A. MIRES.

Churn-Power.

No. 218,553. Patented Aug. 12, 1879.

Fig. 1

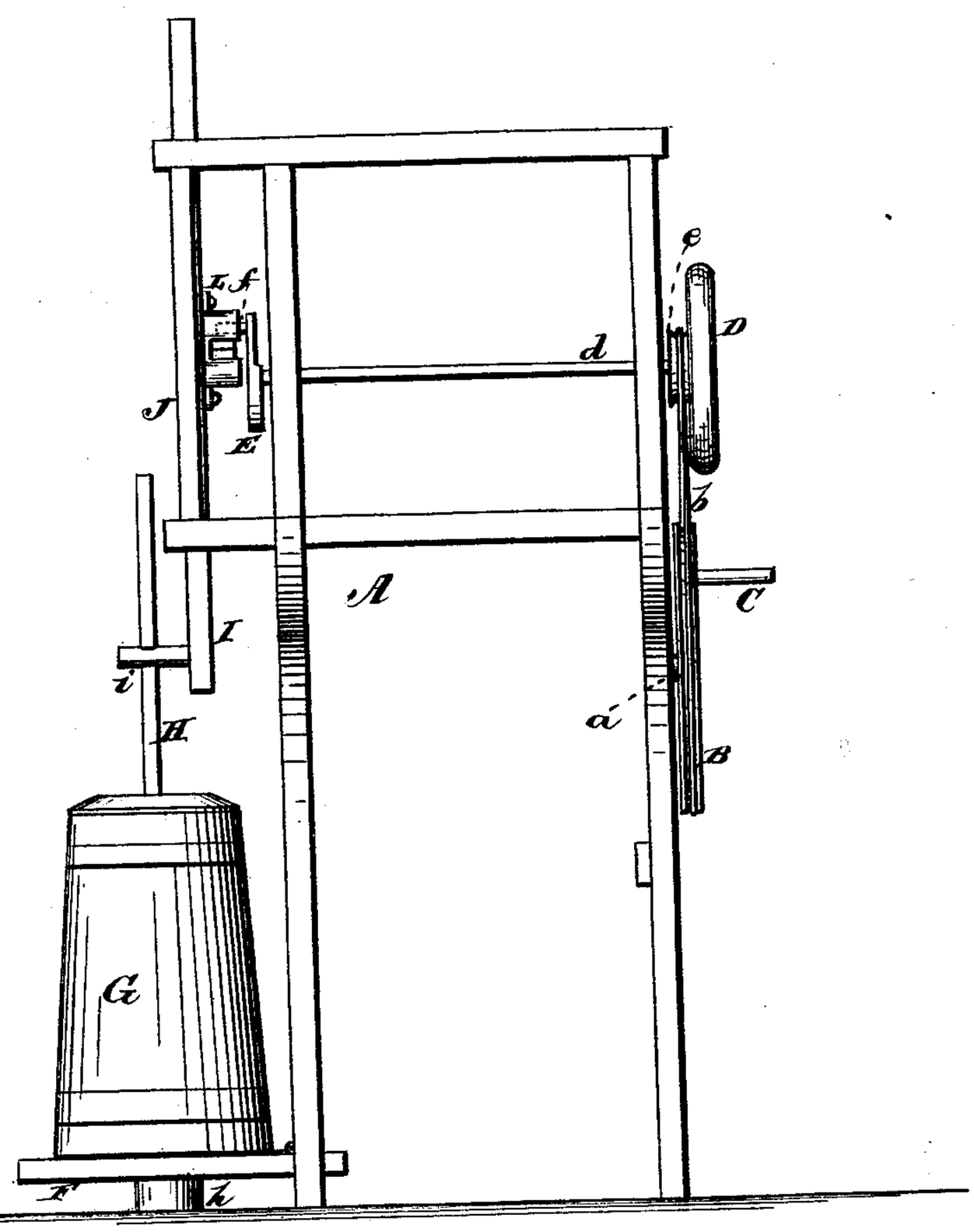

Fig. 2.

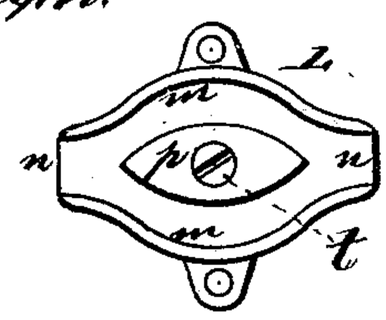

Fig. 3.

