintains the same in its engagement with the 10c aforesaid collar.

In order to guard against leakage of the contents of the tub B through the sleeve *c*, we provide the collar *f* with a flange, which over-

laps the exterior of the collar, as shown in Fig. 1 of the drawings.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the barrel B, of the plate *r*, provided with the socket *b*, plate *v*, provided with the sleeve *c* and sustained by the plate *t*, the rotary dasher-frame *a a*, provided with the gudgeon *d* and with the square socket *e*, the spindle *s*, having a corresponding square inner end, and provided at its outer end with the collar *f*, and the right-angled thumb-piece *u*, pivoted on plate *t*, and having on the free end of its horizontal limb a hook engaging the outer face of collar *f*, all constructed and combined substantially in the manner and for the purpose described and shown.

2. In combination with the body B, provided with the socket *b*, the dasher-frame consisting of the oval or elliptic bows *a a*, joined at right angles, the plate *m*, secured to the outer face of

the bow, and the plate *m'*, secured to the inner face of the other bow, and having the gudgeon *d*, passing through the outer plate, *m*.

3. In combination with the body B, provided with the sleeve *c* and the removable spindle *s*, the bows *a a*, joined at right angles, the plate *n*, secured to the inner face of one bow, and the plate *n'*, attached to the outer face of the other bow, and having the socket *e* extended through the inner plate, *n*, substantially in the manner described and shown.

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 6th day of September, 1882.

WILLIAM HURST. [L. S.]
JAKOB HURST. [L. S.]

Witnesses:

WM. C. RAYMOND,
F. H. GIBBS.