

No. 763,636.

PATENTED JUNE 28, 1904.

C. Y. ROBERTS.
CHURN.

APPLICATION FILED SEPT. 11, 1903.

NO MODEL.

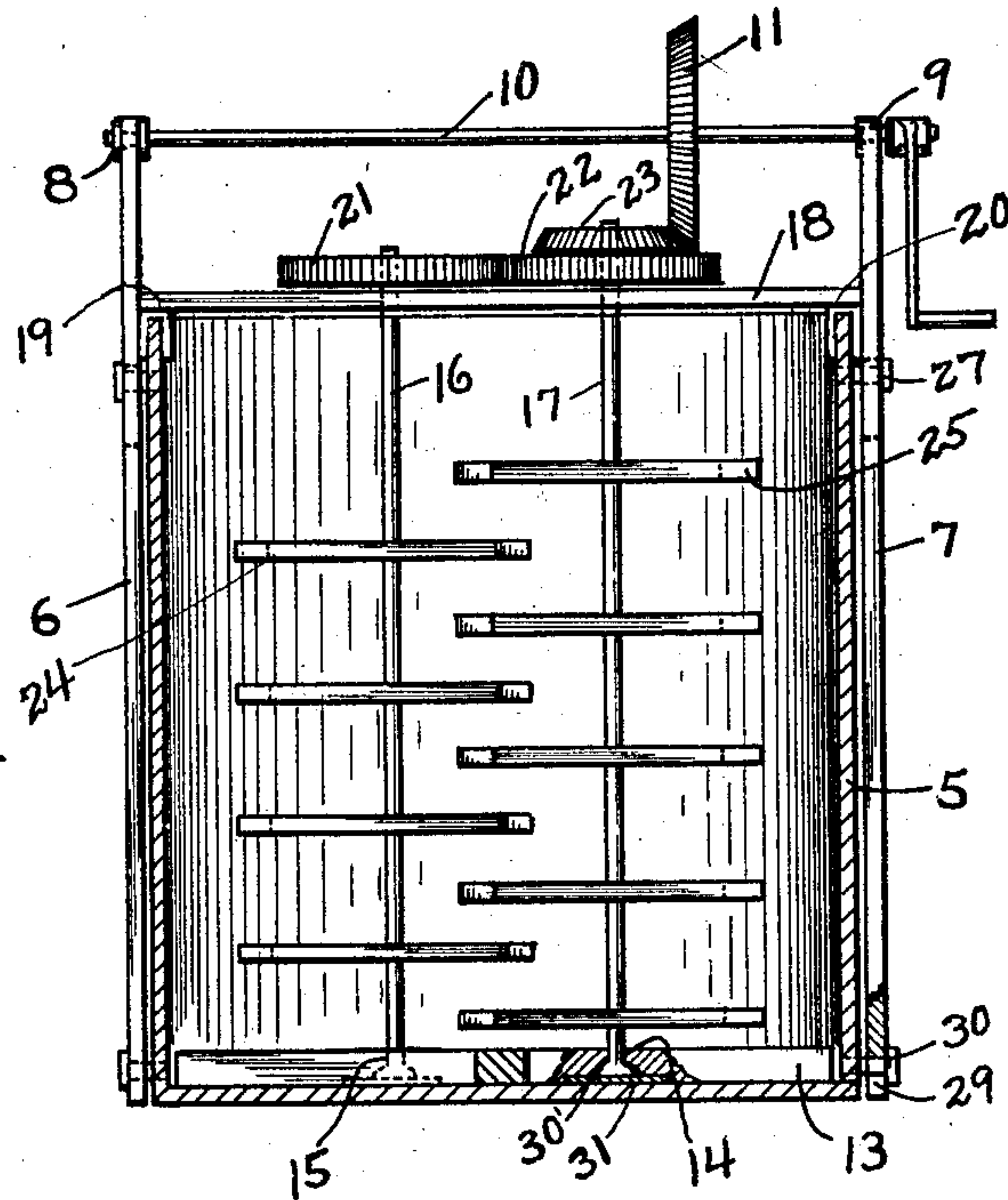


Fig. 1.

