(No Model.)

W. CASE.

CHURN.

No. 325,910. Patented Sept. 8, 1885.

Fig. 1.

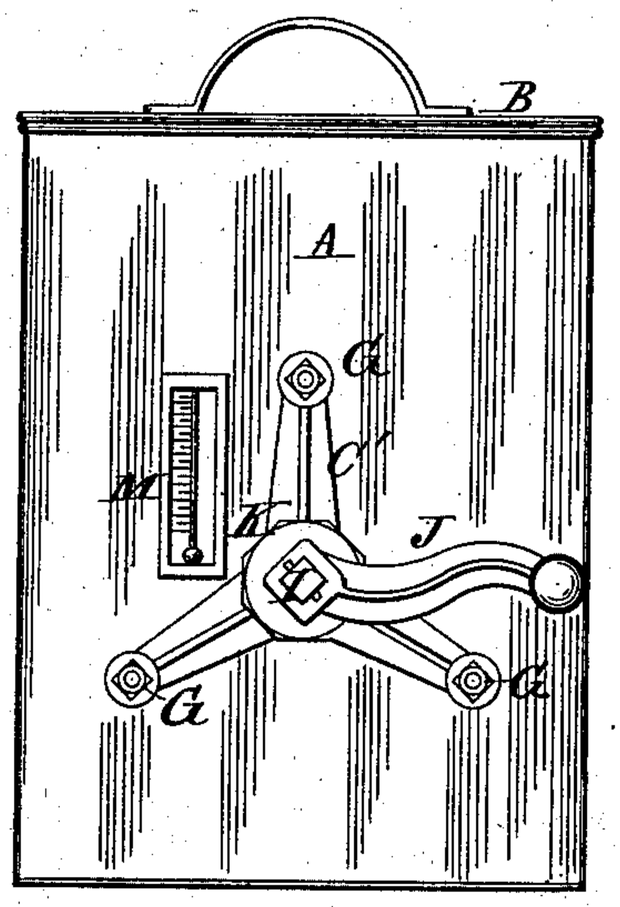


Fig. 8.

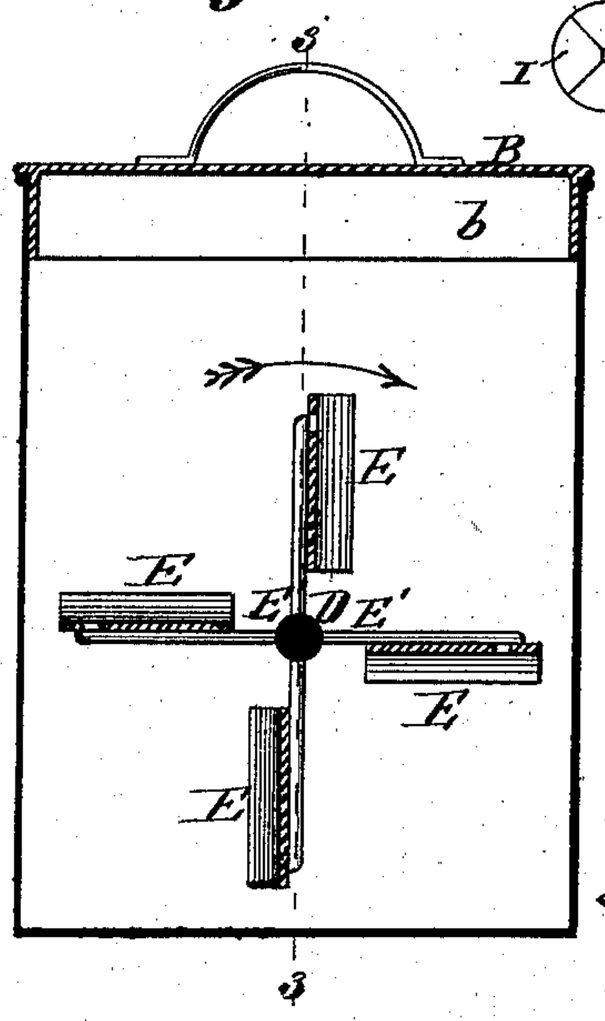


Fig. 5.

