

(No Model.)

J. B. MILES.

MOTOR.

No. 334,263.

Patented Jan. 12, 1886.

Fig. 3.

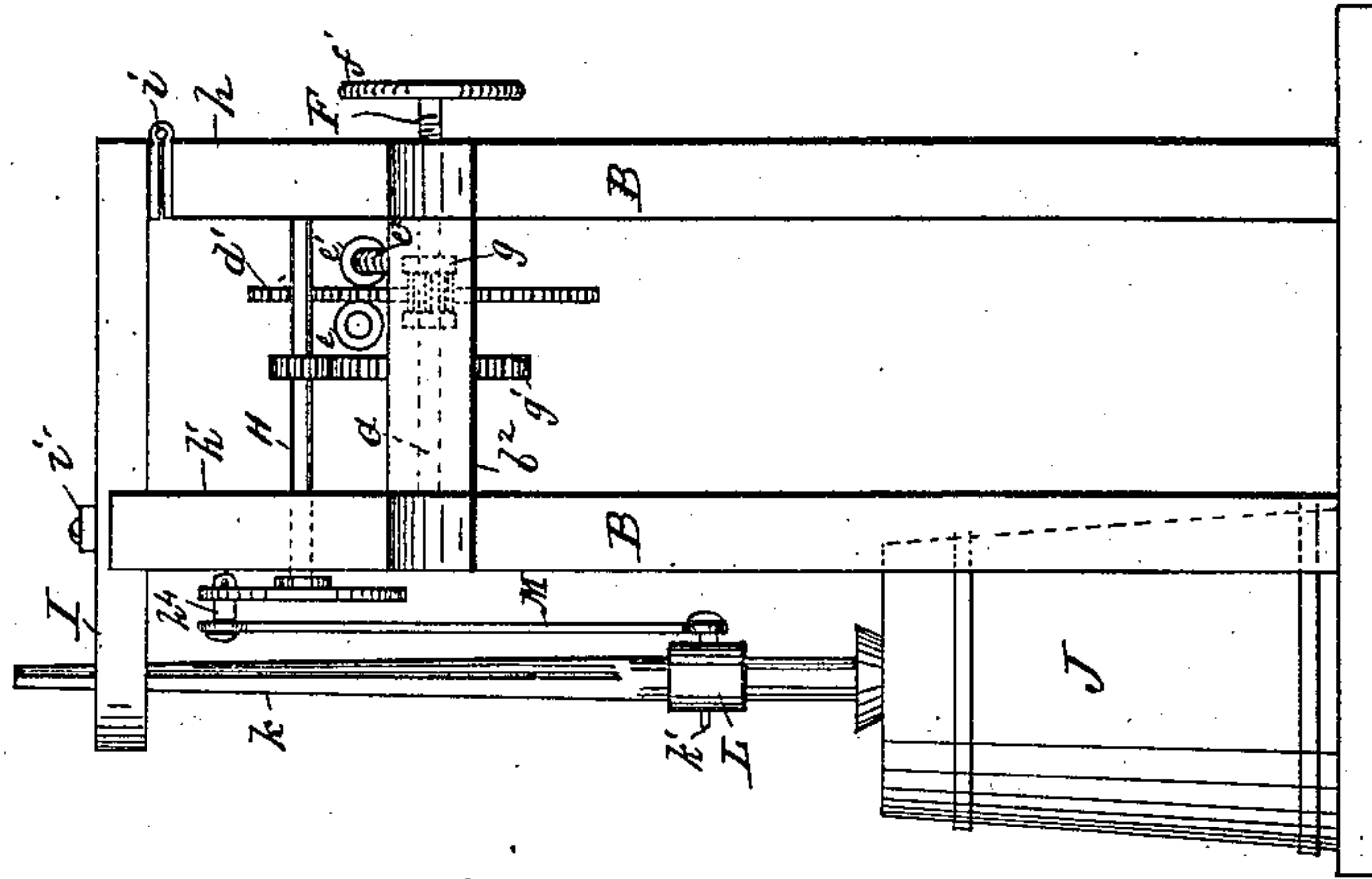


Fig. 2.

