(No Model.)

J. ASKINS.

CHURN.

No. 344,232. Patented June 22, 1886.

Fig. 1.

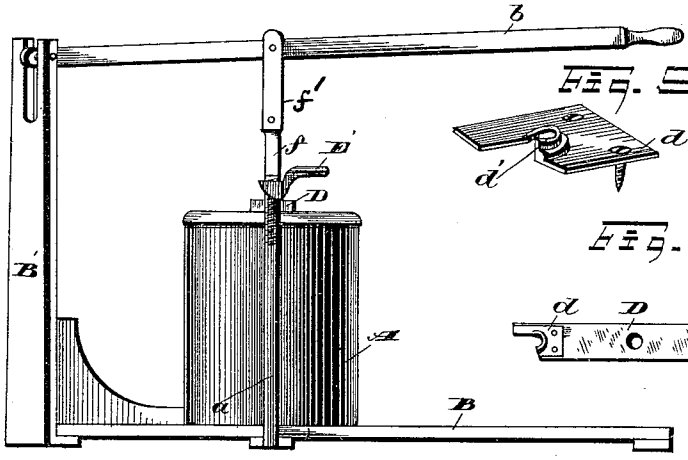


Fig. 5.

Fig. 4.

Fig. 2.

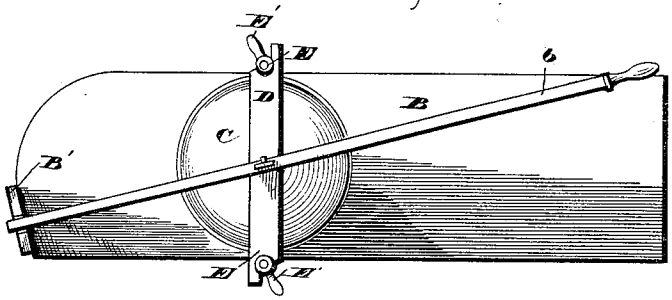


Fig. 3.

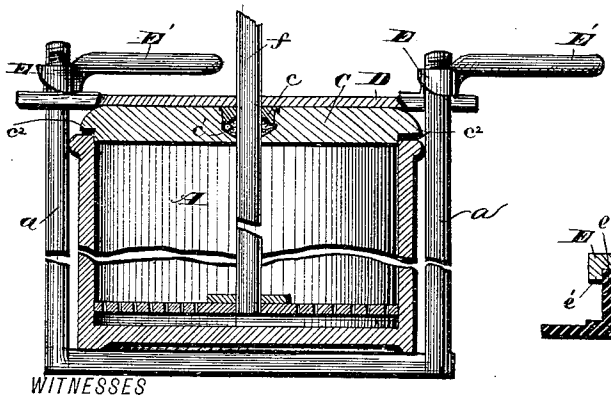
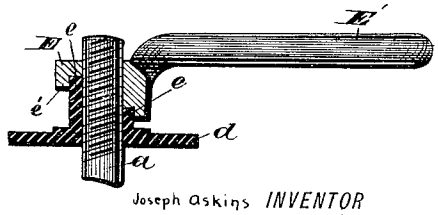


Fig. 8.



WITNESSES

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JOSEPH ASKINS, OF LIMA, OHIO.

CHURN.

SPECIFICATION forming part of Letters Patent No. 344,232, dated June 22, 1886.

Application filed March 17, 1886. Serial No. 195,548. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ASKINS, of Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Churns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in churns, the object being to confine the air in the churn by means of packing about the dasher-rod, and between the cover and container, by means of which the confined air is made to permeate the cream with each stroke of the dasher, resulting in a speedy separation of the butter.

A further object is to provide a cross-bar that is conveniently placed in position or detached, for compressing the packing about the dasher-rod, and for holding the cover on the container and compressing the packing between the cover and container to form an air-tight joint.

A further object is to provide inclines on the cross-bar with screw-rods and nuts for securing the cross-bar, the nuts having cam-faces for engaging the inclines, to the end that the cross-bar is quickly secured or released.

My invention also relates to the details of construction hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of my improved churn. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged elevation in section of the principal parts of the churn. Fig. 4 is a plan view of the cross-bar that secures the churn-cover. Fig. 5 is an enlarged view in perspective of a plate that is secured to the end of the cross-bar. Fig. 6 is an enlarged elevation in section of the cam-plate and cam-nut in position on the securing-bolt.

