

(No Model.)

L. M. ROBBINS.
MOTIVE POWER.

No. 461,047.

Patented Oct. 13, 1891.

Fig. 1.

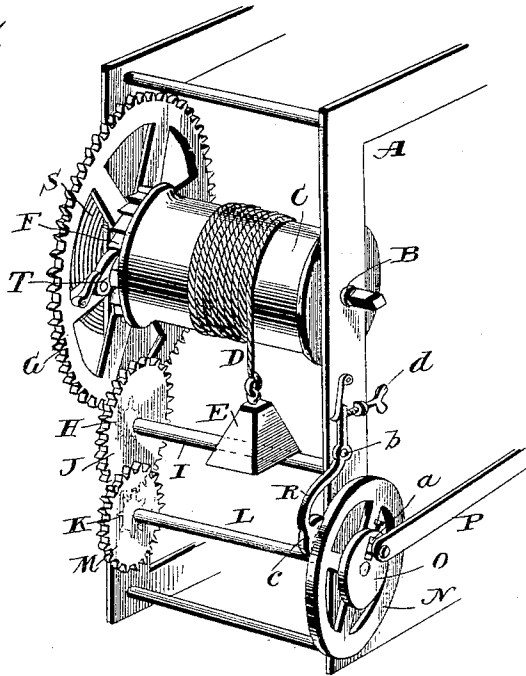
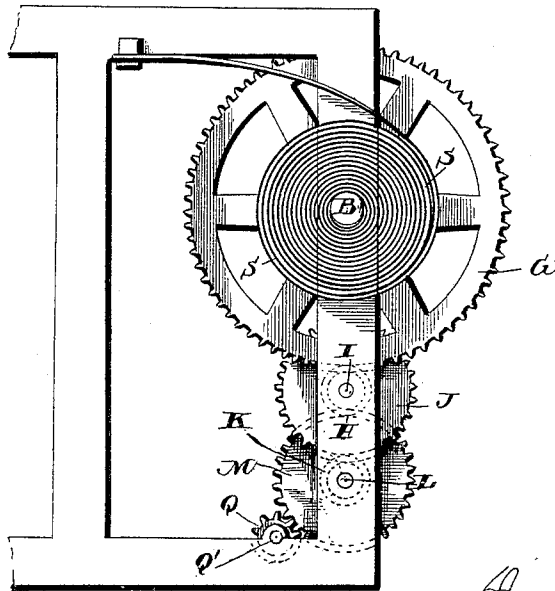


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

LORENZO MARTIN ROBBINS, OF ELIZABETH, ARKANSAS.

MOTIVE POWER.

SPECIFICATION forming part of Letters Patent No. 461,047, dated October 13, 1891.

Application filed June 3, 1891. Serial No. 394,961. (No model.)

To all whom it may concern:

Be it known that I, LORENZO MARTIN ROBBINS, a citizen of the United States, residing at Elizabeth, in the county of Fulton and State of Arkansas, have invented certain new and useful Improvements in Motive Powers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in that class of motive powers in which are employed a spring, a weight or weights, and gearing.

It has for its objects, among others, to provide a simple, cheap, durable, and efficient mechanism of this character which can be employed for a variety of purposes, such as running churns, fans, shakers, and analogous devices. I provide novel means for adjusting the length of stroke and for applying the brake. I place the spring on the drum-shaft, thus materially economizing space.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention in the present instance resides in the peculiar combinations and the novel construction, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the claim.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of my improved motor. Fig. 2 is an end view of a slightly-modified form of the same.

Like letters of reference indicate like parts in both views wherever they occur.

Referring now to the details of the drawings by letter, A designates a suitable framework adapted to support the various parts. It may be of wood or metal or a combination of both.

B is the main shaft, suitably journaled in the uprights of the frame and having one end squared or otherwise formed to receive a wrench or other means by which the shaft may be revolved. On this shaft between the uprights is a drum C, upon which is designed to be wound the chain or cord D, to the free end of which is attached the weight E, which is detachably held to the cord or chain in any suitable manner, so that it may be removed and another of varying weight may be applied, as circumstances may require. Upon this main shaft is also fixed the ratchet-wheel F, which is located between the end of the drum and the main gear-wheel G, which is loose upon the said main shaft. This gear-wheel meshes with a small gear-wheel H on the shaft I, parallel with and in direct vertical line with the main shaft and suitably journaled in the uprights of the frame. On this shaft I is a larger gear-wheel J, which in turn meshes with a small gear-wheel K on the shaft L, which is parallel with and in the same vertical plane as the other two shafts, being suitably journaled in the same uprights of the frame, as seen best in Fig. 2. On this latter shaft L is a larger gear-wheel M, and on the other end of this shaft is a balance-wheel N and a crank-disk O, to the wrist-pin of which is attached the pitman P, designed to be connected with the apparatus to be driven.

In order to change the stroke from long to short, or vice versa, I make the connection of the wrist-pin with the disk adjustable, so that it may be moved nearer to or farther from the center. This adjustment is accomplished by making a dovetail radial groove in the disk and forming the crank-pin with a correspondingly-shaped shank fitted thereto, a set-block being provided to follow in the groove behind the pin and to be tightened when in its adjusted position to hold the parts in place.

The larger gear-wheel M may be arranged to mesh with a small gear-wheel Q on the shaft Q', as seen in Fig. 2, and motion conveyed therefrom to the desired place.

R is a brake-arm pivoted at b to one of the uprights of the frame and at one end carrying a brake-shoe c, adapted to bear against the balance-wheel, as shown in Fig. 1, the other end being controlled by a set or thumb

screw *d* in the upright and adapted to be turned in or out to apply the brake to the said balance-wheel to suit the circumstances.

5 S is a spring having one end attached to the frame in any suitable manner, as seen in Fig. 2, and the other end affixed to the main shaft B and wound thereon, as shown in both views. The object of this spring is to assist in raising the weight after it has been run
10 down to its lowest limit.

The operation will be readily understood from the foregoing description, when taken in connection with the annexed drawings, and a further description thereof is not deemed
15 necessary. The pawl T is suitably pivoted to engage the ratchet-wheel, as shown in Fig. 1, which latter is fastened to the drum.

What I claim as new is—

20 The improved motor herein described, consisting of the frame, the main shaft, the drum, the ratchet-wheel, the cord wound on the drum and carrying a weight, the gear-wheel on the drum-shaft, the pawl on the said gear-wheel

and engaging with the ratchet, a flat spring acting on the pawl, another spring having one
25 end secured to the drum-shaft and wound thereon and the other end attached to the frame, the pitman, the balance-wheel with its adjustable crank-pin, the gear-wheel on the shaft of the balance-wheel, the intermediate
30 intermeshing gear-wheels, the pivoted adjustable brake arranged to act on the balance-wheel, a thumb-screw passed horizontally through a screw-threaded eye on the frame and bearing against the upper end of the
35 brake-lever for adjusting the same, and a spring on the frame bearing on the brake in opposition to the adjusting means for said brake, as set forth.

In testimony whereof I affix my signature in
40 presence of two witnesses.

LORENZO MARTIN ROBBINS.

Witnesses:

L. L. GRAY,

J. C. LANCASTER.