H. A. TURNER.

Churn-Motor.

No. 210,580. Patented Dec. 3, 1878.

Fig. 1.

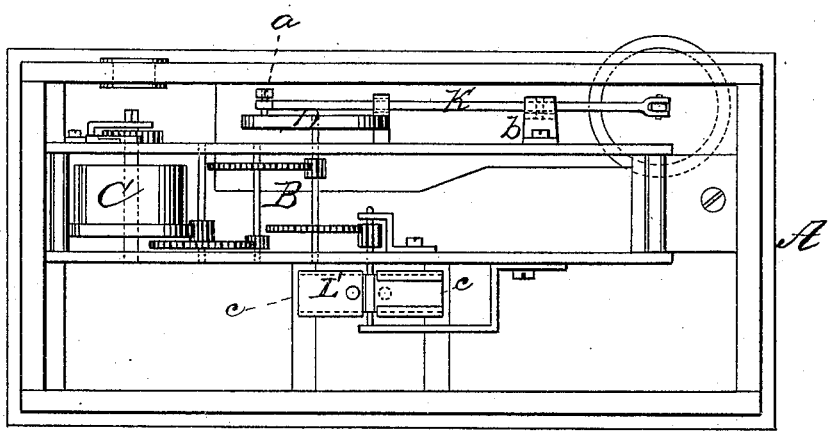


Fig. 2.

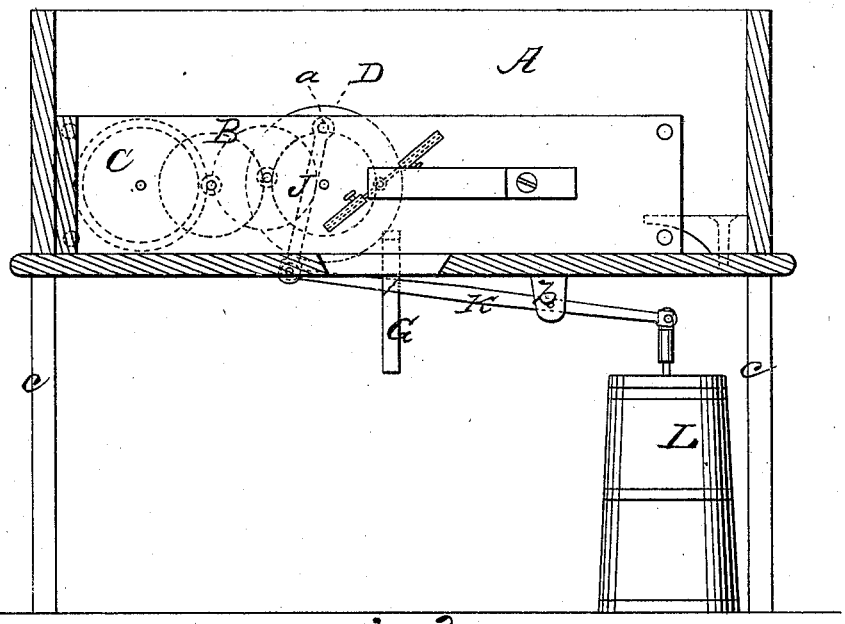
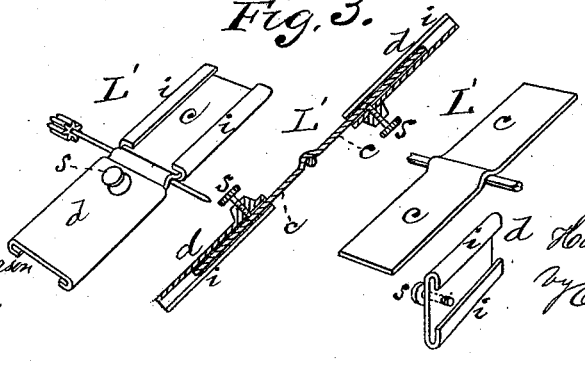


Fig. 3.



WITNESSES

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HARDAWAY A. TURNER, OF BEDFORD COUNTY, VIRGINIA.

IMPROVEMENT IN CHURN-MOTORS.

Specification forming part of Letters Patent No. **210,580**, dated December 3, 1878; application filed May 25, 1878.

To all whom it may concern:

Be it known that I, HARDAWAY AMBROSE TURNER, of the county of Bedford and State of Virginia, have invented a new and valuable Improvement in Churn-Motors; 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 top view of my improved churn-motor. Fig. 2 is a longitudinal vertical section thereof, and Fig. 3 shows detail views of the fly.

This invention has relation to improvements in wheel-train motors for churns.

The object of the invention is to provide means whereby the speed of the stroke of the dash-rod may be regulated at pleasure without using brakes or other like devices, which by their friction tend materially to wear out the journals of the train-wheels.

The nature of the invention consists in the combination, with a churn and its actuating clock-train, of the fly having blades, and extension-wings having guideways upon their lateral edges, formed by turning the edges of the said wings upward and over, and adapted to receive the fly-blades and the adjusting-screws, as will be hereinafter described.

In the annexed drawings, the letter A designates a casing, containing a train of wheels, B, actuated by a spring in the barrel C. Upon the axle of the last wheel of the train is keyed a crank-wheel, D, having a wrist-pin, *a*, to which is attached one end of a pitman, J, the other end of which is secured pivotally to the power end of a vertically-vibrating lever, K, having its fulcrum in a hanger, *b*, depending from the casing. This latter is raised upon legs *c*, and the churn L is placed under it directly beneath the weight end of the lever K.

The dash-rod is pivoted to the power end of said lever, which latter is guided and prevented from wabbling by means of a forked metallic guide, G, depending from the case and straddling the same. The spring is wound up, in the usual way, by a key or wrench, and through the mechanism aforesaid imparts a vertically-reciprocating motion to the dash-rod. This movement should be more or less rapid, according to the quantity of cream in the churn and other circumstances.

This speed-adjustment is attained as follows: The blades *c* of the fly L′ are each provided with an extension, *d*, having on its lateral edges ways *i*, between which the said blades *c* are snugly received. The wings *d* slide endwise toward or from the axis of the fly, thereby lessening or increasing the beating-surface of the blades, and consequently lessening or increasing the speed of the stroke of the dash-rod. The wings *d* are adjusted to the blades by means of a set-screw, *s*.

I am aware that extensible fan-wings lapped upon each other, and secured to the crank-shaft of a churn power driving mechanism by means of slots and clamp-screws, is not new, and I make no claim to such devices.

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

The combination, with a churn and its actuating clock-train, of the fly L, having blades *c*, the extension-wings *d*, having guideways *i* upon their lateral edges, formed by turning the edges of the said wings upward and over, and adapted to receive the fly-blades *c*, and the adjusting-screws *s*, substantially as specified.

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

H. A. TURNER.

Witnesses:
FRANK J. MASI,
WALTER C. MASI.