

Churns.

Patented Dec. 10, 1872.

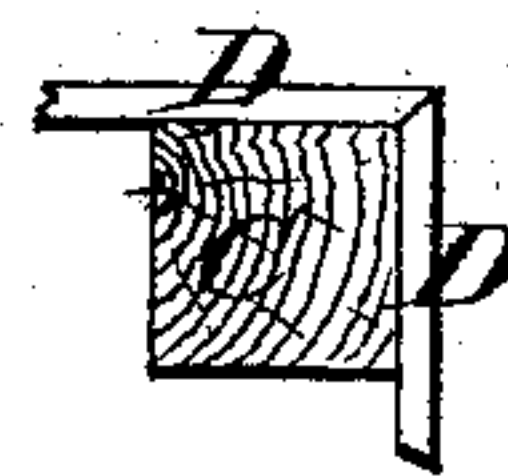


Fig. 2.

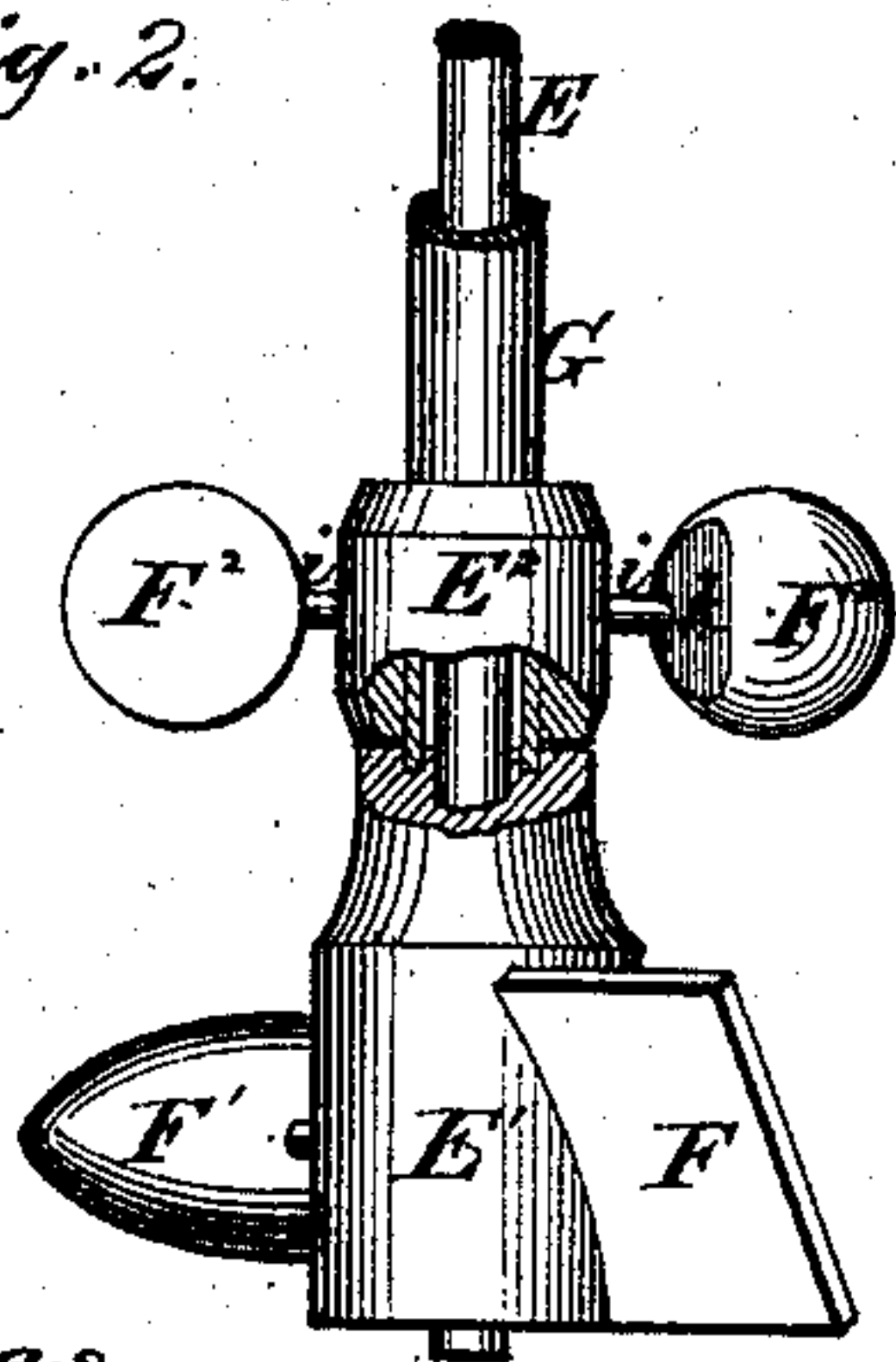


Fig. 3.

