C. C. DEAN.

ROTARY CHURN.

No. 187,521. Patented Feb. 20, 1877.

Fig. 1.

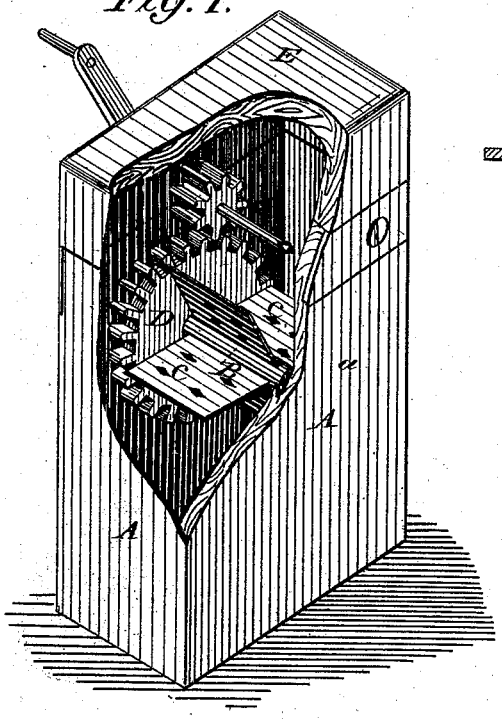


Fig. 2.

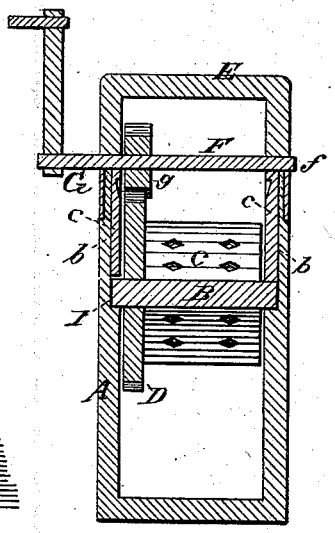


Fig. 3.

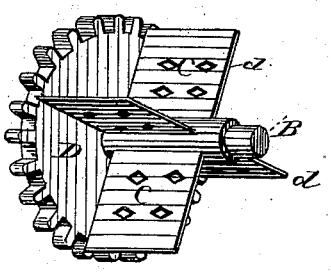
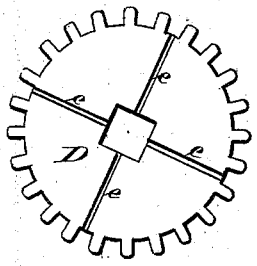


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES C. DEAN, OF SHERMAN, TEXAS.

IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. **187,521**, dated February 20, 1877; application filed September 25, 1876.

To all whom it may concern:

Be it known that I, CHARLES C. DEAN, of Sherman, in the county of Grayson and State of Texas, have invented certain new and useful Improvements in Churns; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference be being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a perspective view, partly in section. Fig. 2 is a vertical section. Fig. 3 is the dasher and gear-wheel, detached; and Fig. 4 is a plan view of the gear-wheel.

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

This invention relates to churns; and it consists in the arrangement, within a square wooden box, of a rotating dasher or paddle, and the mechanism for driving the same, the various parts being constructed, arranged, and operated in the manner hereinafter more fully shown and specified.

In the drawing, A is a square wooden box, which forms the body of my improved churn. It has a cover, E, closely fitting, which may be either hinged or attached to it, when in operation, by any suitable device. The sides of box A, indicated in the drawing by *a a*, have upon the inside dovetailed grooves *b b*. In the bearings thus formed I sink a shaft, B, which is secured in its position by slides *c c* fitting in the grooves *b b*. Shaft B carries the dasher or paddle-wheel C, which, as shown in the drawing, consists simply of two perforated boards, *d*, crossing each other at right angles. Shaft B also has the gear-wheel D, which, as shown in Fig. 4, has, on its inner surface, two grooves, *e*, crossing each other at right angles. Thus, when the wheel D is slipped upon axle or shaft B, the grooves *e* will fit upon the edges of the dasher C, the result of which is that these parts are fixed very solidly in their relation to each other—an object of great importance when the entire working mechanism is made of wood, which, in the construction of churns, is far preferable to metal, on account of its non-liability to rust or corrode.

Between the box A and its cover E, I arrange, in suitable bearings *f f*, a shaft, F, projecting, on one side, outside the box, where it has a crank, G, and having, inside the box, a drive-wheel, *g*, that engages with gear-wheel D of the dasher. The cover E of the churn must, of course, be high enough to admit of the drive-wheel *g* being freely revolved.

The operation and advantages of my improved churn will be readily understood from the foregoing description. After pouring the cream into box A the shaft F, with its attachments, is adjusted, and the cover E is put on and locked. The crank G is then rotated, when the drive-wheel *g*, by engaging with gear-wheel D, will rotate the dasher, which, as before said, may be of any suitable construction.

As soon as the butter is done the cover E and shaft F are removed, when the dasher may be easily taken out by simply removing slides *c c*. The contents may now be poured out, and the churn cleaned and put away for future use.

It will be observed that in my improved churn all the gearing is on the inside. This is a feature of great importance, as, by this arrangement I entirely avoid the use of lubricants.

My improved churn is made of wood throughout, and, owing to the peculiar construction and arrangement of its operating parts, which have already been fully described, it is cheap, easily operated, and cleanly.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The shaft B, having dasher or paddle-wheel C, in combination with the wooden gear-wheel D, having grooves *e*, substantially as and for the purpose hereinbefore set forth.

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

CHAS. CARROLL DEAN.

Witnesses:
J. G. RAINEY,
J. E. LOGSDON.