W. W. HINKLE.

CHURN-MOTORS.

No. 195,368. Patented Sept. 18, 1877.

Fig. 1.

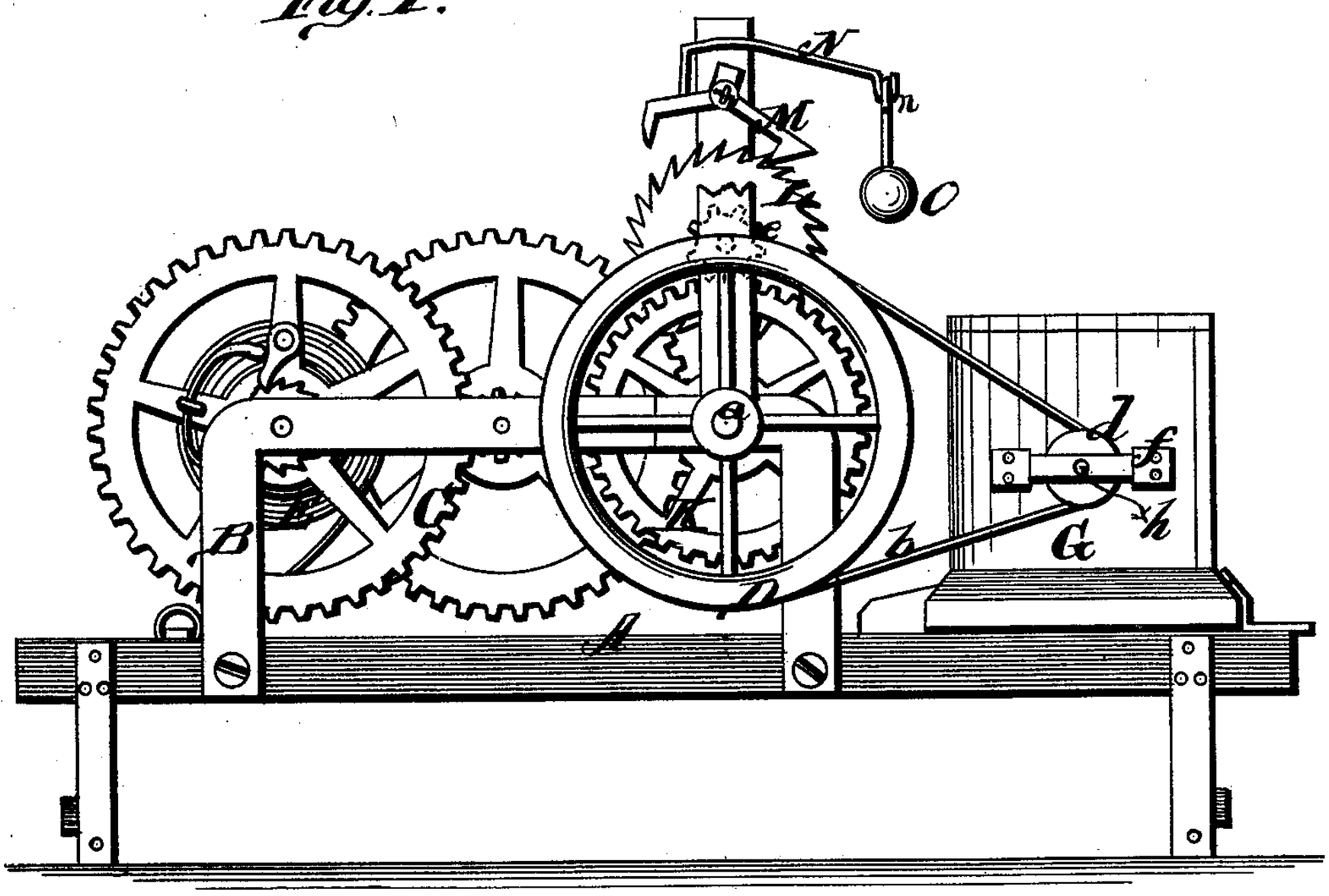
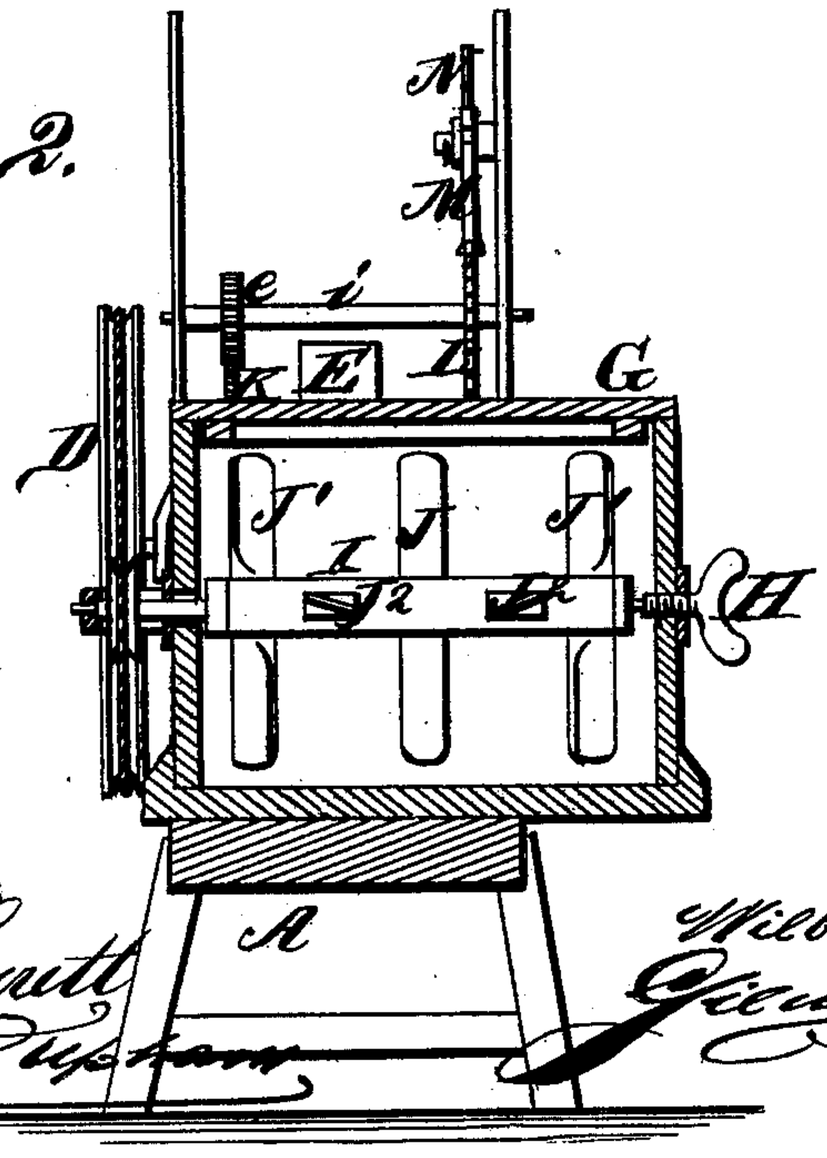


