

(No Model.)

M. M. McDILL.
CHURN.

No. 424,335

Patented Mar. 25, 1890.

FIG. 1.

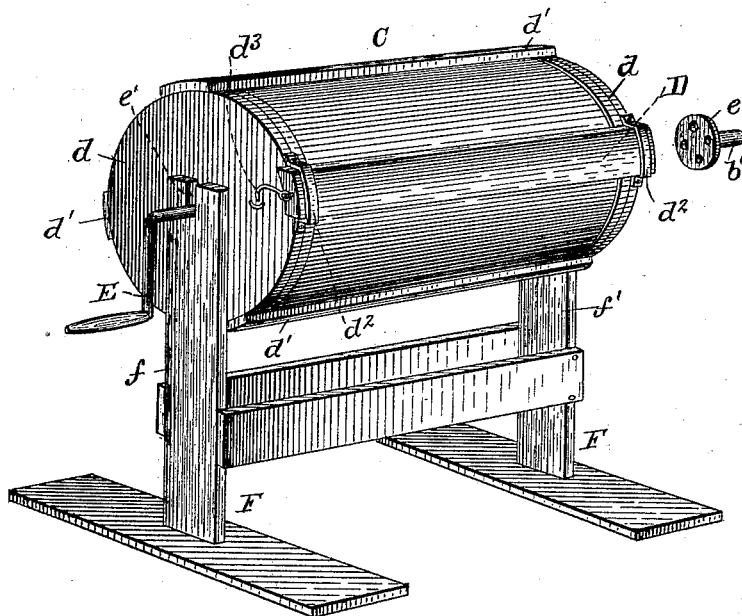


FIG. 2.

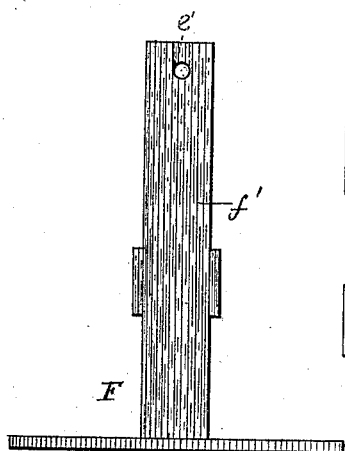


FIG. 4.

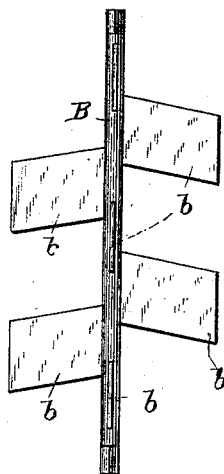
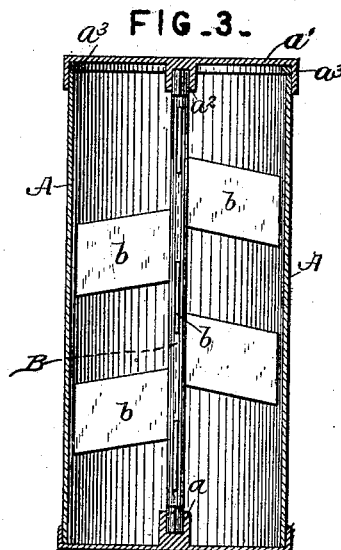


FIG. 3.



Attest:
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UNITED STATES PATENT OFFICE.

MARY M. McDILL, OF ORA, SOUTH CAROLINA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 424,335, dated March 25, 1890.

Application filed October 23, 1889. Serial No. 327,889. (No model.)

To all whom it may concern:

Be it known that I, MARY M. McDILL, a citizen of the United States of America, residing at Ora, in the county of Laurens and State of South Carolina, have invented certain new and useful Improvements in Churns, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in churns, having for its object the provision of improved and highly-efficient means for readily effecting the churning operation in a short space of time and with the exercise of but little labor. It has as a further object the production of a churn the milk can or receptacle of which is devoid of all crank or trunnion connections, whereby the splitting of the can, resulting in the leakage of the contents, is avoided.

The invention comprises the detail construction, combination, and arrangement of parts substantially as hereinafter fully set forth, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a view in perspective of my improved churn. Fig. 2 is a side elevation of the supporting-stand. Fig. 3 is a vertical sectional view of the receptacle and dasher. Fig. 4 is a detail view of the latter.

Referring to the drawings, A designates a circular can or receptacle, provided on its bottom with a square-shaped socket *a*. The lid or cover *a'* is also provided with a similar socket *a'*, and around this cover is preferably placed a washer *a''* to prevent leakage.

B is the dasher, which is preferably a circular rod having square ends corresponding to the sockets *a* and *a'*, in which they are designed to fit, so as to prevent the turning of said dasher independent of the can or receptacle. This rod is provided with a series of spirally-arranged dasher-arms *b*, the ends of which nearly touch the inner wall of the can or receptacle.

C is an inclosing frame or holder, consisting of two circular end pieces or heads *d* and a series of rigid connecting bars or slats *d'* and a removable bar or slat D. This latter bar or slat is held at its ends by keepers *d''*, and is

engaged by a hook *d'''*, secured to one of the heads *d*. From one end of this frame projects a short circular stud *e* and from its other end a crank-handle E. This crank-handle is designed to bear in a slot or opening *e'* in the upper end of a standard *f* of a stationary frame F, while the stud *e* fits a hole or opening in the upper end of a similar standard *f'* of said frame. Thus the frame or holder is free to revolve in the frame F by simply turning the crank-handle thereof. I have shown this frame or holder as being circular; but it is obvious that the same may be made square in cross-section, if desired.

In practice, after the milk has been placed in the can or receptacle and the cover firmly secured thereon, said can or receptacle is placed within the inclosing-frame and the bar or slat is replaced and firmly held by its engaging-hook. The churning operation is then effected by turning the crank-handle, and the milk, which has a tendency to remain at the bottom of the can, is continuously kept in motion or agitated by the spirally-arranged arms of the dasher, whereby butter is soon produced. The spiral arrangement of the dasher-arms and the holding of the dasher rigid serve to keep the milk in a continuous roll, and thus the churning operation is greatly accelerated.

I am aware that it is not new to provide a rotary churn with a rigid dasher, and also to pivot the can or receptacle directly in a supporting-frame, and hence I do not make broad claim covering such construction and arrangement. My invention is designed as an improvement thereover, the same consisting, first, in arranging the dasher-arms spirally, and, secondly, inclosing the can or receptacle in a frame, to which latter the pivotal supports are secured, thereby preventing cracking or tearing and loosening where such supports are generally secured, and thus preventing leakage.

My churn is extremely simple in construction, is readily and easily operated, and the waste of milk or cream during the operation is entirely avoided.

While I have only shown a crank for operating my improved churn, it will be understood, of course, that I do not limit myself

thereto, since the same can also be operated by a treadle, a spring-motor, or any other suitable means.

I am aware that it is not new to construct
5 a revoluble churn with a stationary dasher, and also that clamping revolving frames for holding a churn have heretofore been used; hence I do not make broad claim covering such features independently.

10 I claim as my invention—

As an improvement in churns, the combination, with the horizontally-disposed frame having end pieces or heads, the rigid connecting bars or slats, and a removable bar carry-

ing a hook at one end, the stud *e*, and crank- 15 handle *E*, secured to said end pieces or heads, of the stationary frame *F*, wherein said inclosing-frame is pivotally mounted, and the churn cylinder or receptacle designed to be secured in said inclosing-frame and having a station- 20 ary dasher, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARY M. McDILL.

Witnesses:

J. W. SHELL,

G. F. LITTLE.