

J. Y. LANFAIR.
Churn.

No. 230,484.

Patented July 27, 1880.

Fig. 1.

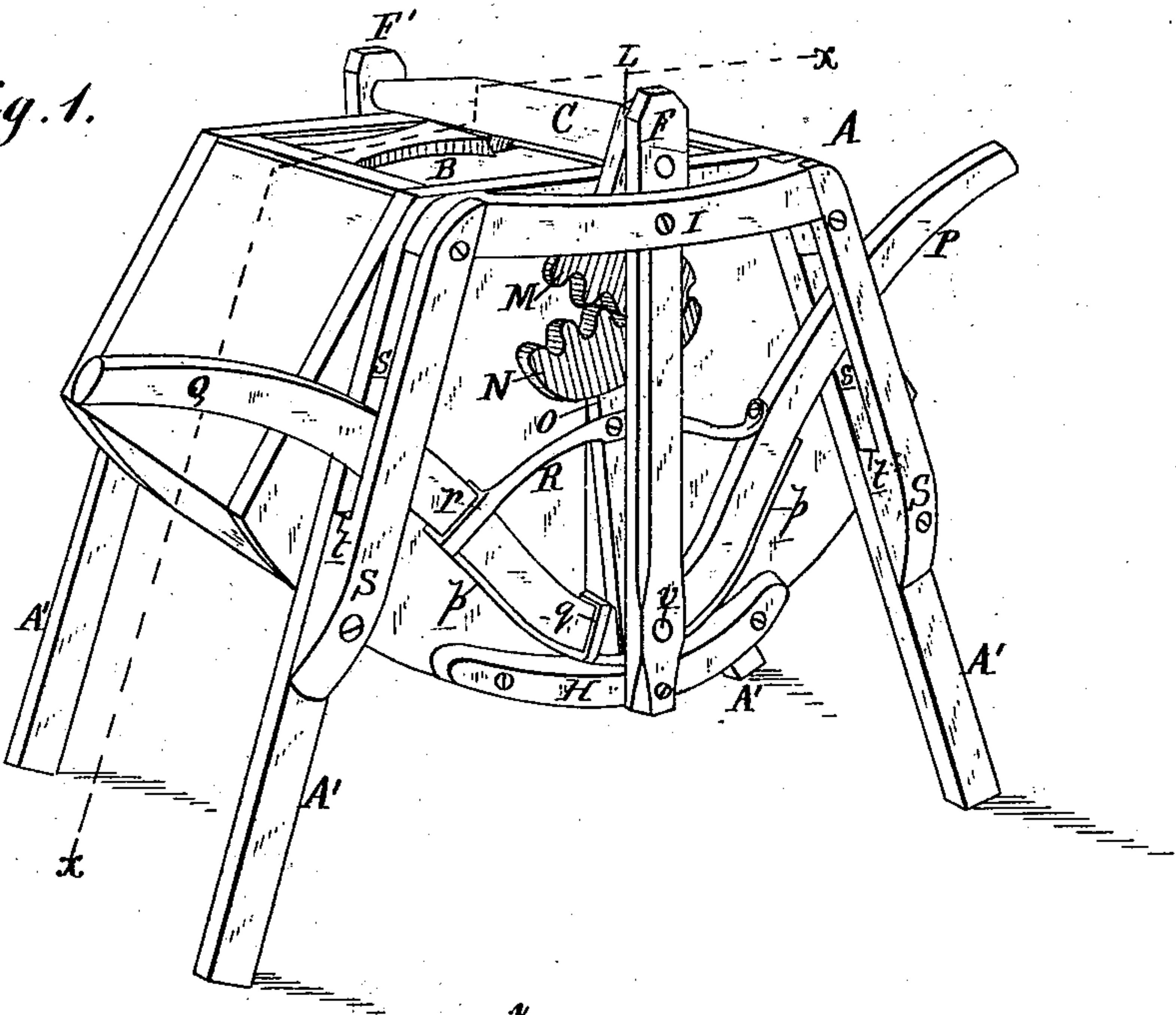
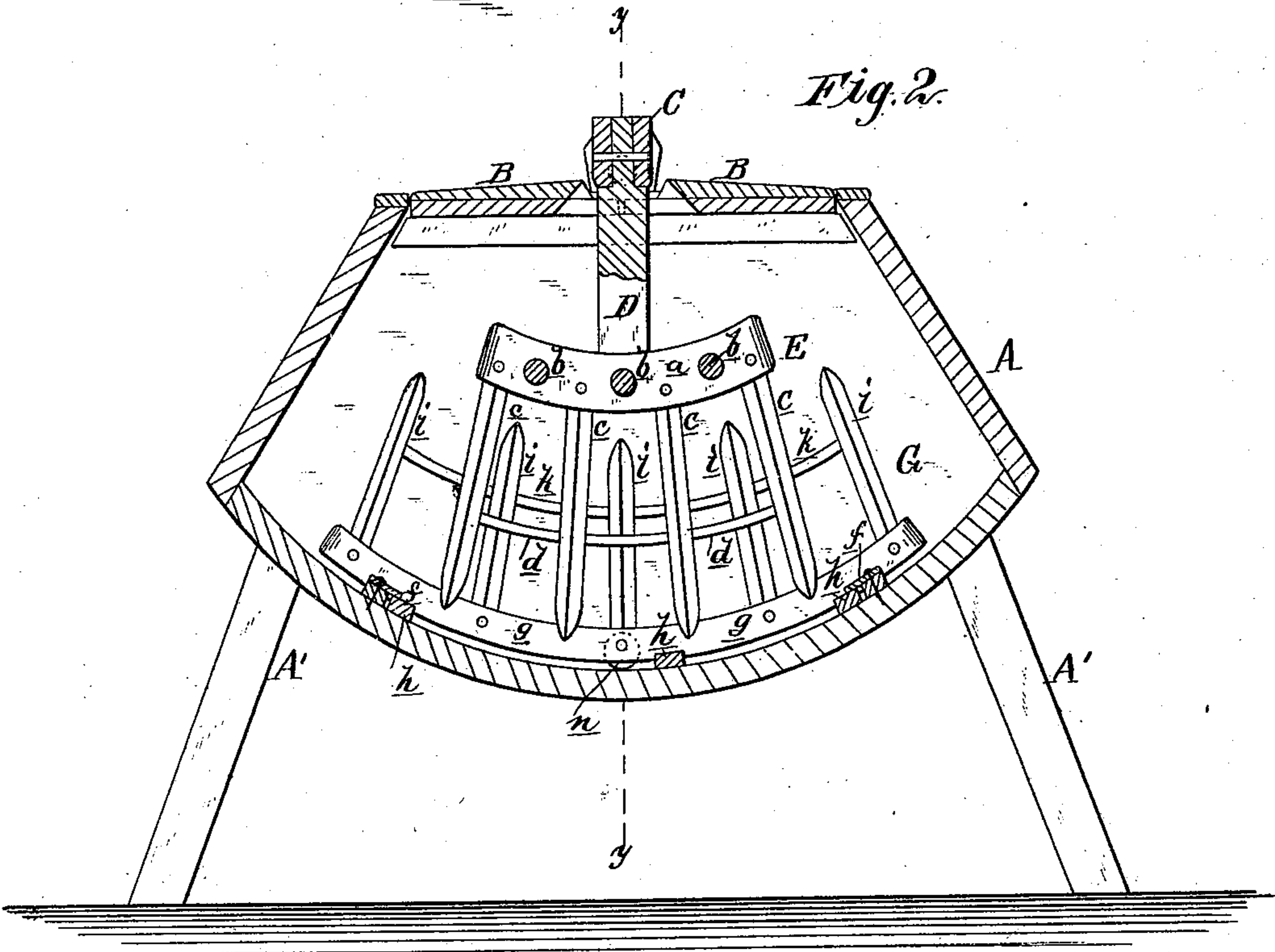