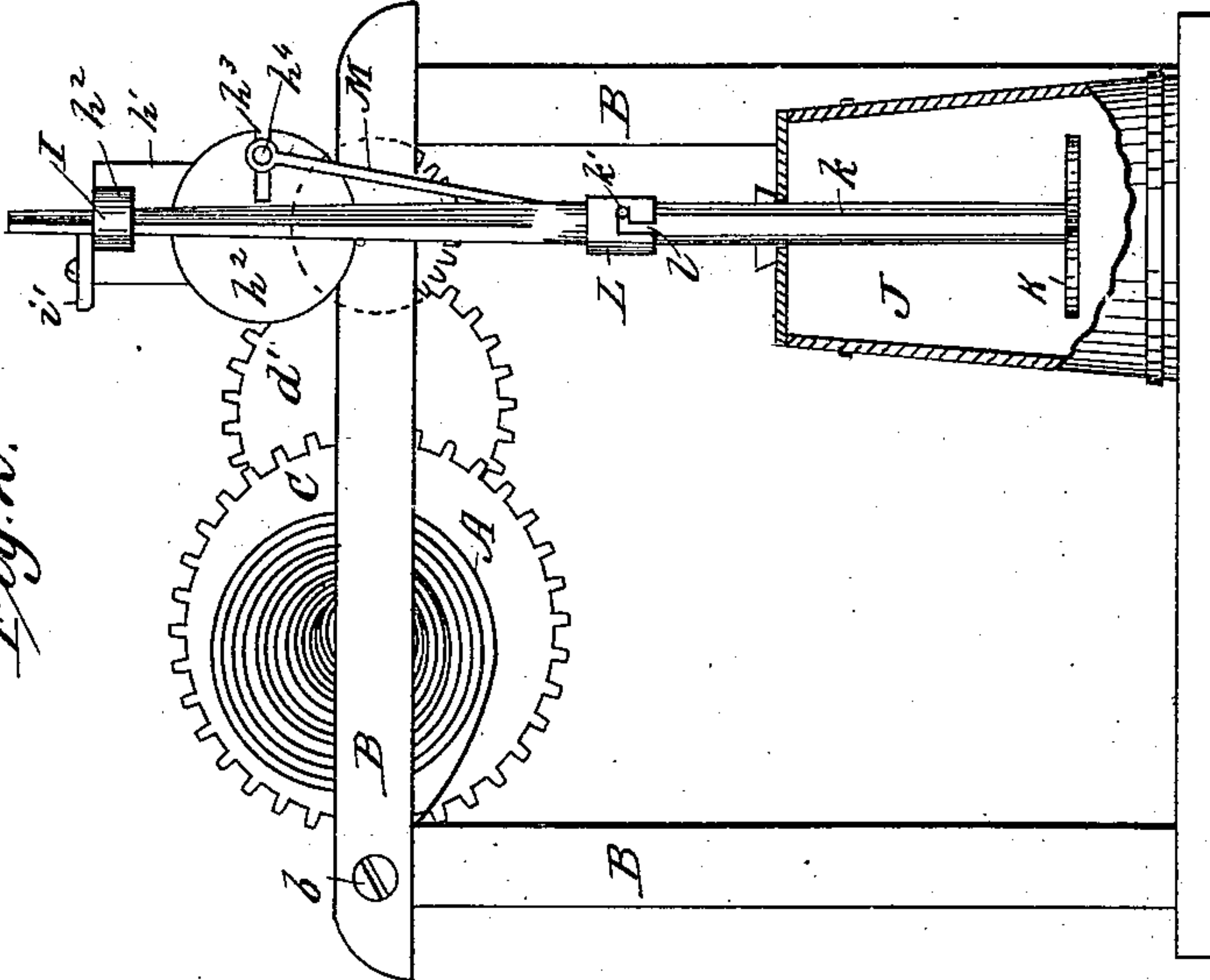
