(No Model.)

J. AHRENDS.

CHURN.

No. 378,753. Patented Feb. 28, 1888.

Fig. 1.

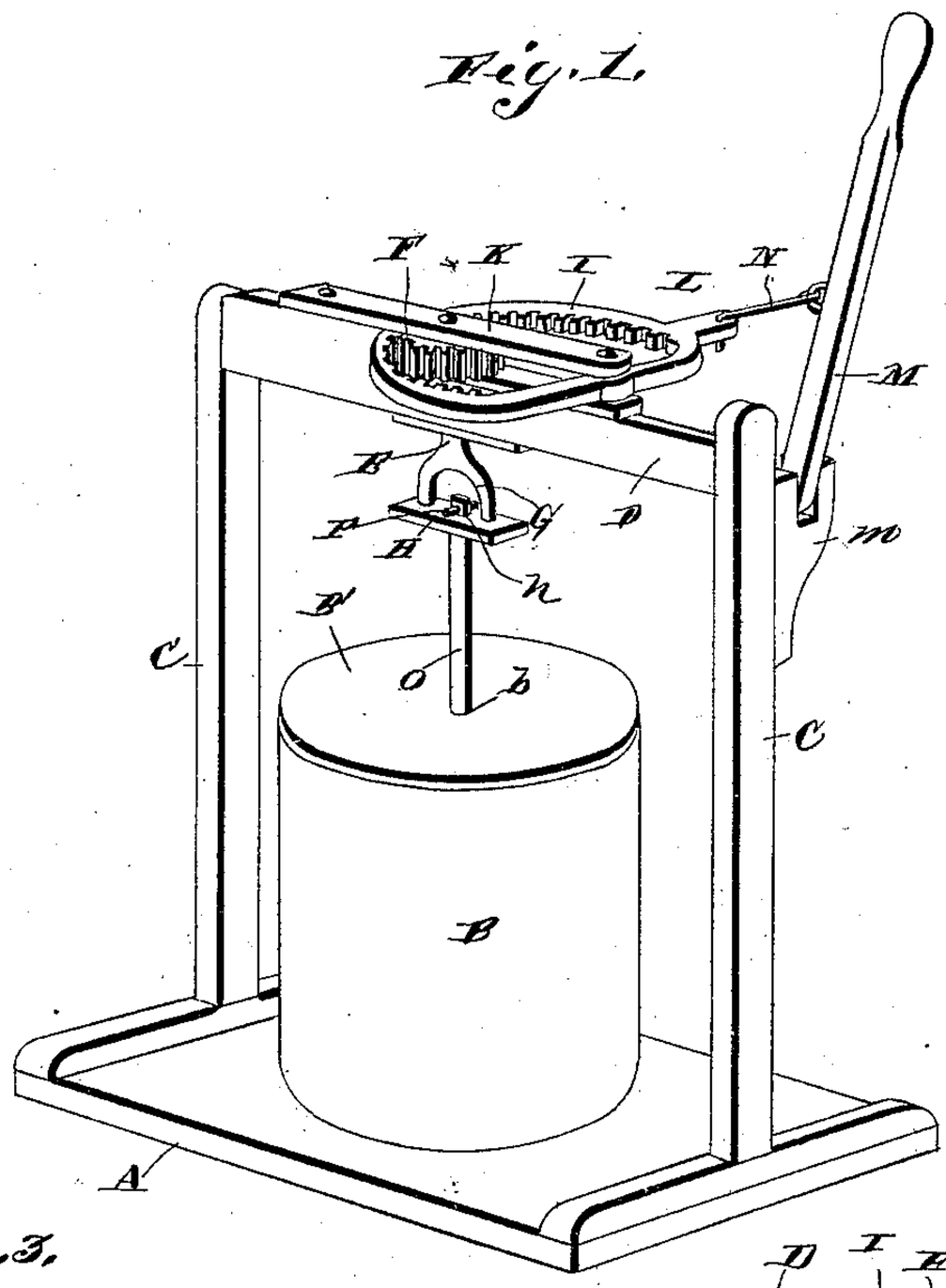
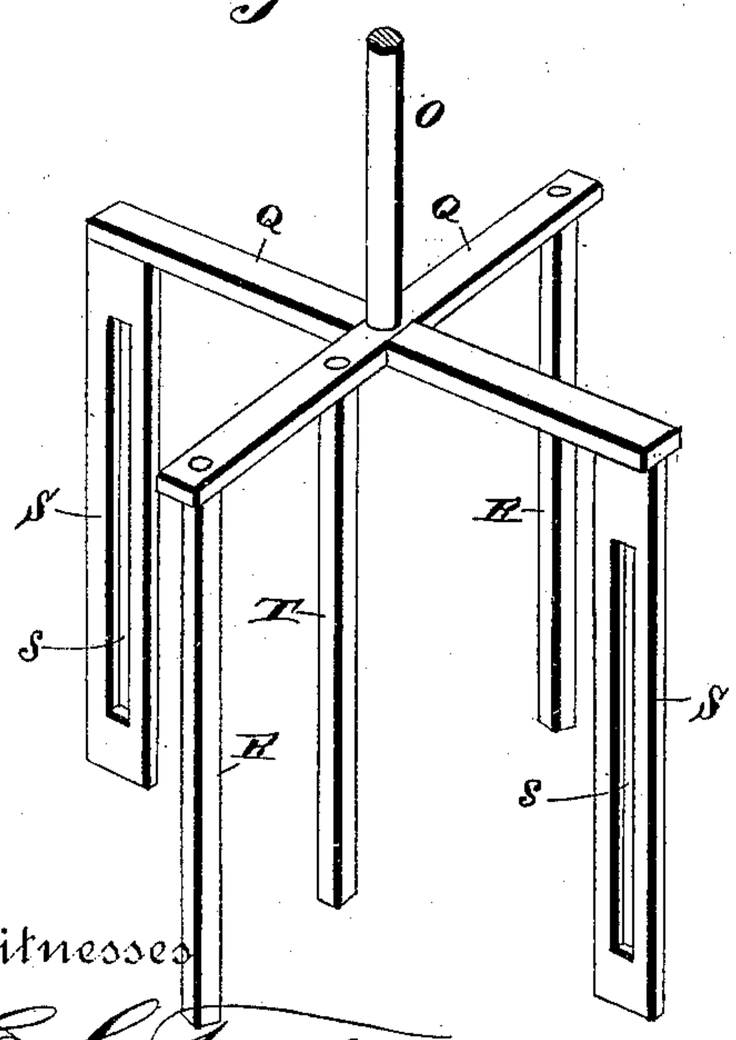