Fig. 2.



WITNESSES:

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C. Seagwick

INVENTOR:

BY

J. Y. Lanfair
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Fig. 3.

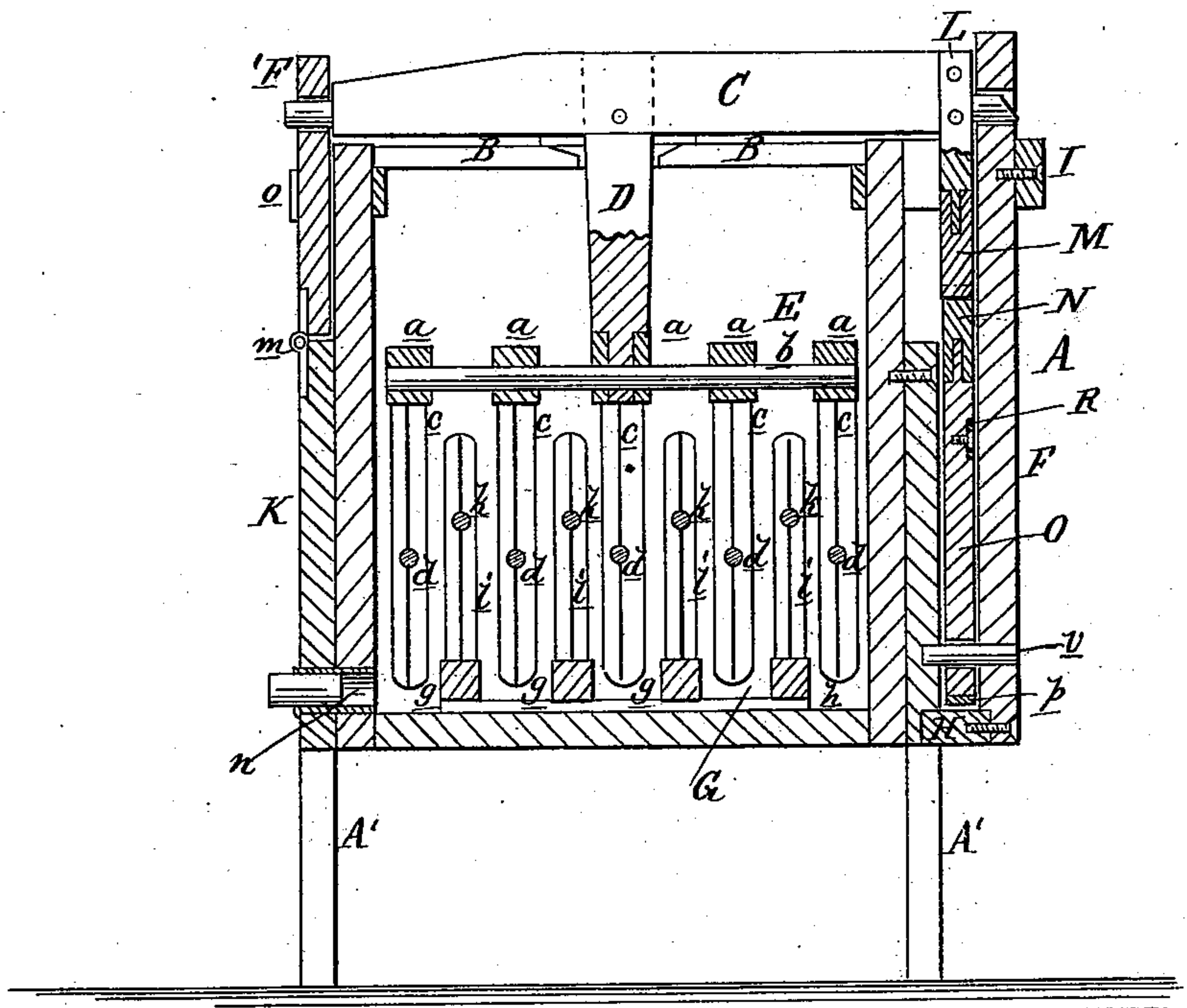
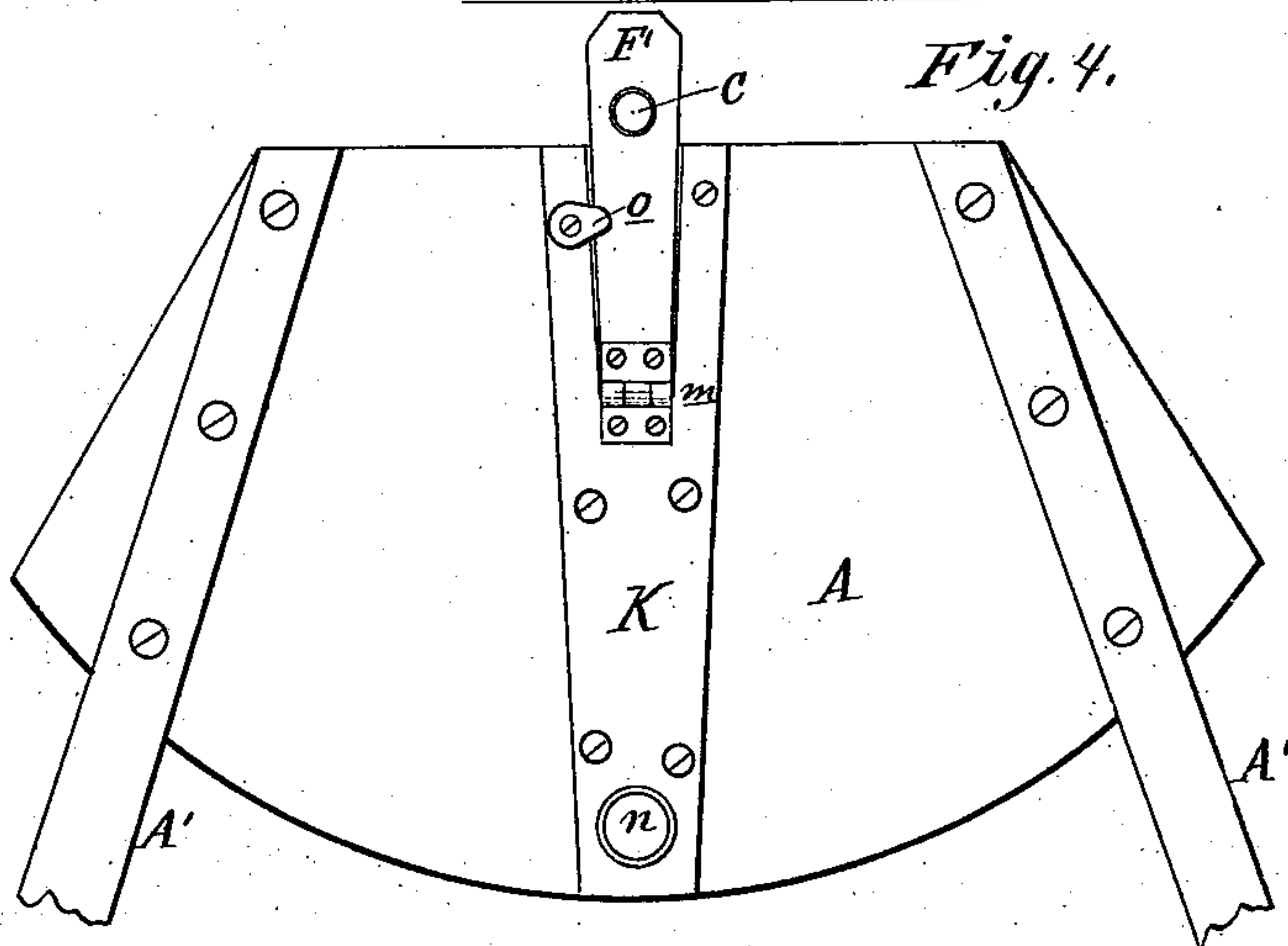