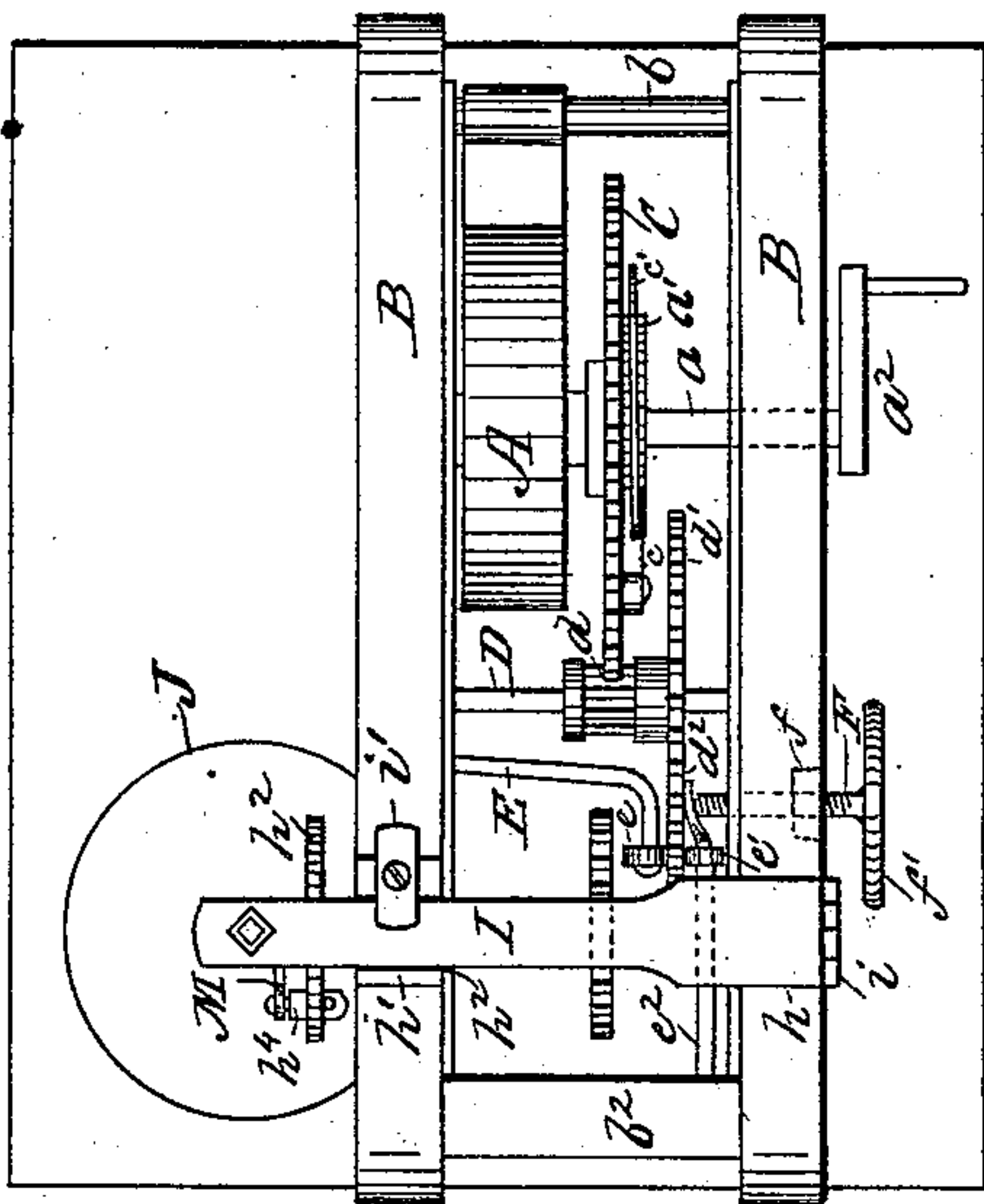