Fig. 3.

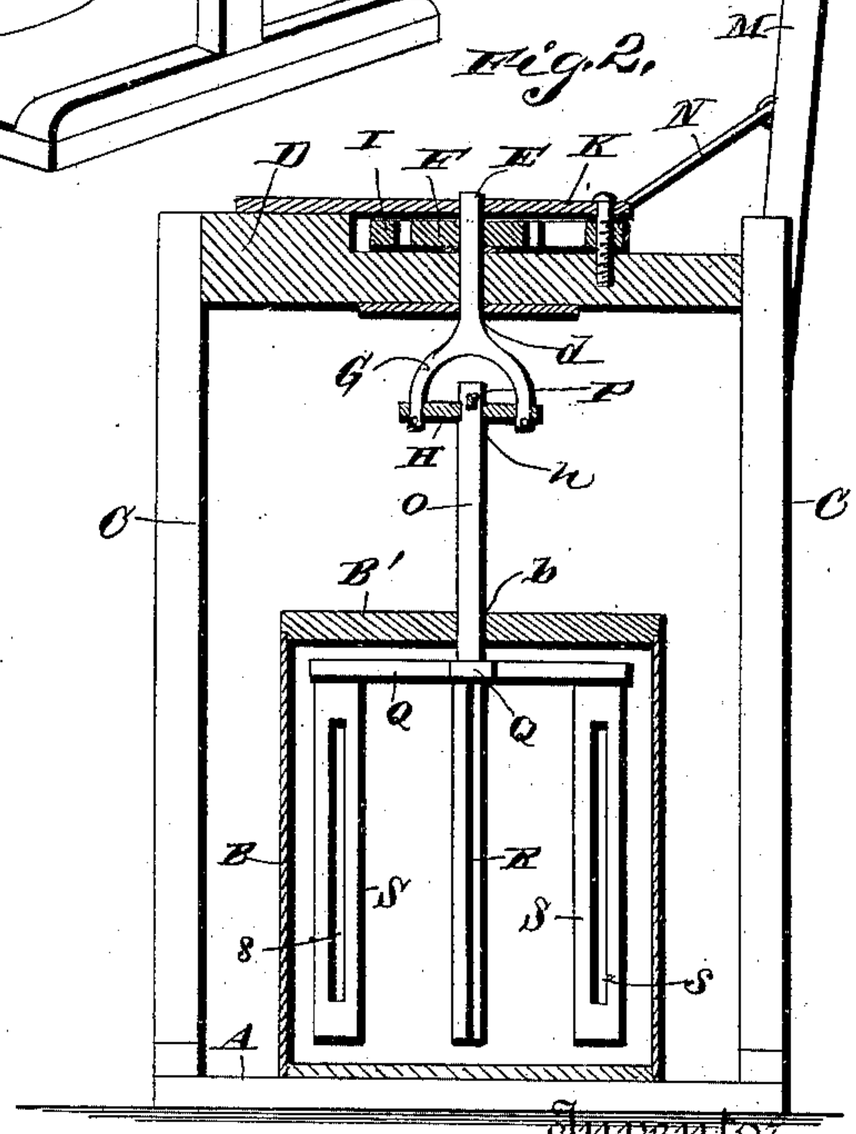


Witnesses

C. L. Taylor,

C. E. Dayle.

Fig. 2.