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN Y. LANFAIR, OF HILL VIEW, NEW YORK.

CHURN.

SPECIFICATION forming part of Letters Patent No. 230,484, dated July 27, 1880.

Application filed December 19, 1879.

To all whom it may concern:

Be it known that I, JOHN Y. LANFAIR, of Hill View, in the county of Warren and State of New York, have invented a new and Improved Churn, of which the following is a specification.

Figure 1 is a perspective view of the churn. Fig. 2 is a vertical sectional elevation on line *x x*, Fig. 1. Fig. 3 is a vertical sectional elevation on line *y y*, Fig. 2. Fig. 4 is a rear elevation of the churn.

Similar letters of reference indicate corresponding parts.

This invention relates to that class of churns in which a suspended dasher is made to swing back and forth in the body of the churn; and it consists of a dasher composed of a number of a downward-projecting rigid fingers that are made to swing back and forth between a number of corresponding fingers that are fixed so as to project upward from the bottom of the churn; and it consists, further, of suitable levers and gears for operating the churn, and of other novel arrangements, hereinafter described.

In the drawings, A represents the body of the churn, supported on legs A' A', and having a rounded or curved bottom, perpendicular sides, sloping ends, and a flat top, as shown, said top being covered and closed by the covers B B.

C is a rocking shaft journaled in the standards F F', and stretching across the top of the churn from side to side of it; and suspended from this shaft C by the rigidly-connected hanger D is the dasher E, composed of several upward-curved pieces of wood, *a a*, held together and parallel with each other by strong rods *b b*, while rigidly pinned in mortises in these curved pieces *a a*, and depending from them, are the fingers *c c*, that are of nearly a rectangular cross-section and present edges to their lines of motion. These fingers *c c* are further stayed by the rods *d d*, that pass through them in the direction of their motion, as shown. Held on the curved bottom of the churn by buttons *f f*, and so that it can be removed at any time, is a frame, G, composed of the upward-curving pieces of wood *g g*, held together and parallel with each other by the square rods or bars *h h*; and rigidly pinned into these pieces of wood *g g* are the upward-projecting

fingers *i i*, that are rigidly stayed by the rods *k k*, that pass through them, as shown. On motion being given to the shaft C the fingers *c c* reciprocate back and forth in a line parallel with the churn-bottom and between and outside of the fingers *i i*, whereby the cream in the churn is actively and violently dashed about and formation of butter more quickly obtained than in those churns that are provided with fewer and broader dashers than those herein shown.

Secured to the front side of the churn-body and at its lower edge is a curved stay, H, and secured at the tops of the churn-legs on the same side is the outward-curved stay I. On the outside of the stay H and at its central point is fastened the lower end of the standard F, which projects upward between the stay I and the body of the churn, and is fastened at its top to the said stay I. One end of the shaft C is journaled in the top of this standard F, while the other end of the said shaft is journaled in the movable standard F', that is hinged at *m* in an upright stay, K, which is secured on the rear side of the churn. The opening *n* made through this stay K and into the churn-body serves to empty the churn whenever desired of its liquid contents.

Whenever it is desired to remove the dasher E the button *o* is moved aside and the standard F' is slipped off the end of the shaft C, which is then drawn out of its bearing in the standard F, and the covers B B being removed, the said dasher E can readily be lifted out. The frame G may also be detached from the bottom of the churn by turning aside the buttons *f f*, and be lifted out of the churn, so that the butter formed therein may be easily removed.

Power is applied to the churn by means of levers and racks or gears.

Keyed or otherwise secured to the shaft C is a hanger, L, which, depending between the churn-body and the standard F, carries on its lower end a curved rack or toothed segmental gear, M, which meshes into a corresponding toothed segmental gear, N, which is secured on the upper end of the bar O, that projects upward from the curved lever P, which is pivoted at *v* to the lower part of the standard F and inside of it. This lever P and the supplementary lever Q are held in place by an up-

ward-curved metallic supporting-strap, *p*, that is centrally secured to the lower end of the bar *O*, and extends an equal distance on each side, and by the brace *R*, that is centrally secured to the face of the bar *O*.

One arm of the strap *p* is fastened along the under side of the lever *P*, while the other arm is furnished with a loop or socket, *q*, for holding the lower end of the lever *Q*, and one arm of the brace *R* is made fast to the lever *P*, while the end of the other arm is formed into a loop or socket, *r*, through which the lever *Q* passes. Thus it will be seen that the lever *Q* can be detached from the churn at any time by withdrawing it from the sockets or loops *q r*. These levers *P Q* extend laterally upward through the guiding and retaining slots *s s*, formed by the guides *S S*, that are secured by their lower ends to the front legs of the churn and by their upper ends to the ends of the outward-curved stay *I*. Hence when an upward-and-downward motion is given to the said levers *P Q*, or either of them, the shaft *C* and its attachments are rocked back and forth by the transmission of the motion through the interlocking gears *M N*, and the shoulders *t t* of the guides *S* limit the downward motion of the levers *P Q*, while the ends of the stay *I* limit their upward motion.

For heavy work in the churn both levers may be used with an operator at each one, and when the work to be done is light the lever *Q*

may be unshipped and the work performed by one operator at the lever *P*.

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

1. In a churn, the lever *P*, bar *O*, segmental gears *M N*, and hanger *L*, in combination with the rocking shaft *C* and fingered dasher *E*, substantially as and for the purpose described.

2. In a churn, the frame *G*, composed of curved pieces *g g*, bars *h h*, upward-projecting fingers *i i*, and rods *k k*, in combination with the dasher *E*, composed of curved pieces *a a*, rods *b b d d*, and downward-projecting fingers *c c*, hanger *D*, and rocking shaft *C*, substantially as and for the purpose described.

3. In a churn, the lever *P*, supplementary lever *Q*, supporting-strap *p*, provided with socket *q*, and brace *R*, provided with socket *r*, in combination, substantially as herein shown, and for the purpose described.

4. As a means of holding the levers *P Q* in position and limiting their stroke, the combination of guides *S S*, legs *A' A'*, and curved stay *I*, substantially as herein shown and described.

JOHN Y. LANFAIR.

Witnesses:

CHARLES H. LANFAIR,
CLAYTON T. LANFAIR.