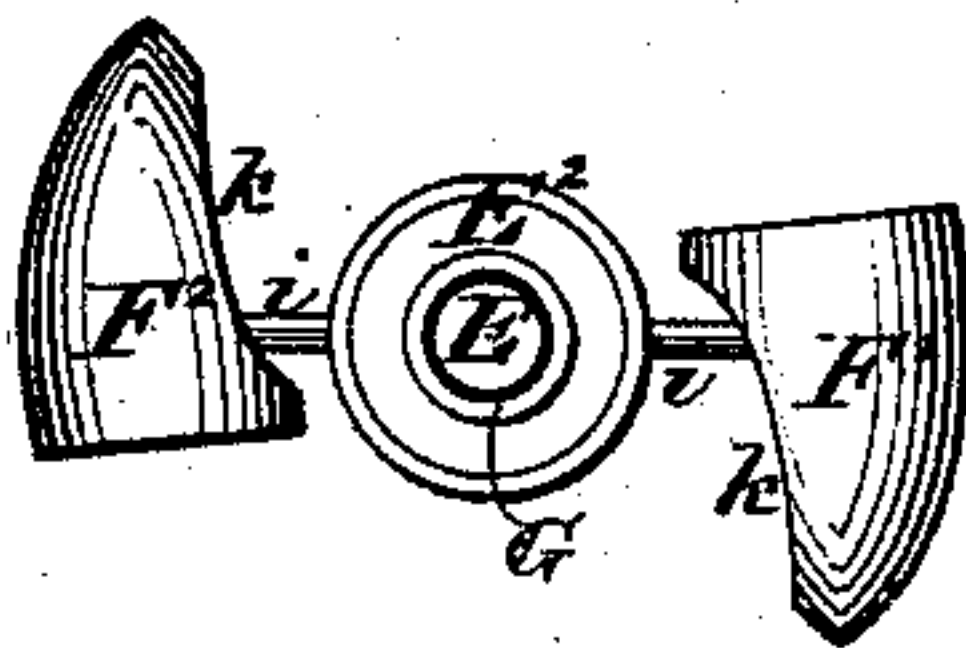
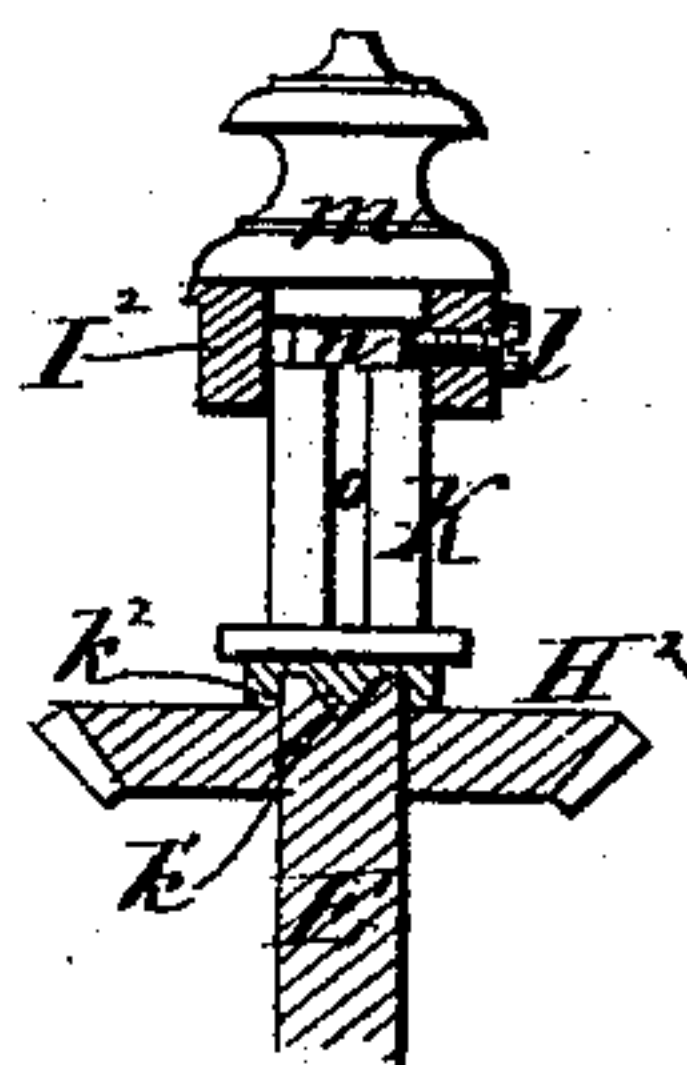


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

MYRON MOSES, OF MALONE, NEW YORK, ASSIGNOR OF ONE-HALF HIS
RIGHT TO ORVILLE B. KIMPTON, OF SAME PLACE.

