(No Model.)

J. N. NUTT.

CHURN.

No. 346,859. Patented Aug. 3, 1886.

Fig. 1.

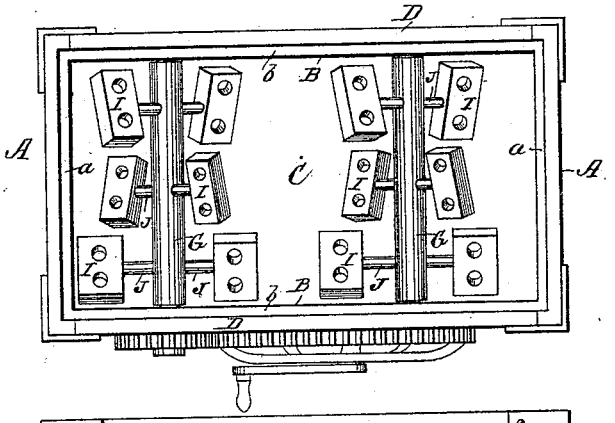


Fig. 2.

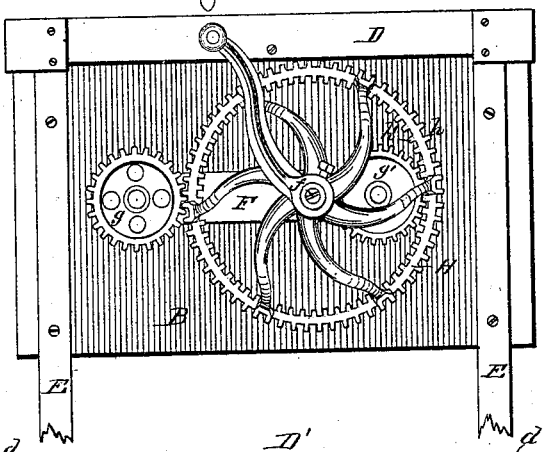


Fig. 3.

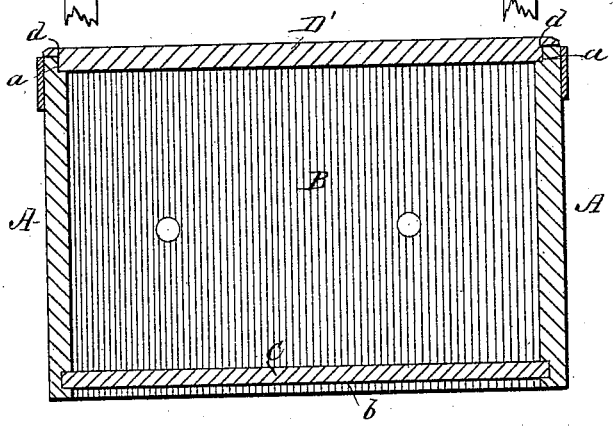


Fig. 4.

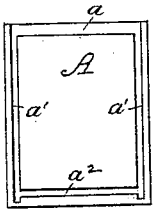
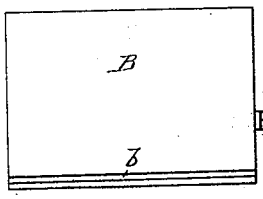


Fig. 5.



WITNESSES:

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JASPER N. NUTT, OF SIDNEY, OHIO, ASSIGNOR OF ONE-HALF TO GEORGE W. BUCKLEY, OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 346,859, dated August 3, 1886.

Application filed October 23, 1885. Serial No. 180,767. (No model.)

To all whom it may concern:

Be it known that I, JASPER N. NUTT, of Sidney, in the county of Shelby and State of Ohio, have invented a new and useful improvement in Churns, of which the following is a description.

My invention is an improvement in churns, and especially in that class of such machines known as "rotary" dashers; and it consists in certain novel constructions, combinations, and arrangements of parts, as will be described and claimed.

In the drawings, Figure 1 is a top plan view of my churn with the cover removed. Fig. 2 is a side view thereof with the cover in place. Fig. 3 is a longitudinal section of the churn box and cover, the dashers being removed; and Figs. 4 and 5 are detail views, on a reduced scale, of the inner side of, respectively, the end and side pieces of the churn-box, as will be described.

Each end piece A of the churn-body is formed at its upper edges with a rabbet, *a*, extending almost to its opposite sides. From the ends of the rabbet grooves *a'* extend downward, and communicate near their lower ends with a horizontal groove, a^2. The grooves *a'* are fitted to receive the side pieces, B, and the grooves a^2 the ends of the bottom C. The sides B are grooved at *b*, near their lower ends, to receive the side edges of the bottom. The sides terminate in plane with the base of rabbet *a*, and their upper edges form the base of the side wing of the rabbet, which extends around the mouth of the box. The upright walls of such side wings are formed of batten-bars D, secured alongside of and projected slightly above the sides B, and abutting at their ends flush against the end pieces A, as most clearly shown in Fig. 1. Metallic corner clamps may be secured on the upper corners, to give rigidity and strength to the box. The top D is formed with a rabbet, *d*, which fits the rabbet of the box, as shown in Fig. 3. Legs E are secured to the sides of the box against the projecting portions of ends A, and their upper ends are preferably lapped under the lower edges of the corner clamps, to prevent any warping or other spreading of the parts. A bearing-plate, F, is secured to one side of the box, and is provided with a stud, *f*, for the drive-wheel, and with bearings for the ends of the dasher-shafts. These shafts G G are journaled in the sides of the box, and have pinions *g g'* on one end, as shown.

The master or drive gear H has a suitable crank, and is journaled between the pinions *g g'*. I form this gear H with external teeth, *h*, meshed with pinion *g*, and with internal teeth, *h'*, meshed with pinion *g'*, and it operates to revolve the dashers in opposite directions.

As will be seen on reference to Fig. 2, the number of external teeth, *h*, on the master-wheel is just equal to the number of internal teeth, *h'*, on said wheel, and also that the pinions *g* and *g'* are of the same size. By this construction of the gearing the dasher-shafts are driven in unison, whereby the dashers are made to perform an equal amount of work.

Through each shaft G, at right angles to the axis thereof, are passed three rods, forming arms J on each side of the shaft, on which are secured perforated dasher-blades I. These rods are passed through the shaft in such a manner that the arms on each side will stand at an angle of about sixty degrees to each other, and the blades I are attached to the arms in such a manner as to stand obliquely to the axis of the shaft, the blade on one arm being inclined in a reverse direction to that on the opposite arm on the other side of the shaft. The dasher-shafts are located a considerable distance apart, as seen in Fig. 1, so as to leave a space in the middle portion of the box not traversed by the dashers.

By the above-described arrangement of the dasher mechanism the cream will the thrown alternately to the sides and the center of the box, causing the butter to settle in the middle portion of the churn, where it is left undisturbed by the dashers until the churning is completed.

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

The combination, with a churn-box, of two shafts, each of which is provided with dasher-

blades set obliquely to its axis, the arms bearing the blades radiating from the shaft at an angle to each other of about sixty degrees, the blade on one arm being inclined in a reverse direction to that on the opposite arm on the other side of the shaft, the shafts being placed a sufficient distance apart to leave a space in the middle of the box not traversed by the blades, and mechanism, substantially as described, for driving the shafts in opposite directions at the same speed.

JASPER N. NUTT.

Witnesses:
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ALBERT WILSON.