Fig. 2.



WITNESSES.

Robt Ewell

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WILBER W. HINKLE, OF HOOD'S MILLS, MARYLAND.

IMPROVEMENT IN CHURN-MOTORS.

Specification forming part of Letters Patent No. **195,368,** dated September 18, 1877; application filed July 21, 1877.

To all whom it may concern:

Be it known that I, WILBER W. HINKLE, of Hood's Mills, in the county of Carroll and State of Maryland, 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 side view of my churn-motor, and Fig. 2 is a transverse vertical sectional view thereof.

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

The accompanying drawing, to which reference is made, fully illustrates my invention.

A represents the bench or base on which the churn and the power for running the same are secured. On this base is a frame, B, firmly secured to it, and in this frame is an ordinary train of gearing, C, operated by means of a spring, E.

This train of gearing may, of course, equally as well be operated by a weight; but I prefer to use a spring, as shown, because it renders the mechanism more compact, so as to take up but little room.

On the end of the last shaft *a* of the train of gearing is a large circumferentially-grooved wheel, D, around which is passed an endless cord, chain, or belt, *b*. This cord, or its equivalent, also passes around a pulley, *d*, secured on a shaft, *h*, which has its bearings in the end of the churn-box G, and in a metal frame, *f*, secured to the end of said box. The inner end of the shaft *h* is made square, and enters a square socket formed in or attached to one end of a horizontal shaft, I, within the churn-box, the other end of said horizontal shaft having its bearing on the pointed end of a screw, H, which is passed through the other end of the box. This screw serves also as a brake, to stop the motion of the shaft and to regulate its speed.

The horizontal shaft I is provided with two sets of blades or dashers passed through the shaft at right angles to each other. One set of these consists of a center blade or dasher, J, and two end dashers, J^1 J^1. The center dasher J stands parallel with the shaft, while the end dashers J^1 J^1 are twisted or turned in opposite directions. The other set consists of two dashers, J^2 J^2, arranged between and at right angles with those of the first set. These latter dashers J^2 J^2 are also turned or twisted in opposite directions, the whole being so arranged that when the dashers are rotated one set will throw the milk from the center toward the ends and the next set throw it from the ends toward the center, while the center dashers J, so to say, divide the currents in the center, whereby a violent agitation of the milk is produced, cutting the globules and making the butter come very rapidly, and also collecting all the butter contained in the milk.

The last shaft *a* of the train of gearing is provided with a cog-wheel, K, which meshes with a pinion, *e*, on a shaft, *i*, and this shaft is provided with an ordinary escapement-wheel, L. Above this wheel is pivoted the escapement M, which takes into the wheel, and acts as a governor for regulating or steadying the motion of the gearing.

The escapement M is provided with an arm, N, having a hook, *n*, at its outer end, upon which is to be hung a weight, O, when it is desired to stop the churn-power before the spring is run down.

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

1. The pivoted escapement M, to the inner arm of which is attached the bent arm N, having at its outer end the hook *n*, adapted to receive the removable weight O, substantially as described, and for the purpose set forth.

2. The pivoted escapement M, to the inner end of which is attached the bent arm N, having at its outer end the hook *n*, adapted to receive the removable weight O, in combination with the escapement-wheel L and the train of gearing described, operated by a spring or weight, substantially as described, 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.

WILBER W. HINKLE.

Witnesses:

GEORGE E. UPHAM,

EMORY H. BATES.