IMPROVEMENT IN CHURNS.

Specification forming part of Letters Patent No. 133,878, dated December 10, 1872.

To all whom it may concern:

Be it known that I, MYRON MOSES, of Malone, in the county of Franklin and State of New York, have invented a new and Improved Churn; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of the whole machine; Fig. 2, a detached elevation of the two sets of beaters, collar, and shaft; Fig. 3, a detached plan of the upper set of beaters; and Fig. 4, a detached vertical section of the mechanism for driving the dasher.

Similar letters of reference in the accompanying drawing denote the same parts.

This invention belongs to that class of churns which employ two sets of beaters revolving in opposite directions; and has for its object to improve the construction of such a churn in such manner, first, that the mechanism for driving the churn may be readily removed with the churn from the holding-frame; and, second, that the cream may be thrown to the sides of the churn during the operation of churning. To this end the invention consists, first, in the construction and arrangement of that part of the frame which supports the driving mechanism of the churn; second, in the construction of the beaters.

In the drawing, A is the churn, the same being of sheet metal, of ordinary construction, and placed, when the process of churning is going on, upon the floor B of a frame, O C', which floor has a recess, a, of a shape to be accurately fitted by the churn, said recess having inclined sides to receive the flange on the bottom of the churn and prevent its moving upward. The parts O C' are connected by four or more pairs of parallel metal bars, D, each of which is in contact at its ends with two of its fellows, the joints being all mitered so as to make the bars D serve as braces to each other as well as the posts. One of the upper bars is pivoted at c, and rounded off at its upper corner d so as to admit of turning it up for the removal or introduction of the churn. The pivoted bar has a pin projecting inward from its free end, which pin, when the bar is turned down, enters a notch, e, in the

top of the post C, whereby this bar is fastened as securely as the rest. Grooves h are cut in the posts C to admit of the passage of the bead on the top of the churn. The shaft E is stepped in the bottom of the churn, and has a hub, E¹, rigidly affixed to its lower end, which hub bears a flat inclined beater, F, and a semi-conical beater, F¹, attached to the end of a radial arm extending from the opposite side of the hub from the beater F. Resting on the hub E¹ is another hub, E², rigidly attached to the lower end of a collar, G, placed loosely on the shaft E. The hub E² has radial arms i extending from opposite sides, to the ends of which are fastened beaters F², which are of the same shape as the beater F¹, except that they are dished out on the inner sides, as shown at k, Figs. 2 and 3, in order that they may thereby throw the cream toward the sides of the churn, and also that there may be room enough between the hub and beaters to work in while cleaning the latter. Conical beaters pass through the cream with less resistance than flat ones, and consequently to work them requires less power. At the same time, by the squareness of their rear ends, my conical beaters agitate the cream so much as to require but comparatively little churning. As shown in Fig. 2, there is a groove in the top of the hub E¹, next to the shaft E, which groove the lower end of the collar G enters. By this arrangement cream is prevented from getting between the collar and shaft E. At the top of the shaft E is a miter-wheel, H², similar to a miter-wheel, H¹, on the upper end of the collar G, which wheels form a bevel-gear with a miter-wheel, H, placed on the end of a shaft, I, supported in suitable boxes attached to the top of the frame, and at the opposite side thereof from the pivoted bar D, so as not to be in the way of moving the churn. By means of this bevel-gear the upper and lower sets of beaters are whirled in opposite directions. From one of the boxes of the shaft an arm, I¹, extends upward, at the top of which arm is a socket, I², Fig. 4, through one side of which extends a screw, l. In the socket I is placed a bolt, K, having a flange, m, resting on the top of the socket, a circumferential groove, n, near the flange and a longitudinal groove, o, communicating at its

upper end with the groove *n*, and at right angles with it. The point of the screw *l* is always in one or the other of these grooves. The bolt *K* has a boss, *k*¹, at its lower end, and a flange, *k*², concentric with the boss and separated from it by a groove. The boss *k*¹ enters a depression in the head of the shaft *E*, and thus steadies the latter. When this is the case the screw *l* is in the groove *n*, and the bolt *K* should be turned so as to bring the groove *o* out of line with the screw, which then locks the bolt *K*. By turning the bolt so as to bring the groove *n* in line with the screw, the bolt can be raised, the screw traversing the groove *n*. The shaft *E* is then unsupported at the top, and, together with the

churn, can be removed from the frame after lifting the bar *D*. On putting the shaft in place again, the bolt *K* is shoved down and turned, as before.

What I claim as new is—

1. The combination of the shaft *E*, block *K* having the grooves *n o* placed at right angles with each other, socket *I*², and screw *l*, all arranged as set forth.
2. The conical beater, substantially as herein described.

MYRON MOSES.

Witnesses:

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