

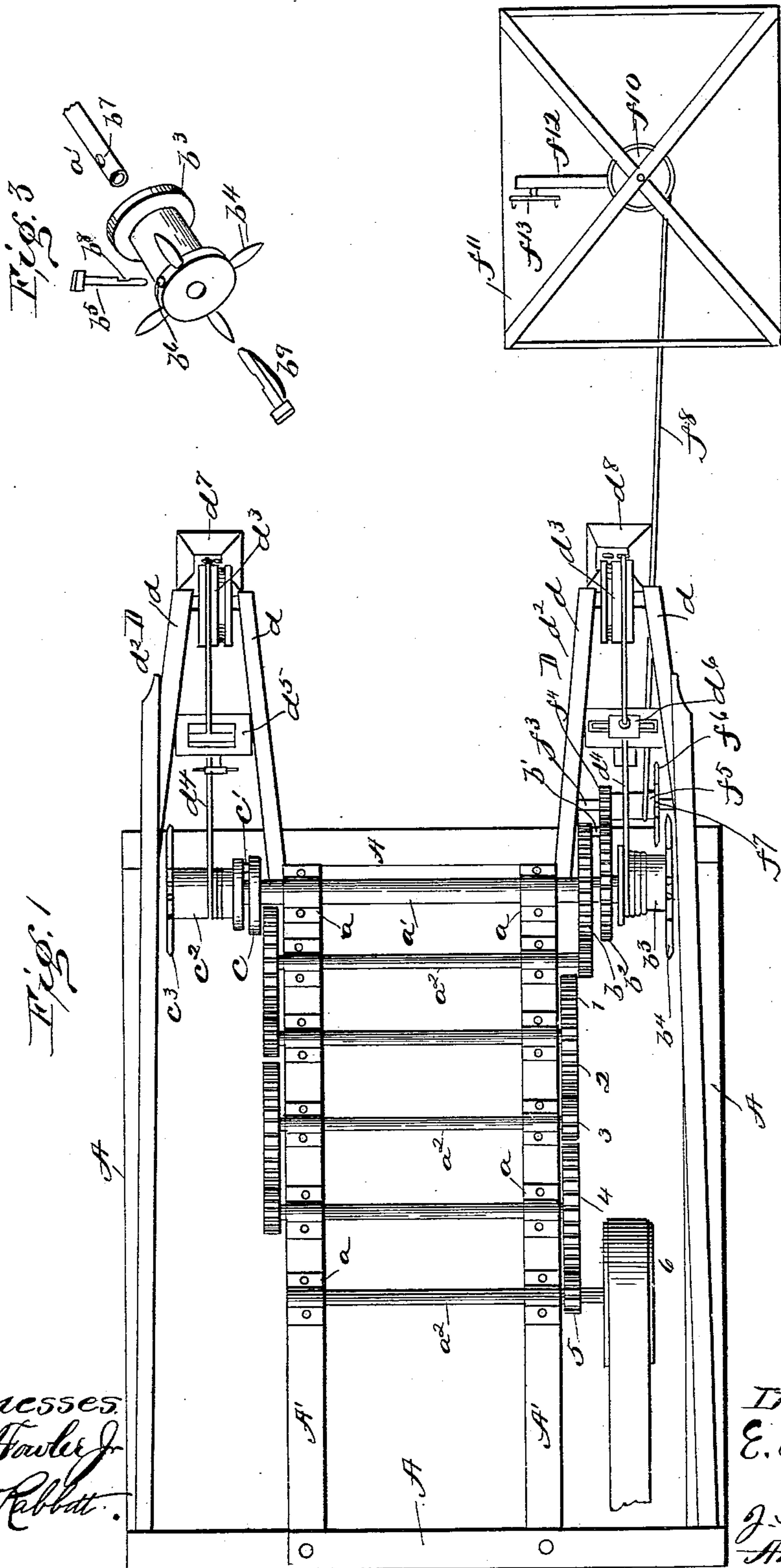
(No Model.)

2 Sheets—Sheet 1.

E. LEVINGS.
POWER MOTOR.

No. 560,222.

Patented May 19, 1896.



Witnesses:
J. M. Fowler
R. E. Rebbat.