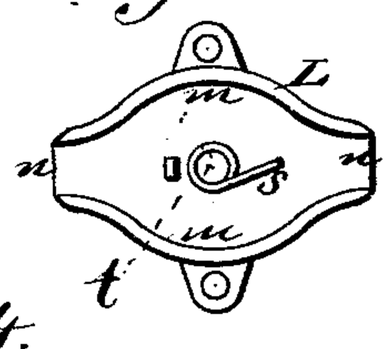

Fig. 4.

WITNESSES

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ANDREW MIRES, OF CHILLICOTHE, MISSOURI.

IMPROVEMENT IN CHURN-POWERS.

Specification forming part of Letters Patent No. **218,553**, dated August 12, 1879; application filed June 7, 1879.

To all whom it may concern:

Be it known that I, ANDREW MIRES, of Chillicothe, in the county of Livingston and State of Missouri, have invented certain new and useful Improvements in Churn-Powers; 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 of my churn-power; and Figs. 2, 3, and 4 are detail views of the same.

The nature of my invention consists in the construction and arrangement of a churn-power, as will be hereinafter more fully set forth.

The annexed drawings, to which reference is made, fully illustrate my invention.

A represents a stand or frame, of any suitable size and construction, having upon one side a stud, *a*, firmly secured thereto, and projecting from it sufficiently far to receive a band-wheel, B, which wheel is provided with a crank, C, for turning the same. *b* is the belt or band connecting the band-wheel with a pulley, *e*, on the hub of a fly-wheel, D, said fly-wheel being secured upon a horizontal shaft, *d*, which passes through and has its bearings in the upper part of the frame A. On the other end of this shaft *d* is secured a disk, E, with a pin, *f*, projecting outward therefrom.

At or near the bottom of the stand A, to one side, is hinged a platform, F, which may be closed upward against the side of the frame when not in use, so as to take up less room.

When the machine is to be used, the platform F is let down and the churn G is placed thereon. In the center of the platform, on the under side, is a foot, *h*, to support the same level.

H is the dasher-rod, extending upward from the churn, and fastened adjustably in a clamp, *i*, secured in and projecting from a vertically-sliding bar, I, which passes up through suitable guides at J J, formed in the stand. On the inner side of this sliding bar I is secured an oval plate, L, having top and bottom flanges, *m m*, thus forming an oval box, with an opening, *n*, at each end. Within this box is pivoted an oval tongue or center piece, *p*, so as to form two curved passages, one at the top and one at the bottom, which communicate or run into each other at the ends, as shown.

The pin *f* on the disk E projects into the box L *m*, and as the shaft *d* is being rotated this pin *f* will work alternately above and below the center piece, *p*, against the flanges *m*, and impart a rapid vertically-reciprocating motion to the sliding bar I and to the churn-dasher connected thereto.

The back of the tongue or center piece, *p*, is formed with an oval recess, *x*, in which works a spring, *s*, one end of which is placed on the pivot *t* of said tongue. This spring holds the oval tongue *p* in an inclined position.

During the operation of the machine, as the pin *f* travels in the track above the tongue, it depresses the end of the tongue before emerging into the opening *n*. The spring *s* throws this end of the tongue up again, so as to leave a sufficiently large mouth for the pin *f* on its return movement to enter from the opening *n* into the passage below the tongue. Then, at the other end of said tongue, the movement is reversed, one spring causing the two movements.

I am aware that a piston-rod has been combined with a cross-head having an internal angular block or gate, controlled by a spring or cam, and employed to carry the wrist-pin beyond the dead-points in converting rotary into reciprocating motion, as shown in Patent No. 41,373, of January 26, 1864; and this construction I specifically disclaim; but

What I do claim is—

In a churn-power, the oval plate L, having flanges *m m*, openings *n n*, center piece, *p*, and spring *s*, and the sliding bar I, combined with the rotating shaft *d*, multiplying power B *b e*, disk E, and pin *f*, substantially as and for the purpose set forth.

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

ANDREW MIRES.

Witnesses:
S. M. BEEMER,
W. J. REDWINE.