Inventor.

John Ahrends.

By his Attorneys.

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UNITED STATES PATENT OFFICE.

JOHN AHRENDS, OF MONMOUTH, KANSAS.

CHURN.

SPECIFICATION forming part of Letters Patent No. 378,753, dated February 28, 1888.

Application filed September 24, 1887. Serial No. 250,590. (No model.)

To all whom it may concern:

Be it known that I, JOHN AHRENDS, a citizen of the United States, residing at Monmouth, in the county of Crawford and State of Kansas, have invented new and useful Improvements in Churns, of which the following is a specification.

My invention relates to improvements in churns; and it consists in a certain novel construction and arrangement of parts, fully set forth hereinafter, and specifically pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of the device. Fig. 2 is a vertical sectional view. Fig. 3 is a detail view of the dasher.

Referring by letter to the drawings, A designates the base of the frame, on which rests the churn-tub B, and to the extremities of the said base are attached the lower ends of the uprights or standards C C.

D designates a cross-bar secured at the ends to the upper ends of the said uprights and provided at the center with a vertical bearing *d*, and E represents a vertical shaft journaled in the said bearing and provided on the upper end with the gear-wheel F. The lower end of the vertical shaft E is provided with a fork or yoke, G, the lower extremities of which are secured to the ends of the slotted bar H, provided at the center with the longitudinal slot *h*.

I designates a semicircular gear-segment pivoted to the upper side of the cross-bar D and provided on the inner side of its circumference with gear-teeth to mesh with the teeth of the gear-wheel F. The horizontal plate K extends over the gear-segment and holds the same in place. The upper end of the vertical shaft E is also journaled in the said horizontal plate. One side of the gear-segment is provided with an outwardly-extending arm, L. To a block, *m*, secured to one of the uprights near the upper end is pivoted the lower end of the handle or lever M, and an intermediate point of the same is connected by the rod N to the extremity of the arm L on the side of the gear-segment. It will now be readily seen that if the upper end of the lever is operated the segment will be rotated, and as the same is geared to the gear-wheel F the vertical shaft will be rotated. Therefore, as the upper end of the lever is moved backward and forward the shaft E will be rotated alternately in opposite directions.

The churn body or tub B is provided with a lid, B′, which latter has a small opening or bearing, *b*, in the center.

O designates the dasher-shaft, operating in the bearing *b* and having the upper end flattened to enter the slot *h* in the bar H. The upper end of the said dasher is further provided with a perforation, through which is passed the pin or key P to lock the upper end of the dasher to the vertical shaft, whereby when the latter is operated the former will be similarly actuated. To the lower end of the dasher-shaft are secured the radial arms Q, which are arrranged in pairs extending, respectively, in opposite directions. To the extremities of one pair of the said arms are attached the upper ends of the blades R R, angular in cross-section, and to the extremities of the other arms are attached the upper ends of the blades S S, which are provided with longitudinal slots *s s*. The plain and slotted blades are thus arranged alternately, and the effect is to very violently agitate the contents of the tub.

In addition to the four blades just described, there is a fifth blade, T, attached to one of the arms a short distance from the center thereof, its object being to more effectually agitate the milk at the center of the tub.

This churn is exceedingly simple in construction, and it will be found very effective in operation, the gearing being so arranged that the movement of the handle causes a very rapid rotation of the dasher-shaft, and consequently a violent agitation of the contents of the tub.

Having thus described my invention, I claim—

In a churn, the combination of the uprights C C, cross-bar D at the upper ends thereof, having a bearing, *d*, in the center, segmental gear I, pivoted to the upper side of the cross-bar and having interior gear-teeth, plate K, to hold the segmental gear in place, lever M, pivoted to one of the uprights and connected to the said segmental gear, vertical shaft E, journaled in the bearing *d* and having the gear-wheel on the upper end to mesh with the segmental gear and the fork or yoke G on the lower end, the slotted bar H, secured to the extremities of the said yoke and having the

slot *h* in the center, and the dasher-shaft O, provided at the lower end with a dasher and passing at the upper end through the slot *h*, the said shaft O being held in place in the slot by the key or pin P, passed through a perforation therein, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN AHRENDS.

Witnesses:
G. M. SLOUGH,
B. F. FITZGERALD.