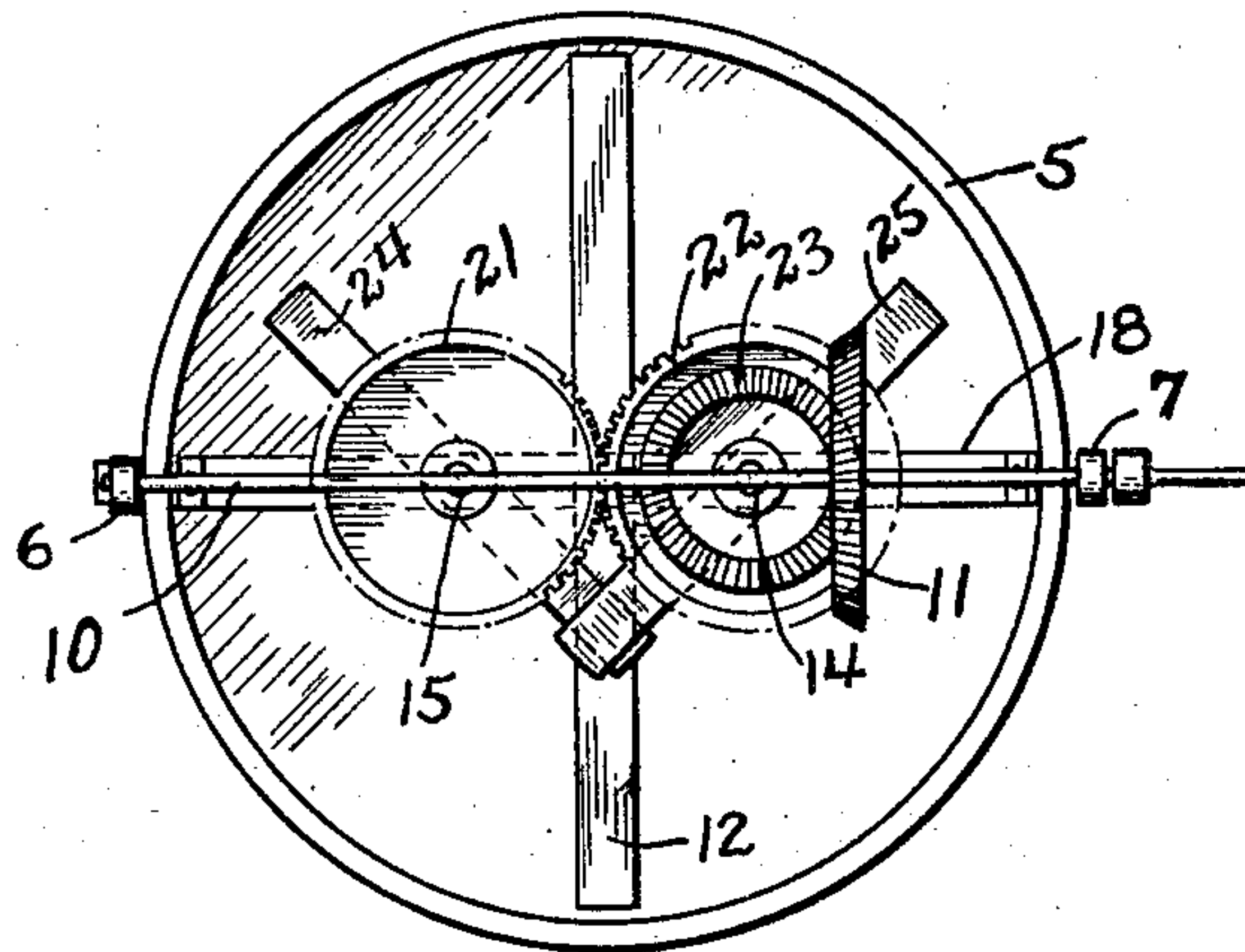


Fig. 2.

Witnesses
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Inventor
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By *Handwritten Signature*
Attorneys

UNITED STATES PATENT OFFICE.

CHANDLER Y. ROBERTS, OF CARADAN, TEXAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 763,636, dated June 28, 1904.

Application filed September 11, 1903. Serial No. 172,803. (No model.)

To all whom it may concern:

Be it known that I, CHANDLER Y. ROBERTS, a citizen of the United States, residing at Caradan, in the county of Mills, State of Texas, 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 appertains to make and use the same.