A represents the container, that in small churns is preferably an ordinary crock or jar, with which article farmers are usually plentifully supplied. The churn stands upon a platform, B, that has a standard, B′, at one corner, to which is pivoted the hand-lever *b*, for operating the churn. The lever runs diagonal with the platform, by which arrangement standing-room is left on the latter for the operator. The platform has attached upright screw-rods *a*, for holding the churn and attachments in position.

C is the cover, usually of wood, and has a depression around the dasher-rod, into which depression fits the gland *c*, forming a stuffing-box, in which is placed packing *c′*, consisting usually of a rope of rags or other suitable material. An elastic gasket, c^2, preferably of rubber, is placed between the cover and container.

D is a cross-bar, that when secured in position on the rods *a* presses the cover on the gasket and forms an air-tight joint, and at the same time forces down the gland *c*, compressing the packing around the dasher-rod. The peculiar construction of this cross-bar and attachments to render them convenient are illustrated in Figs. 4, 5, and 6. The cross-bar is cut away at the ends, as shown in Fig. 4, by means of which, when it is placed on the rod *f*, by turning the bar laterally in one direction or the other it is made to engage or disengage the bolts *a*. Plates *d* are secured on top of either end of the cross-bar that have, respectively, upwardly-projecting ribs *d′*, that are curved so as to be concentric with the adjacent bolt *a*, when the parts are in position. The upper face of the rib *d′* is inclined circumferentially. This rib is usually about a quarter of a circle.

E are nuts threaded to engage the screw ends of the rods *a*, and have short hand-levers E′, for turning the nuts. The under side of the nut is cam-shaped at *e*, to correspond with and engage the inclined face of the rib *d′*, and has a depending lip, *e′*, that hooks over the outside of the rib *d′* and holds the parts in place. If the screw-threads alone were relied upon to tighten the parts, several turns of the nut would be necessary; but with the cams operating in the same direction as the screw-thread a quarter-turn of the nut is usually sufficient to tighten or loosen the cross-bar. The lip *e′* is cut away on one side, so as not to interfere with swinging the cross-bar, plates, and ribs into position around the rod *a*, or swinging them away from the rod when the nuts are loosened. (See Figs. 1 and 3.)

F is a perforated dasher that is made to fit the container as closely as may be and move easily. The dasher-rod *f* is pivoted to the link or connecting-rod *f′*, that in turn is pivoted to

the lever *b*. By moving the pivotal pin that connects the rods *f* and *f'* the parts are easily separated for cleansing, and are as easily assembled for churning.

When a dasher of the kind shown is raised quickly, it will of course elevate a considerable quantity of cream, and if the cover fitted loosely, as is usually the case with this class of churns, a quantity of air would be forced out of the churn with each upward movement of the dasher.

With my improved churn, the air being confined is forced to permeate the cream much more thoroughly than if such permeation depended on atmospheric pressure alone, and this air, as it passes up through the cream, produces an ebullition in the latter that is of great advantage in hastening the separation of the butter from the residuum or whey, and it is found in practice that under the same circumstances otherwise the churning can be done some minutes quicker when the cover is made tight than with the cover fitting loosely.

The device is cheap, simple, and convenient, and of such construction that almost any farmer can keep it in repairs.

What I claim is—

1. In a churn, the combination of a cross-bar for securing the cover of the churn, and pivoted on the dasher-rod, so as to turn laterally, screw-rods secured to the supporting-platform, and nuts on the screw-rods for depressing the cross-bar, the latter being cut away at the ends to permit it to be turned to or from its engagement with the screw-rods, substantially as set forth.

2. In a churn, the combination, with a churn-body, of a cover having a stuffing-box, through which the dasher-rod passes, screw-rods located alongside of the churn-body, a cross-bar pivoted on the dasher-rod and adapted to engage the rods, and nuts mounted on the screw-rods and adapted to engage the ends of the cross-bar, substantially as set forth.

3. In a churn, the combination of a dasher-rod, a cross-bar pivoted thereon for holding the cover in position, screw-rods, and nuts secured on the screw-rods and engaging the ends of the cross-bar, the said cross-bar and nuts having engaging cam-faces, substantially as and for the purpose set forth.

4. The combination of the container with the cross-bar D, arranged to embrace the dasher-rod and turn laterally thereon, and cut away at its ends, as shown, the cover having plates *d*, with inclined ribs *d'*, the screw-rods *a*, and nuts E, having cam-faces for engaging the ribs, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 25th day of September, 1885.

JOSEPH ASKINS.

Witnesses:
MARTIN L. BECKER,
JOHN E. RICHIE.