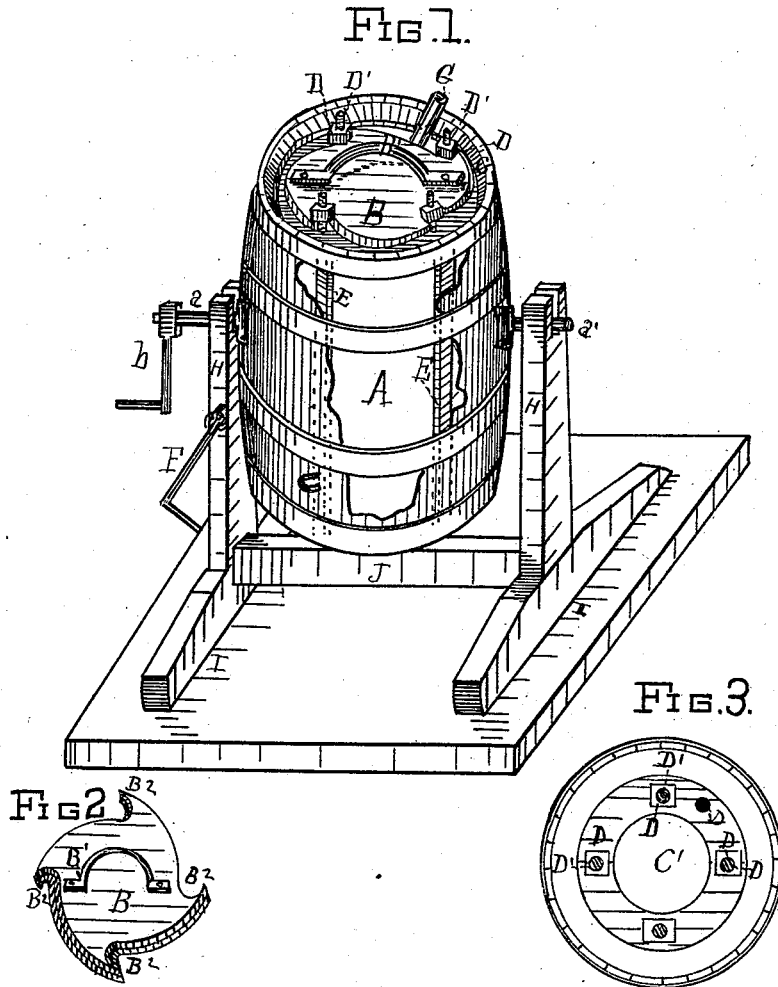


J. McDERMAID.
ROTARY-CHURN.

No. 183,585.

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WITNESSES
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JOHN McDERMAID, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. **183,585**, dated October 24, 1876; application filed June 24, 1876.

To all whom it may concern :

Be it known that I, JOHN McDERMAID, of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Churns; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure 1 is a perspective view of the churn, with one side broken away, showing the beaters within. Fig. 2 is the cover detached from the head, and Fig. 3 is a top view of the head with the cover removed.

Similar letters of reference denote corresponding parts in all the figures.

The object of the invention is to provide a revolving and barrel-shaped churn with secure heads, and still have a suitable opening for the admission of the cream or other fluid; and the churn consists of a solid head of the usual form, which is designated the bottom. The other or top head is made of metal, with an opening through the center, and is secured in place by having the periphery enter the groove made with the cooper's croze, and held in position by hoops in the usual manner. It further consists of a peculiar-shaped removable cover made of any suitable material, either of metal or wood, or both combined, and having a handle attached, by which, when the same is secured to the body, the churn can be lifted from the frame and carried from place to place, as may be desired. It still further consists of longitudinal beaters or wooden bars, having each of their ends resting against the upper and lower heads, and secured in a position to give space between the said bars and the inner side of the churn-body, for the purpose of breaking the cream, and to assist in separating the globules of butter from the milk, all of which will be hereinafter explained.

A is the churn-body, having journals *a a* secured to the churn-body on opposite sides, near the longitudinal center, so that when in working position, before filling with cream, the whole is evenly balanced. The journal *a* is provided with a crank, *b*, by means of which a revolution end over end may be given the churn. B is the cover, having a handle, *B¹*, by which the cover can be removed, or, when

secured in position, the whole body can be carried. This cover is provided with packing between it and the open head upon which it rests, which prevents leakage when in use. It is also further provided with hook-shaped ears *B²* upon its periphery, by which, in connection with securing-bolts, the said cover can be fastened to the open head. C is a ring which enters within a groove such as is ordinarily made for the reception of the barrel-head, and is preferably made of metal; but wood may be used. C' is an opening, circular in form, made in the head, which forms the ring by the said opening before this part is made a part of the churn by being secured in the aforesaid groove. This opening is for filling and discharging purposes. D D are the thumb-nuts upon the screw-thread bolts D', and by which, in connection with the ears *B²*, the cover B is fastened to the ring or head C. E E are beaters or bars placed inside of the churn, flush with the opening C', and running the entire length of the body from head to head, and secured to the same in such manner that they can be readily removed for cleaning or other purposes. These beaters serve to break and agitate the cream more fully than is done by the even surface of the body when the same is revolved. F is a hook-fastening which hooks into suitable eyes secured to the body, and by which the churn can be secured in a vertical position when it is desired to either fill or empty the same. G is a plug or stopper to the vent-hole, by which the gaseous matter is allowed to escape, which forms during the process of churning, and it is also used for drawing the buttermilk or other fluid from the churn, as may be desired. H H are uprights of the frame-work, upon which the churn is mounted. I I are the supporting-sills, to which the said uprights are secured, and J the cross-bar uniting the same together in the usual manner.

The operation is as follows: When the churning is to be done the barrel is, by the handle on the cover, raised and placed in position, with the journals resting in the boxes or bearings in the uprights, and, when locked in position by the hook, the thumb-nuts are loosened, the cover by its handle is turned around sufficiently far for the ears to clear the thumb-nuts, when it can be lifted off, and the cream

can be poured through the opening in the head, the plug inserted in the vent-hole, the cover again placed upon the head, closing the opening, and, by the packing and screw-bolts carrying the nuts, the end is made tight and secure, when the churn can be unlocked from the frame, and, by the use of the crank, the whole body, with the inclosed cream, is revolved until, by the said revolution and with the help of the beaters, the butter is separated from the milk, when the churn can again be locked and the cover removed, as well as the contents.

Having now described my invention, what I desire to secure by Letters Patent is—

1. The combination of the churn-body A, the open head C secured to the body as described, provided with the cover B, having the handle B¹, for removing and carrying purposes, substantially as described.

2. The cover B, provided with ears B², in combination with the head having the opening C', screw-nuts D, and screw-bolts D', all arranged and operating substantially as shown and described.

3. In a revolving barrel-shaped churn, having one solid head and one head with an opening, as shown, the removable longitudinal bars or beaters E, arranged and operating substantially as described, and for the purpose set forth.

This specification signed and witnessed this 14th day of April, 1876.

JOHN McDERMAID.

Witnesses:

G. W. FORD,
CHARLES S. FORD.