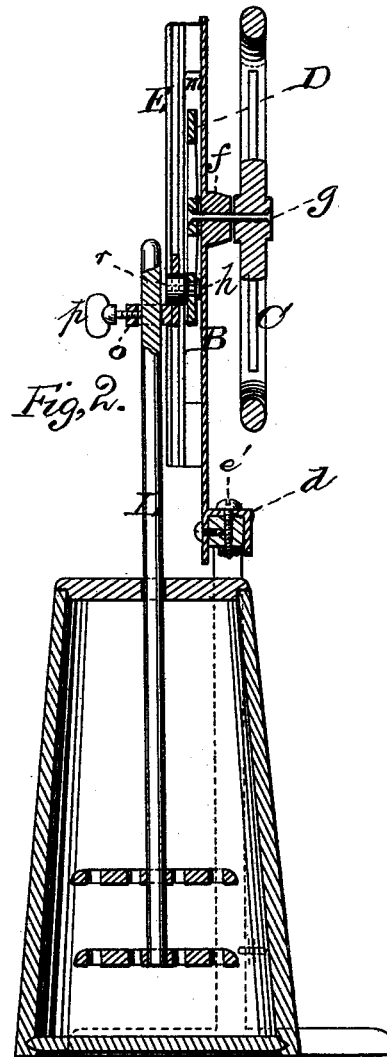
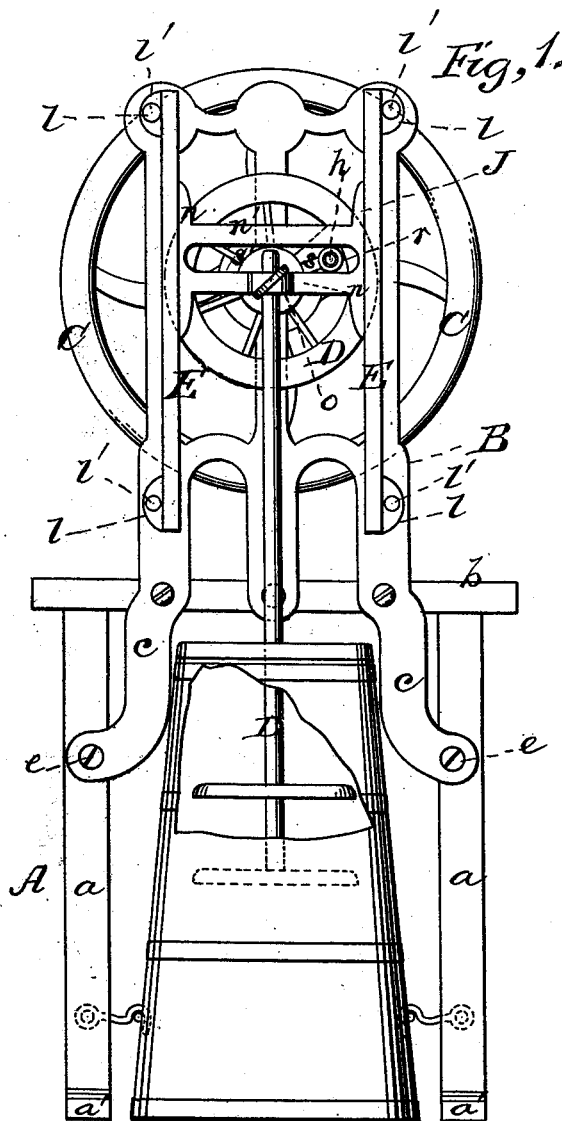


J. T. HAILE.
Churning-Machine.

No. 220,474.

Patented Oct. 14, 1879.



WITNESSES
Villette Anderson.
F. J. Masi.

INVENTOR
J. T. Haile,
by C. W. Anderson
his ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES T. HAILE, OF WHITESBOROUGH, TEXAS.

IMPROVEMENT IN CHURNING-MACHINES.

Specification forming part of Letters Patent No. **220,474**, dated October 14, 1879; application filed June 14, 1879.

To all whom it may concern:

Be it known that I, JAMES THOMAS HAILE, of Whitesborough, in the county of Grayson and State of Texas, have invented a new and valuable Improvement in Mechanisms for Operating Churns; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of my improved machine, and Fig. 2 is a vertical section thereof.

This invention has relation to improvements in mechanisms for operating churns; and the nature of the invention consists in the construction and novel arrangement of the devices used, as will be hereinafter more fully set forth.

In the accompanying drawings, the letter A designates an upright stand, composed of two standards, *a*, fitting each into a base, *a'*, and braced at top by a cross-beam, *b*. B designates a strong open-work metallic frame, having curved outwardly-bent legs *c*, secured both to beam *b* and standards *a* by means of horizontal bolts *e*, and provided with three or more metallic angular holding-plates, *d*, that straddle the beam *b*, and are secured thereto by means of the vertical bolts *e'*. *f* indicates a boss, extending outward from frame B, and affording bearings to the spindle *g* of a master-wheel, C. This spindle is carried through the frame, and is provided on its rear end with a crank-wheel, D, having a wrist, *h*, that is adjustable to or from the center of the wheel in a radial slot, *s*, formed therein, for a purpose hereinafter set forth.

E represents parallel ways, having laterally-extended lugs *l* at top and bottom, by means of which and suitable bolts *l'* they are readily secured to the lateral edges of the frame. The lugs *l* are considerably thickened, the object being to form a space, *m*, between the frame and ways, in which the crank-wheel revolves without interference with either.

J indicates a sash, consisting of two end bars, *n*, connected by a horizontal cross-piece, *n'*, having a horizontal slot, *s'*. This sash in its general outline resembles the letter H, and the branches of the end bars, *n*, extend equally above and below the cross-piece *n'*, and fit neatly, after the manner of the side rails of a sash, in the ways E. The wrist *h* extends through slot *s*, and is provided with an anti-friction roller, *r*, fitting in said slot and rotating on the said wrist. The piece *n* has near its lower edge a horizontal eye, *o*, through which the dash-rod L extends, being adjusted therein, according to the quantity of cream in the vessel, by means of a set-screw, *p*.

By adjusting the wrist *h* nearer to or farther from the center of the wheel D, the length of the stroke of the dash-rod is lessened or increased at pleasure.

It will be seen by an examination of Fig. 2 that the frame, sash, ways, and dash-rod are one side of the cross-bar, and the master-wheel on the other side thereof, thus creating a balance that effectually maintains the apparatus upright.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the base A, consisting of the uprights *a* and cross-piece *b*, of the frame B, having curved bent legs *c*, secured thereto, and angle-plates *d*, the ways E, the sash J, arranged in said ways and provided with a horizontal slot, *s'*, the master-wheel C, rotating on said frame, the crank-wheel D, having wrist-pin *h*, provided with anti-friction roller *r*, the eye *o* on said sash, the set-screw *p*, and dash-rod L, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

J. T. HAILE.

Witnesses:

FRANK J. MAST,
GEO. C. POULTON.