

(No Model.)

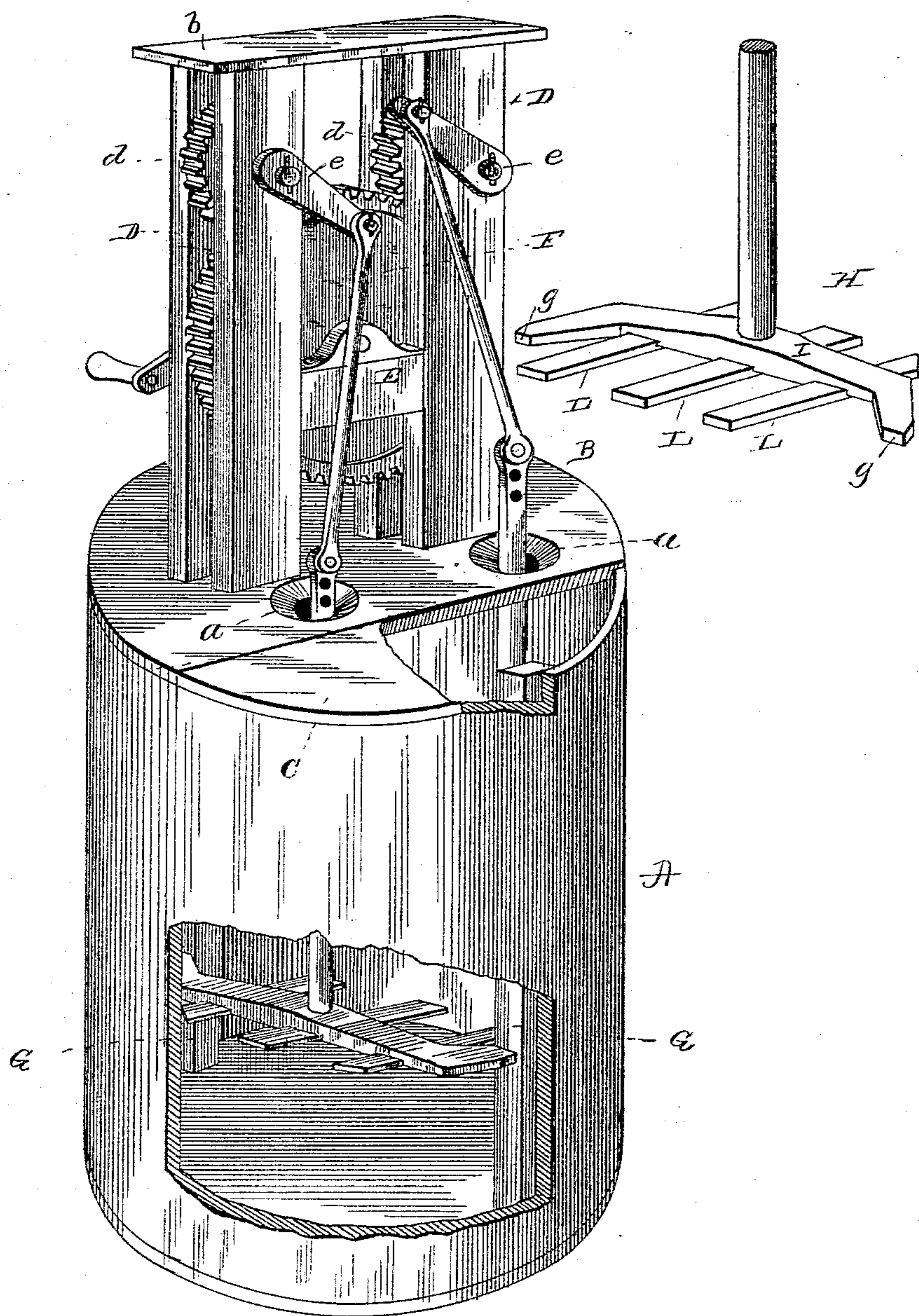
C. A. LORENZ.  
CHURN.

No. 339,308.

Patented Apr. 6, 1886.

Fig. 1.

Fig. 2.



WITNESSES:

E. A. Bond.

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# UNITED STATES PATENT OFFICE.

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## CHURN.

SPECIFICATION forming part of Letters Patent No. 339,308, dated April 6, 1886.

Application filed October 29, 1885. Serial No. 181,259. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. LORENZ, a citizen of the United States, residing at Rimerton in the county of Armstrong and State of Pennsylvania, 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 has relation to improvements in that class of churns known as "vertical double-dasher churns;" and it consists in the peculiar construction, novel arrangement, and combination of devices, as will be hereinafter more fully set forth, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view with the body or tub partly broken away to show the position of the dashers, and Fig. 2 is a view of one of the dashers removed.

Referring to the said drawings by letter, A indicates the body of the churn for holding the cream, and may be of tub or other suitable form. This body is provided with a removable top composed of two sections. (Indicated by the letters B and C.) The section B of the cover is of a greater diameter than the section C, and is provided with two vertical apertures, *a a*, to receive the dasher-stems, and a vertical frame to support their operating mechanism. This frame is composed of two pairs of vertical parallel standards, D, which are connected at their upper ends by a transverse horizontal strip, *b*, which serves to hold the same at the proper distance apart.

E indicates transverse strips, which are secured at opposite ends to the parallel uprights or standards and furnish a bearing for the axle of the main driving-gear F, which rotates between the said standards. Engaging with this gear F and journaled in the standards D are two small gears or pinions, *d*, the fixed axles of which are extended and provided at their ends with crank-arms *e*. These crank-arms are connected at their outer ends with the upper ends of the dasher-rods by means of

pins, as shown. Within the tub at diametrically - opposite points are vertical guide-strips G G, which serve to guide and prevent interference of the dashers in their movements.

H indicates the dashers, which are composed of two similar approximately arc-shaped strips, I I, the inturned ends of which are provided with plain bearing portions *g g*, which are designed to engage the opposite sides of the guide-strips G during operation. The under sides of these strips I are provided at suitable intervals with transverse recesses, as shown, which recesses may be of dovetail form, and the blades L are seated in these recesses.

In operation it will be seen that when the dashers are arranged in the churn the blades of one dasher will extend inward beyond the ends of the blades of the opposite dasher, thus covering nearly the entire bottom of the churn, and serve in breaking up the globules and churning the cream.

I am aware that it is not new to provide a churn-body with internal opposite dasher-guides, and that dashers having arms which cross each other have heretofore been used. I am also aware that similar gearing has been used for driving the dashers and arranged upon a movable cover, and therefore do not claim such devices broadly.

Having described this invention, what I claim is—

The combination, with the churn-top carrying the operating mechanism, of the dashers, constructed as described, and composed of the approximately arc-shaped strips having inturned opposite ends, and the blades arranged to pass each other, and the body having the diametrically - arranged vertical guide-strips to be engaged by the said inturned strips, substantially as specified.

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

CHARLES A. LORENZ.

Witnesses:

R. R. MCGREGOR,  
C. J. ZESKY.