

(No Model.)

G. S. AGEE.
CHURN.

No. 481,542.

Patented Aug. 30, 1892.

Fig. 1

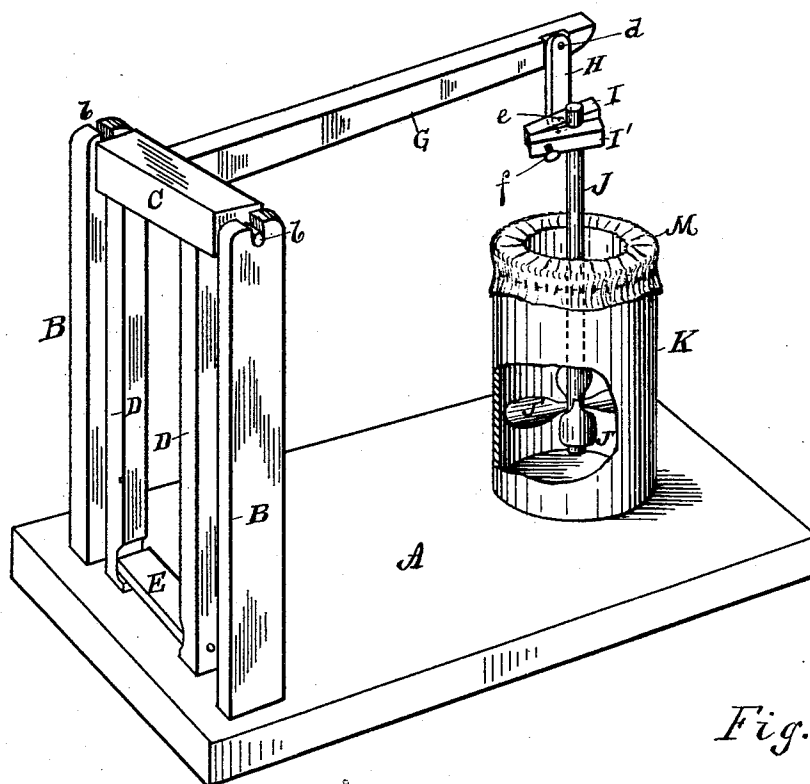


Fig. 5

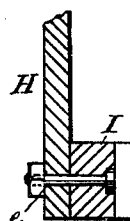


Fig. 3

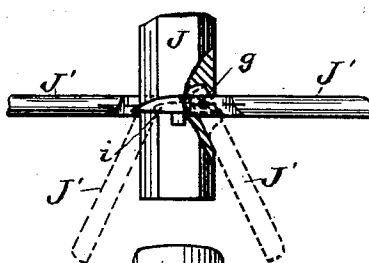


Fig. 2

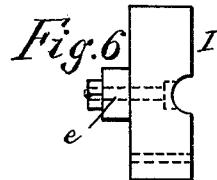
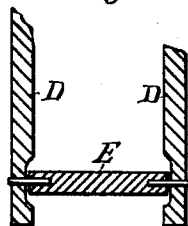
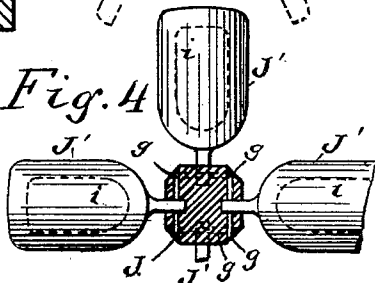


Fig. 4



WITNESSES:

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CHURN.

SPECIFICATION forming part of Letters Patent No. 481,542, dated August 30, 1892.

Application filed October 1, 1891. Serial No. 407,381. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. AGEE, of Willow Springs, in the county of Howell and State of Missouri, have invented a new and useful Improvement in Churns, of which the following is a full, clear, and exact description.

This invention consists in a churn of novel construction, including a swinging treadle for operation by the foot to actuate the dasher, also including a specially-constructed dasher and other constructions and combinations of parts, substantially as hereinafter described, and more particularly pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of a churn embodying my invention; Fig. 2, a vertical section, in direction of its width, of the lower portion of the swinging frame or treadle used to actuate the dasher through the intervention of a longitudinally-arranged arm or lever; Fig. 3, a broken side view of the lower portion of the dasher, showing certain of its paddles or agitators in different positions; Fig. 4, a transverse section of the dasher-staff, taken above the paddles, which are also shown in part; Fig. 5, a vertical section, and Fig. 6 a plan view, of the one-half of a clamp used to hold the dasher-staff and of a link which connects the clamp with the arm or lever worked by the treadle to actuate the dasher.