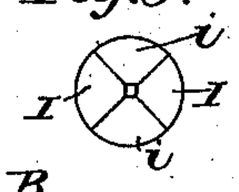


Fig. 6.

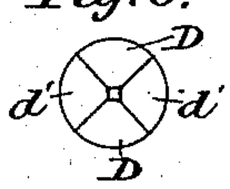
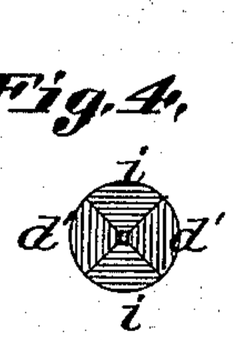


Fig. 3.

Fig. 4.



Attest;
Geo. L. Wheelock
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Attys.

UNITED STATES PATENT OFFICE.

WARREN CASE, OF COLLINSVILLE, ILLINOIS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 325,910, dated September 8, 1885.

Application filed March 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, WARREN CASE, of Collinsville, Madison county, Illinois, have invented a certain new and useful Improvement in Churns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This belongs to the class of churns in which a horizontal dasher-shaft turns in a fixed box or case.

Figure 1 is an end elevation of the churn. Fig. 2 is a vertical section at 2 2, Fig. 3; and Fig. 3, a vertical section at 3 3, Fig. 2. Fig. 4 is a vertical section at 4 4, Fig. 3. Fig. 5 is a view of the sector end of the shaft-section, and Fig. 6 is a view of the sector end of the dasher-shaft.

The case, box, or vessel A may be of any suitable form. I prefer, however, to make the box of a general square form with flattened or rounded corners.

B is the lid, whose flange *b* fits within the box.

At each end of the box is a spider, C C′, which give bearing to the ends of the dasher-shaft D, said shaft carrying dashers E, curved in the direction of their length and extending radially in the direction of their width, supported on radial arms E′ of the shaft. One of the spiders, C, carries at the center a bearing-boss, F, having a center or conical bearing or countersink, *f*, for the conical center *d* of the dasher-shaft, the boss extending through the end of the box or vessel A with a watertight joint. The arms of the spiders C C′ are secured to the ends of the box by bolts or rivets G.

At the center of the spider C′ is a stuffing-box cup, H, in which turns a shaft-section, I, to which the hand-crank J is secured. The dasher-shaft D and the shaft-section I are made with interlocking sectors *d′* and *i*, thus forming a simple clutch or coupling between the parts, the shaft-section serving to give support to that end of the dasher-shaft. The shaft-section I has a collar, *i′*, fitting the interior of the stuffing-box cup H, and against the outer side of which bears the screw-cap K of the stuffing-box.

L is a ring of stuffing between the collar and the inner end of the cup.

The construction is such that the shaft-section I has steady bearing in the stuffing-box by means of the collar *i′* and ring L within the stuffing-box cup and the cap K and inner end of the cup, which fit the shaft and are adjusted together so as to press against the collar and ring. The cap K, by its bearing against the collar *i′*, holds the coupling *d′ i* firmly interlocked.

By simply unscrewing the cap the shaft-section can be drawn out a sufficient distance to release the dasher-shaft without removing the collar entirely from the cup.

M is a thermometer let into the end of the churn to indicate the temperature of the contents of the churn.

The dasher-wings E have perforations *e*, which serve to break up the cream or milk.

The dasher is made to revolve in the direction indicated by the arrow in Fig. 2, so that the liquid is drawn toward the middle of the wings and violently precipitated against the sides of the box or case A as the wings emerge from the liquid.

I claim as my invention—

A churn-dasher comprising a shaft having a conical inner end, *d*, sectors *d′* at its outer end, and shaft-section I, having sectors *i*, in combination with a bearing-boss, F, having conical countersink *f*, a stuffing-box, a collar surrounding the shaft-section in the stuffing-box, and a screw-cap, K, substantially as set forth.

WARREN CASE.

Witnesses:
SAML. KNIGHT,
GEO. H. KNIGHT.