

H. L. GORDON.  
 ROTARY CHURN.

No. 190,576.

Patented May 8, 1877.

Fig. 1.

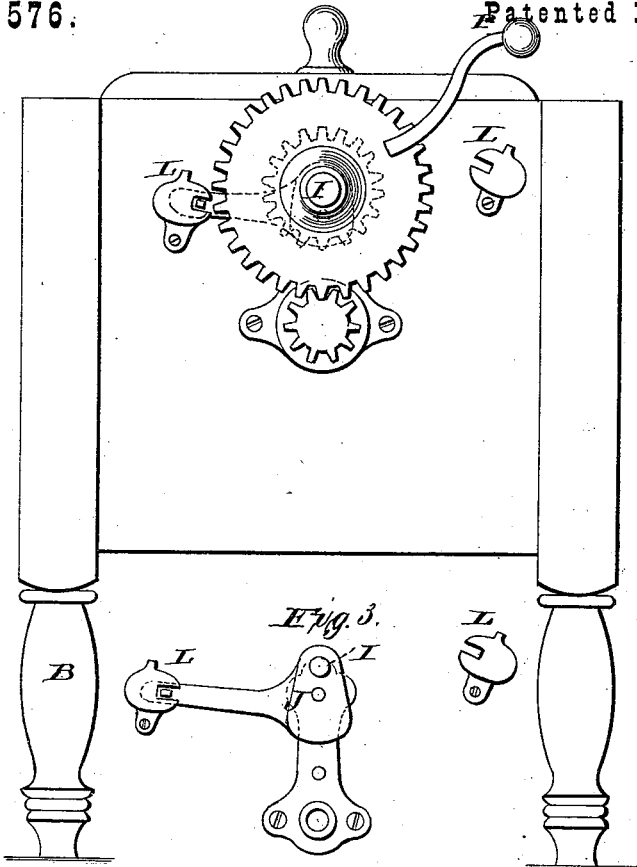


Fig. 3.

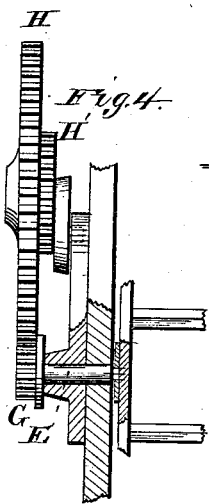
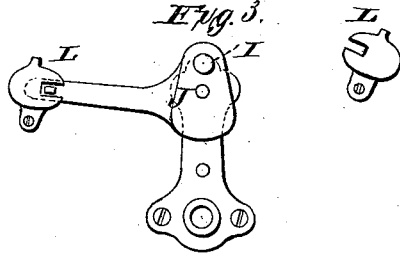
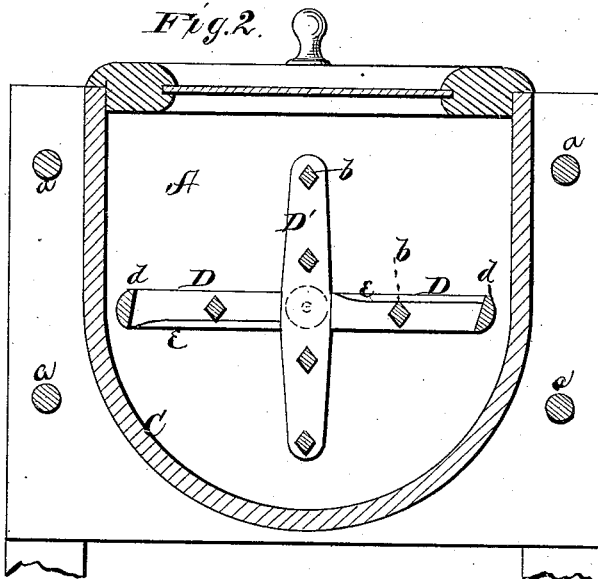


Fig. 2.



WITNESSES

*Frank L. Ormrod*  
*Frank Galt*

INVENTOR

*Horace S. Gordon*  
 By *Alexander Mason*  
 ATTORNEYS.

# UNITED STATES PATENT OFFICE.

HORACE L. GORDON, OF WEST GARLAND, MAINE.

## IMPROVEMENT IN ROTARY CHURNS.

Specification forming part of Letters Patent No. **190,576**, dated May 8, 1877; application filed April 9, 1877.

*To all whom it may concern:*

Be it known that I, HORACE L. GORDON, of West Garland, in the county of Penobscot, and in the State of Maine, have invented certain new and useful Improvements in Churns; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a churn, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is an end view of my churn; Fig. 2, a transverse vertical section of the same. Figs. 3 and 4 are detailed views of the adjustable gear used with my churn.

A A represent the sides or end pieces of my churn provided with the legs B.

These end pieces are grooved to receive the ends of the churn-body C; and are then united by means of rods or long bolts *a a*. The entire hull or churn-body C is made of a single piece of wood, sawed around the log or with the grain of the wood, whereby it becomes much tougher and much less liable to crack than lumber sawed in the ordinary way, or through the log. This hull prevents all possibility of leakage.

The churn-dasher consists of two cross-arms, D D', at each end, united centrally, said arms being alternately long and short, and carrying horizontal diamond-shaped beaters *b b*, connecting the cross-arms of the two sets. These beaters are arranged so as to alternate, and thus take separate tracks through the milk.

The ends of the long arms D are provided with slab-shaped strips *d*, set on an angle with the highest point or edge running foremost and acting both as beaters and workers

or gatherers. These strips or workers, being set on an angle to the circle on which they revolve, force the cream toward the center of motion, and in toward the path of the beaters *b*.

The front edges of the long cross-arms D are beveled on the inside, as shown at *e*, and act as clearers to draw the cream from the ends of the churn, and prevent it from sticking to the churn, thereby leaving no cream, which is put into the churn unchurned.

The churn-dasher thus constructed, has at one end a pivot entering a box fastened to the end of the churn, and through the other end of the churn is passed a short shaft, E, the inner end of which is squared and enters that end of the dasher. On the outer end of the shaft E is secured a pinion, G, which meshes into either one of a double cog-wheel, H H', placed on a stud, I, and movable out and in therein. This stud projects from one end of an elbow-lever, J, pivoted at its angle, and the other arm of said lever, held by a catch, L.

By throwing the lever J from one side to the other, either wheel H or H' is thrown in gear with the pinion G, and thus the dasher made to revolve faster or slower, as desired. The double wheel H H' is provided with a crank, P, for turning the same.

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

The churn-dasher herein described, consisting of the long and short cross-arms D D', the long arms D, having their front edges *e* beveled, the diamond-shaped beaters *b*, set so as to alternate, and the slab-shaped strips *d*, set on an angle, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of March, 1877.

HORACE L. GORDON.

Witnesses:

FRANK GALT,  
ANDREW J. FLANDERS.