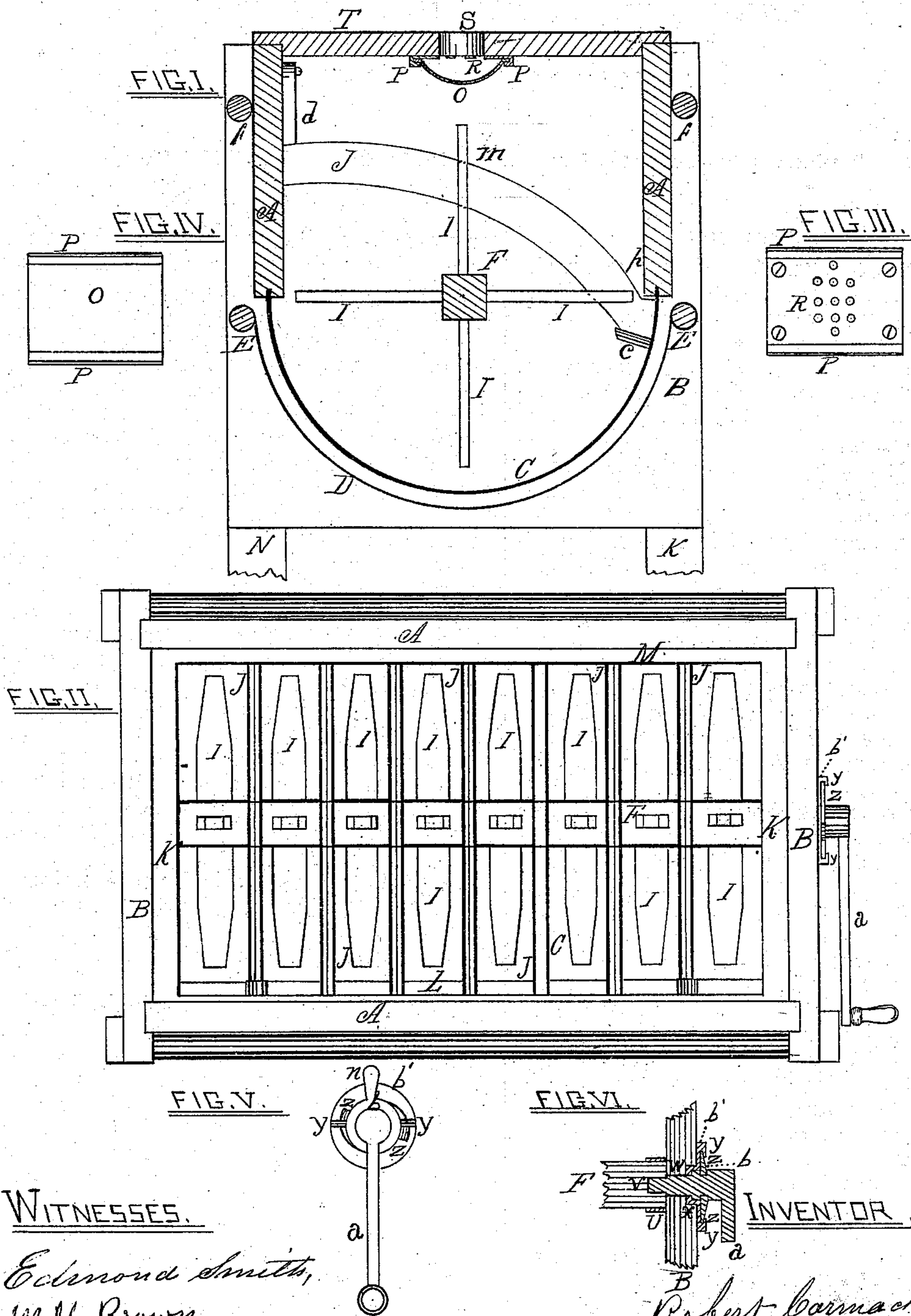


ROBERT CARMACK.  
Improvement in Churns.

No. 125,660.

Patented April 16, 1872.



WITNESSES.

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INVENTOR

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## UNITED STATES PATENT OFFICE.

ROBERT CARMACK, OF MARENGO, ILLINOIS.

## IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 125,660, dated April 16, 1872.

## SPECIFICATION.

I, ROBERT CARMACK, of Marengo, in the county of McHenry and State of Illinois, have invented an Improvement in Churns, of which the following is a specification:

The nature of the present invention consists, first, in the novel means employed to hold the removable shaft in position during the operation of churning, so that the bearing shall be cream-tight; second, in the novel construction of the ventilator for admitting air to the cream, and, at the same time, excluding dust.

In the drawing, Figure 1 is a vertical cross-section of my improved churn; Fig. 2, a plan view of the same; Fig. 3, an inverted view of the ventilating-plate with cap-plate removed; Fig. 4, an inverted view of the ventilating-plate and its cap removed from the under side of the lid of churn-box; Fig. 5, an end elevation of the devices for connecting the dasher-shaft with the crank. Fig. 6, a vertical section of the devices for connecting the said shaft and crank.

A A represent the sides of the churn-body; C, the semicircular bottom of the body; B, the ends of the body; and T, the top or lid, all of which are constructed in the ordinary manner, except the parts hereinafter especially described and claimed. A semicircular water-tank, D, is placed a little distance below the bottom C of the body for the purpose of receiving hot or cold water, as the case may require, to temper the cream. The ends of the tank-plate at E are formed around the rods which hold the lower parts of the ends B to the body of the churn, by means of which these several parts are simple of construction and very strong. The lid T is provided with a ventilator of novel construction as follows: A plate, R, Figs. 1 and 3, has its central part perforated with a suitable number of holes to admit air into the churn-body, and its edges P P are turned over so as to form grooves for the reception of a cap or slide, O, which readily allows air to pass in at its ends, while, at the same time, cream is prevented from escaping by reason of the said cap. K L M represent a movable frame, which is provided with breaks or slots J made in curved forms, as shown in Fig. 1, and arranged with reference to the dashers I, so that the latter will rotate

between them when operated upon by turning the crank *a*. The upper and lower edges of these breaks are made quite sharp, so as readily to separate the cream as it is forced between them by the dashers I. The object of making the breaks curved in form is that the dashers I may move between them for considerable space, and thus secure increased friction by the use of a single rack; and that butter may be the better gathered after separation. This advantage of construction is obtained by giving to the dasher-shaft F a reversible motion, forcing the butter from *m*, Fig. 1, into the angle *p*, same figure. This movement will force buttermilk from the gathered butter. The lower edge of the rack bears on two lugs, *c*, fastened to the ends B of the churn-body, and it is held in place by means of two buttons, *d*, pivoted to one side of the body. By swinging these buttons up the rack can be lifted out of the churn-body for cleaning, removing butter, &c. In connection with the break I use tapered dashers I for the purpose of forcing the butter, cream, &c., outwardly toward the body of churn where the friction is greatest.

I have been thus particular to describe the peculiar construction of the churning devices that the churn may, in every particular, be complete; but the rack is not considered new, and is, therefore, not claimed.

The means for connecting the dasher-shaft with the crank consist of a circular plate, *b*, Figs. 2, 5, and 6, which is countersunk into the end of the churn-body at *x*, and provided with inwardly-projecting lugs *yy*, under which a plate, *b*, is turned to hold the crank in the shaft F. This plate *b* is fitted to turn on the shaft W, and it is provided with one or more arms, *n*, for the convenience of turning the cams Z Z on plate *b* under the lugs when the crank *a* is to be attached to the shaft F, the edges of the cams being somewhat sharpened readily to catch under said lugs. The shaft W passes through the end of the churn-body, and its square end *v* fits into the end of shaft F, so that when the crank *a* is turned the shaft F will be rotated. To remove the shaft F, turn the plate *b* to the left by means of arms *n*.

Having thus described my invention, what I claim is—

1. The combination of the crank *a*, shaft W provided with square end *v*, plate *b'* provided with lugs *y y*, and the plate *b* provided with one or more arms, *n*, when operating the shaft F, as and for the purpose set forth.

2. The ventilating-plate R turned over at its edges P, and combined with the curved

cap-plate O, which is open at its ends to admit air into the churn, as described.

ROBERT CARMACK.

Witnesses:

ROBERT MORRIS,  
G. V. WELLS.