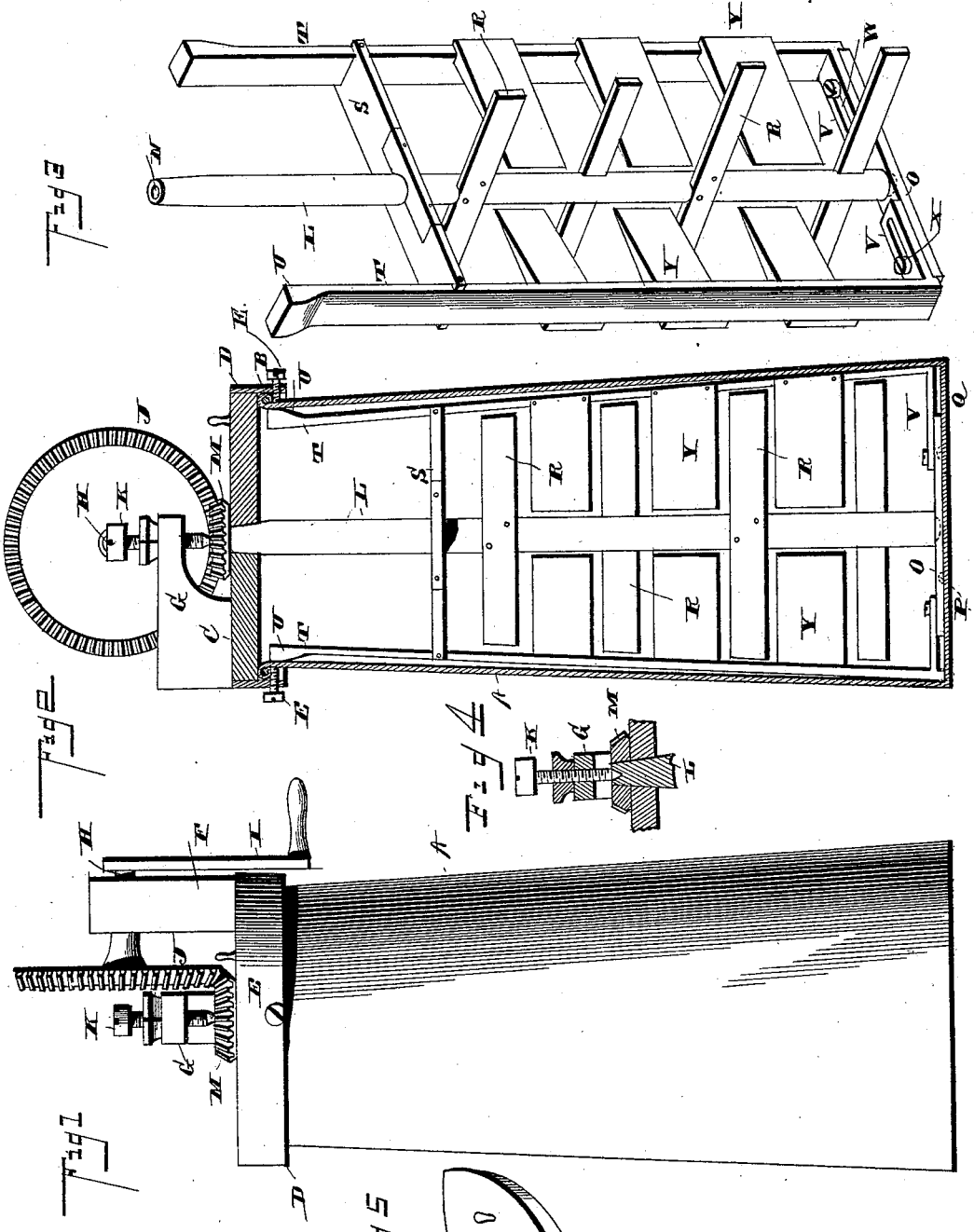
(No Model.)

C. T. BOYER.

CHURN.

No. 421,065. Patented Feb. 11, 1890.



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CHARLES T. BOYER, OF FRANKLIN, INDIANA.

CHURN.