A indicates a stand or base having parallel uprights B B at its one end, provided with open bearings b b on top for reception of the trunnions on the ends of a rocking bar or fulcrum-piece C. This fulcrum bar or piece C is mounted on and made fast to the upper ends of a swinging frame D, composed of opposite uprights carrying at their bottoms a pivoted foot-piece E, all arranged to work within or between the uprights B B and forming, in connection with the fulcrum-piece C, a horizontally or backward-and-forward swinging treadle for operation by the foot to actuate the dasher through a forwardly-projecting arm or lever G. This arm or lever G has pivoted to it at its forward end, as at d, a link H,

which in its turn is pivoted at its lower end, as at e, to the one-half of a divided clamp I I', adjustable by a thumb-screw f and adapted, when tightened up, to hold the staff J of the dasher of the churn. By means of the backward and forward swinging treadle and its forwardly-projecting arm or lever the dasher has its usual up-and-down motion given to it by the mere swinging movement of the foot, the pivoted link H swinging or moving laterally to preserve the perpendicularity of the dasher.

The dasher, which works within the upright churn, tub, or can K, is preferably constructed as follows: Attached to the dasher-staff J near its lower end, as by pivots g, are a series (here supposed to be four) of paddles or agitators J', arranged around or on opposite sides of the dasher-staff and restricted, by the slots in the staff in which their inner ends are jointed or pivoted, from moving up beyond a horizontal position or thereabout, but free to close or drop into a partially-closed position against the sides of the staff, as shown by dotted lines in Fig. 3. As the dasher-staff is raised by the swinging of the treadle the paddles J' fall, drop, or close, thus admitting of a free passage for the cream during the up-stroke of the dasher; but when the motion of the dasher is reversed—that is, moved downward by the continued swinging motion of the foot as applied to the treadle—said paddles instantly open or spread outward by the resistance they encounter with the cream to give the necessary agitation to the cream in the tub K. The opening and closing paddles J' are made hollow or with cavities i in their lower surfaces, so that when the dasher moves downward they will, by means of these cells i, carry a quantity of air down with them into the cream and so facilitate the gathering of the butter. A churn thus constructed works exceedingly light, and as the operator only requires to swing his foot backward and forward to work the dasher he is at liberty to do other light work at the same time. The tub, can, or vessel K has an inwardly-overlapping partial or centrally open cover M applied to and around its upper edge. This cover or guard, which may be made of rubber or of metal constructed to spring over the tub or

can, prevents the cream from being thrown up and out of the can by the working of the dasher.

If desired, the operating portions of the churn may be duplicated without changing the invention. Thus there may be two swinging treadles operating two levers similar to the one G for working two dashers in the same churn, side by side. If desired, also, a screw or any other ordinary connection may be used instead of the clamp I I' for attaching the link H to the dasher-staff. The cover or guard M is designed to be used over the ordinary churn-lid. (Not shown in the drawings.)

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

1. In a churn, the combination, with a support, of an angular rocking frame pivoted at its angle to said support, a foot-treadle at the lower end of the vertical member of said rocking frame, and a dasher-shaft clamp on the outer end of the horizontal member, substantially as set forth.

2. In a churn, the combination, with the

parallel uprights, of an angular frame pivoted at its angle between said supports, a dasher-shaft clamp suspended by a link H from the outer end of the horizontal member of said frame, the vertical member of the rocking-frame being formed of parallel bars provided with a treadle or foot-piece between their lower ends, substantially as set forth.

3. A churn comprising the base A, vertical uprights B B, the angular rocking frame pivoted at its angle in the upper ends of said uprights, with its horizontal arm G overhanging the base and provided with a depending pivoted link carrying at its lower end the clamping-jaws I I', the vertical member of the rocking frame being formed of two parallel bars having a foot-piece pivoted between their lower ends, and a churn-body having a dasher provided with a shaft held between said clamping-jaws, substantially as set forth.

GEORGE S. AGEE.

Witnesses:

W. H. BRILL,

F. M. TARLTON.