Fig. 1.



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JACKSON B. MILES, OF LINCOLNTON, GEORGIA, ASSIGNOR TO HIMSELF,
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MOTOR.

SPECIFICATION forming part of Letters Patent No. 334,263, dated January 12, 1886.

Application filed October 17, 1885. Serial No. 180,165. (No model.)

To all whom it may concern:

Be it known that I, JACKSON B. MILES, a citizen of the United States, residing at Lincolnton, in the county of Lincoln and State of Georgia, have invented a new and useful Improvement in Churn-Powers, of which the following is a description.

Figure 1 is a plan view of the churn-power. Fig. 2 is a front elevation showing the churn in section. Fig. 3 is an end view of the machine.

This invention relates to spring-motors used in connection with churns for operating the dasher-staff; and it consists in the detailed construction of the parts, hereinafter fully described, by which the said dasher-staff is operated in an improved manner, and may be readily connected or disconnected from the motor, and by which the speed of the said motor is controlled and regulated.

In the accompanying drawings, similar letters of reference indicate corresponding parts in all the figures.

A is the spring by which the mechanism is driven. This is mounted upon the shaft *a*, and has its inner end made fast thereto, its outer end being attached to the cross-bar *b* of the framing B. A ratchet-wheel, *a'*, is also secured upon shaft *a*, and a handle, *a''*, is provided for winding up the spring.

C is a gear-wheel, loosely mounted upon the shaft *a*, and provided with a pawl, *c*, engaging with the teeth of the ratchet-wheel *a'*, and kept in place by the spring *c'*, so that the motion of the spring when unwinding is transmitted to the gear-wheel C.

D is a shaft journaled in bearings in the framing B, and having a pinion, *d*, gearing into the wheel C, and a gear-wheel, *d'*, secured upon it. The gear-wheel *d'* is provided with a flat portion, *d''*, upon which the brake-rollers *e* and *e'* revolve.

E is a bent arm one end of which is fastened in the framing. The other forms a journal upon which the brake-roller *e* revolves loosely. The other brake-roller, *e'*, is also mounted loosely upon the spring-arm *e''*, one end of which is fastened in the cross-bar *b''* of the framing. The other end, after passing through the said roller, is turned downward, and is

provided with a screw, F, the point of which bears upon it and regulates the pressure with which the roller *e'* presses against the flat portion *d''* of the gear-wheel. The screw F passes through a nut, *f*, let into the framing, and is provided with a head, *f'*, for turning it round and adjusting it.

G is a shaft journaled in bearings in the framing B, and provided with a pinion, *g*, gearing with the wheel *d'*, and with a gear-wheel, *g'*.

H is the crank-shaft for driving the churn-dasher-staff. It is journaled in bearing-blocks *h* and *h'*, attached to the top of framing B, and is provided with the crank-plate *h''*, having a slot, *h'''*, therein. The crank-pin *h''''* is provided with a sliding key at the back of the crank-plate, or with a nut, so that its position may be altered and a longer or shorter stroke given to the dasher-staff of the churn.

I is the guide for the dasher-staff. One end of this is provided with a hinge, *i*, by which it is attached to the bearing-block *h*. The other bearing-block, *h'*, has a slot, *h''*, in it, on the bottom of which the guide rests, and is held in the said slot by the button *i'*.

When it is desired to remove the dasher from the churn, the guide can be turned over backward on its hinge, so as to be out of the way.

J is the churn in which the dasher K works. Any description of churn may be employed in which a vertically-reciprocating dasher is used for making the butter, and provided with a dasher-staff, *k*, passing through the lid of the churn and through the guide I.

L is a socket, provided with slots *l* in it, which engage with the pin *k'*, projecting from the dasher-staff.

M is the connecting-rod, which couples the crank-pin to a similar pin, *l'*, projecting from the side of the socket L. The socket can be removed from the dasher-staff by first turning it round until the pin is in the vertical portion of the slot and then sliding it off lengthwise.

When the spring is wound up, which can be accomplished in a very short space of time, the mechanism is put in motion, and will continue to operate the dasher in the churn for

from fifteen to forty-five minutes, depending upon the speed at which it is allowed to run, which may be controlled by the brake-rollers.

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

1. In a churn-power, the combination of the churn-dasher staff having the pin k' , projecting therefrom, the connecting-rod, the hinged guide I, the socket L, provided with slots l , and the crank-plate having the slot h^3 therein, and a crank-pin for operating the dasher in the churn, substantially as shown and described.

2. In a churn-power, the combination of the churn-dasher staff, the socket L, having slots l , the connecting-rod, the crank-plate having an adjustable crank-pin, the guide I, provided with hinge i , the block h , the block h' , having

slot h^2 therein, the button i' , and a train of mechanism operated by a spring for imparting motion to the dasher in the churn, substantially as described and shown.

3. In a churn-power, the combination of a spring provided with a ratchet-wheel and spring-pawl and means for winding it up, a train of mechanism for imparting motion to the dasher in the churn and containing the gear-wheel d' , having a flat portion, d^2 , the brake-rollers e and e' , the spring-arm e^2 , and the adjustable screw for regulating the pressure of the brake-rollers and controlling the machine, substantially as described and shown.

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Witnesses:

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