SPECIFICATION forming part of Letters Patent No. 421,065, dated February 11, 1890.

Application filed October 9, 1889. Serial No. 326,479. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. BOYER, a citizen of the United States, residing at Franklin, in the county of Johnson and State of Indiana, have invented a new and useful Churn, of which the following is a specification.

My invention relates to improvements in churns; and it consists in certain novel features hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side view of my improved churn. Fig. 2 is a vertical section of the same. Fig. 3 is a detail perspective view of the dashers and breakers. Fig. 4 is a detail section through the connection for the upper end of the dasher-staff. Fig. 5 is a detail view of one of the sections of the lid.

The body A is of the usual upwardly-tapered construction, and is provided at its upper end with an annular flange or bead B, as clearly shown. The lid C is provided with a depending annular rim D, in which a series of set-screws E are mounted.

In practice the lid is placed on the body with the flange D passing over and below the bead or flange B, and the set-screws are then turned home, so as to bind against the body and engage under the bead, and thereby secure the lid on the body, so that it cannot be removed therefrom accidentally.

The lid is constructed in two sections or members, so that it may be easily fitted around the upper end of the dasher-staff, and on the upper side of the lid I secure a standard F and bracket G. The driving-shaft H is mounted in the end of the standard F, and is provided with a crank-handle I, by means of which it may be operated, and the driving-wheel J is secured on the inner end of the shaft. A set-screw K is mounted in the end of the bracket G, and the lower end of this screw is tapered, as clearly shown, so as to form a bearing-point for the upper end of the dasher-staff.

The dasher-staff L is provided at its upper end with a pinion M, which is adjustable on the staff, so that it may be made to engage a driving-wheel of greater or less diameter, and thus increase or decrease the speed of the machine. The upper end of the dasher-staff is provided with a recess N, which is engaged by the lower tapered end of the set-screw K, and its lower end is stepped in a cross-bar or base O, which is provided in its under side with sockets P, adapted to engage studs Q on the bottom of the churn-body, and be thereby prevented from rotating. The dashers consist of radial arms R, secured to the dasher-staff at stated points of its length, as clearly shown. A cross-bar S is mounted loosely on the dasher-staff near the upper end of the same, and to the ends of this cross-bar I pivot the breaker-supports T, having the wedge-shaped upper ends U, and having their lower ends provided with the inwardly-projecting arms V, which are provided with longitudinal slots W, engaging studs X on the upper side of the cross-bar O. The breakers Y project inward from the supports T and alternate with the dashers.

In practice the dasher and the breaker supports are inserted downward into the churn-body, and the wedges U at the upper ends of the breaker-supports will bear on the upper edge of the body, and thereby cause the lower ends of the breaker-supports to swing outward over their pivots on the cross-bar S, so that the supports will bind against the inner surface of the body, and thereby aid in supporting the dasher-staff in a vertical position. The cream is then placed in the body, after which the lid is fitted in place and secured and the dasher-staff rotated, as will be readily understood. When it is desired to remove the butter, the lid is taken from the body, after which the dasher is removed, as will be readily understood. As the dasher is raised the breaker-supports will be caused to bind on the upper edge of the churn-body, so that their lower ends will be thrown inward, thus permitting the easy removal of the device from the body and preventing the rotation of the dashers.

From the foregoing description it will be seen that I have provided a device in which the dasher and breakers can be easily applied to the common frusto-conical churn-body and will be firmly supported therein while in use.

The device can be easily operated, is very simple in its construction, and produces butter very rapidly. The dashers and breakers

are so arranged that the butter will be quickly separated from the milk and cream without destroying the grain of the butter.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the dasher and the body, of the cross-bar mounted on the dasher-staff and the breaker-supports pivoted to the ends of the cross-bar and adapted to be thrown to and away from each other by the churn-body, as set forth.

2. The combination, with the churn-body and the dasher-staff mounted therein, of the cross-bars O and S, the breaker-supports pivoted to the ends of the cross-bar S and having wedge-shaped enlargements at their upper ends, and the arms or plates at the lower ends of the breaker-supports provided with longitudinal slots engaging studs on the cross-bar O, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHAS. T. BOYER.

Witnesses:
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