This invention relates to churns, and more particularly to the class of rotary-dasher churns, the object of the invention being to provide a churn wherein there will be employed two dashers having their paddles or wings alternated, the dashers having a single crank for rotating them simultaneously and the entire mechanism being so arranged that the dashers may be easily and quickly applied to the churn and removed therefrom.

In the drawings forming a portion of this specification, in which like numerals of reference indicate similar parts in both views, Figure 1 is a vertical section through the churn, parts thereof being shown in elevation. Fig. 2 is a top plan view of the churn.

Referring now to the drawings, there is shown a churn comprising a body 5, at diametrically opposite points of the sides of which are uprights 6 and 7, having bearings 8 and 9 at their upper ends, in which is rotatably mounted the crank-shaft 10, which carries a gear-wheel 11.

Within the body 5 of the churn is a movable frame comprising the cross-pieces 12 and 13, having bearings 14 and 15 therein which receive the lower ends of dasher-shafts 16 and 17, respectively, the upper ends of which are rotatably mounted in a cross-beam 18, having clips 19 and 20 at its ends which engage the upper edge portion of the churn-body, so that the beam is held securely to the body and lateral displacement of the dasher-shafts is prevented.

Fixed to the upper ends of the dasher-shaft above the beam 18 are intermeshing pinions 21 and 22, the latter having a bevel-gear 23 formed upon its upper face, with which is engaged the gear-wheel 11, so that by rotation

of the crank-shaft 10 both shafts 16 and 17 will be rotated with their adjacent faces in the same direction.

Upon the shaft 16 are fixed a number of radiating dasher blades or arms 24, while upon the shaft 17 are fixed a number of similar blades or arms 25, the blades of one shaft alternating vertically with those of the other shaft and overlapping them.

The cream to be churned is placed in the body of the churn and the crank-shaft rotated, as will be understood, so that the two dashers operate upon the contents of the churn to produce the butter. After the butter is produced the dashers may be removed from the body to facilitate the removal of the butter.

To permit of removal of the dashers from the churn-body, the shaft 10 and the bevel-gear 11 must first be swung laterally or from over the dasher-shafts. The upper portions of the uprights 6 and 7 are slotted vertically, and through these slots are passed pivots 27, that are engaged with the churn-body, so that the uprights 6 and 7 may have a vertical movement to raise the gear 11 from the gear 23, and the uprights may then be swung laterally to a degree sufficient to permit of disengagement of the clips 19 and 20 from the upper edge of the churn-body and subsequent removal of the member 18 and the member 13, with the dashers and their gears.

After the dashers have been put in place in the churn-body the uprights 6 and 7 are swung back to their vertical positions and are then lowered to engage the gear 11 with the gear 23. To hold the uprights in their vertical positions with the gears 11 and 23 engaged, notches 29 are formed in the lower ends of the uprights, and pins 30 project from the body of the churn, so that when the uprights have been swung into vertical position and then lowered to engage the gear 11 with the gear 23 the pins 30 will be received in the slots 29 of the uprights, the upper slots of the uprights being sufficiently long to permit of vertical movement of the uprights to engage and disengage the pins 30 with the slots 29. In order that the bottom frame may be removed with the dashers, the lower ends of the

dasher-shafts may be enlarged, as shown at 30', and received in cup-shaped bearings, in which they are held by plates 31.

What is claimed is—

- 5 A churn comprising a body, uprights pivotally and slidably mounted upon the upper portion of the body, said uprights having notches in their lower ends, pins disposed in the lower portions of the sides of the body in
10 position to enter the said notches to hold the uprights against pivotal movement, a crank-shaft mounted at the upper ends of the uprights, a beam removably disposed upon the body, means for holding the beam in place, a
15 frame disposed loosely in the bottom of the

body, dasher-shafts having their upper and lower ends rotatably mounted in the said beam and frame respectively, the said shafts having dasher-blades which alternate vertically and overlap, intermeshing pinions carried by 20 the dasher-shafts, and a bevel-gear formed upon one of the pinions and with which the gear-wheel, which is mounted upon the crank-shaft, is engaged.

In testimony whereof I affix my signature in 25 presence of two witnesses.

CHANDLER Y. ROBERTS.

Witnesses:

F. S. TAYLOR,
I. W. LAIRD.