E. A. OLIVER.

CHURN.

No. 181,966. Patented Sept. 5, 1876.

Fig. 1

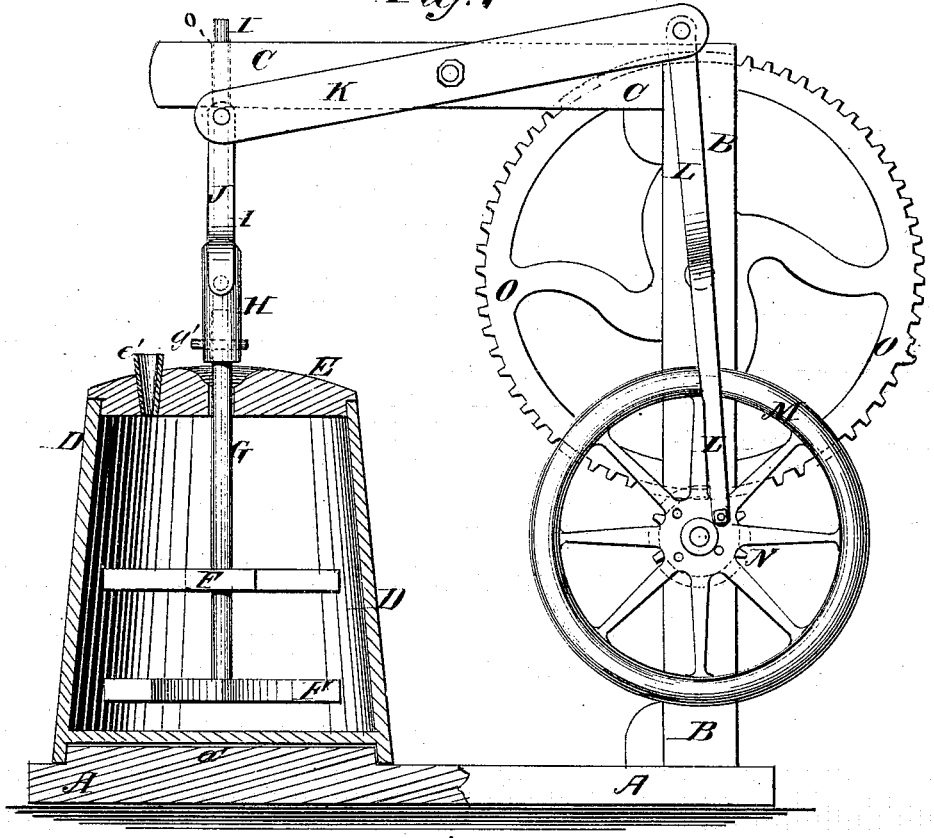
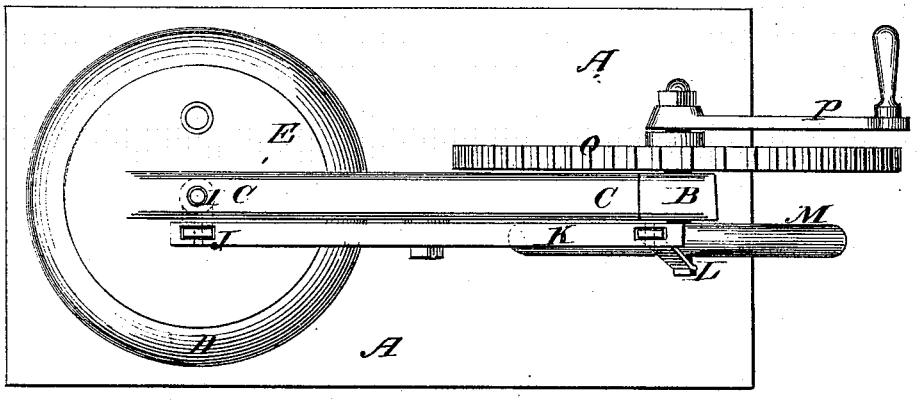


Fig. 2.



WITNESSES:

Francis H. McArdle

Alex. F. Roberts

INVENTOR:

E. A. Oliver

BY Gilmore & Smith & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE

ELAM A. OLIVER, OF BELLEVILLE, WISCONSIN.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. **181,966**, dated September 5, 1876; application filed April 3, 1875.

To all whom it may concern:

Be it known that I, ELAM A. OLIVER, of Belleville, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Churning Apparatus, of which the following is a specification:

Figure 1 is a side view of my improved churning apparatus, partly in section, through the churn. Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

The invention will first be fully described, and then pointed out in the claim.

A is the platform, to which, near one end, is attached the lower end of a post, B. To the upper end of the post B is attached the end of a horizontal bar or beam, C, which projects so that its other end may be above the other end of the platform A. To the platform A, directly under the end of the beam C, is attached, or upon it is formed, a circular projection, a', to fit into the chimes of the bottom of the churn D, and thus keep the said churn securely and exactly in place.

The churn-body D is provided with a cover, E, in which is formed a hole for air to pass in and out. In the air-hole of the cover E is secured a funnel-shaped or flaring tube, e', to prevent the milk from spattering out. F is the dasher, which is made in two parts, each part consisting of two bars, crossing each other at right angles at their centers, and so arranged that the bars of the upper part may be over the spaces between the bars of the lower part. The parts of the dasher F are attached to the shaft G, the one a little above the other. The dasher-shaft G passes up through a hole in the center of the churn-cover E, and its upper end enters a socket or hole in the lower end of the weight H, where it is secured by a pin, g', passing through a transverse hole in the said weight, and in the said dasher-shaft. To the upper end of the socket H is attached a rod, I, which passes up through a guide-hole, o, in the end of the arm or beam C, to cause the dasher to move up and down vertically. In the upper part of the weight H is formed a transverse hole, to receive the pin formed upon or attached to the lower end of the connecting-rod J. The connecting-rod J is made with an offset or outward bend, and its upper end is pivoted to the end of the lever K, which is pivoted at its center to the arm or beam C. To the other end of the lever K is pivoted the upper end of the connecting-bar L, the lower end of which is pivoted to a crank-pin attached to the fly-wheel M, several holes being formed in said fly-wheel at different distances from its center to receive the said crank-pin, to enable the length of stroke of the dasher to be regulated at pleasure. The shaft of the fly-wheel M passes through and revolves in a transverse hole in the post B, and to its other end is attached a small gear-wheel, N, into the teeth of which mesh the teeth of a large gear-wheel, O, pivoted to the post B, and to which is attached the crank P, by which the apparatus is operated.

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

The dash-rod G, socket-joint H, walking-beam K, perpendicular and horizontal supports B C, and churn and gearing, arranged as described.

ELAM A. OLIVER.

Witnesses:

HOLLIS CROCKER,

I. B. GREEN.