Inventor:
E. Levings
by
J. S. Duffie
Attorney.

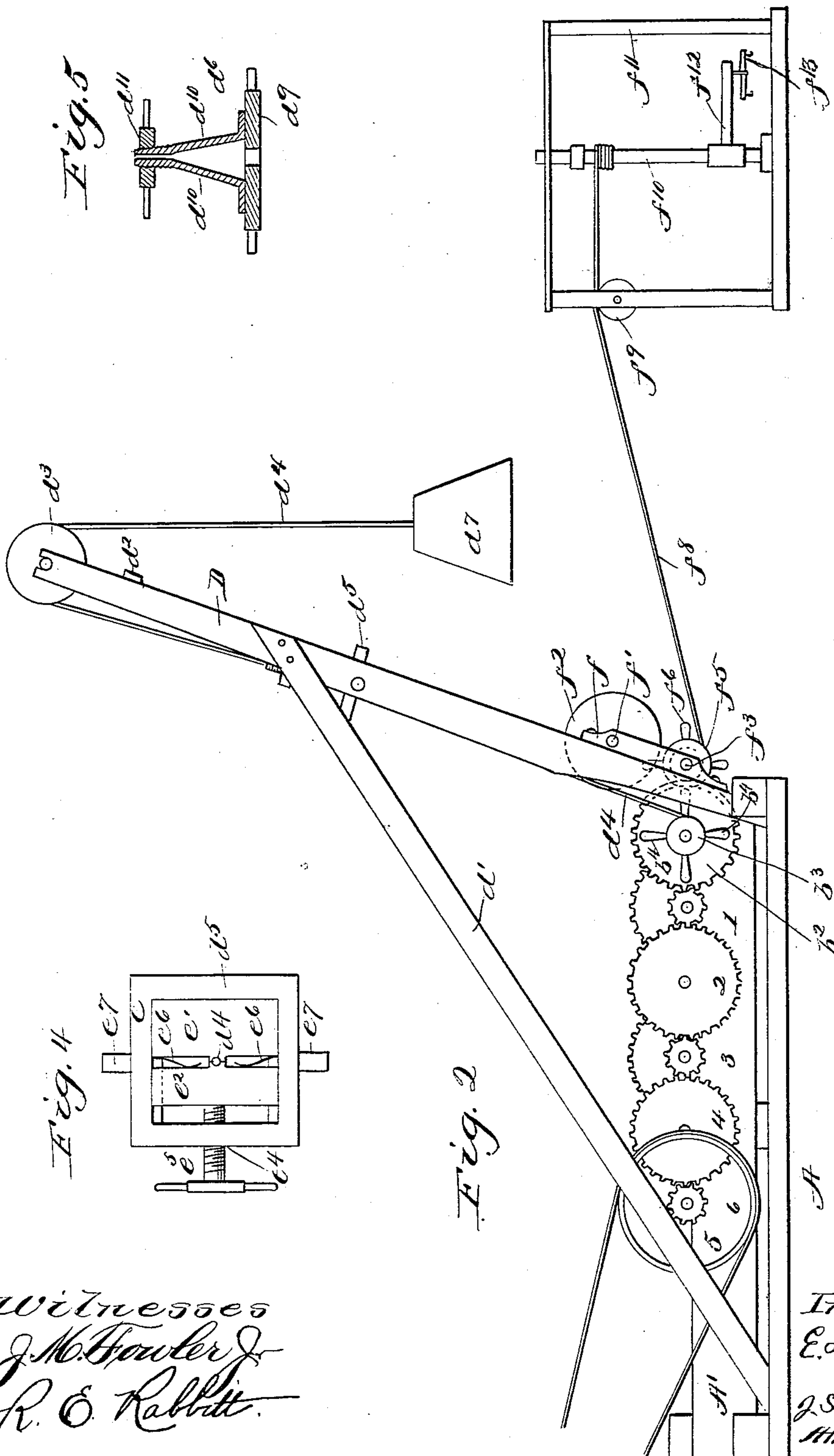
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No. 560,222.

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Witnesses
J. M. Fowler &
R. E. Rabbitt.

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Attorney

UNITED STATES PATENT OFFICE.

ENOC LEVINGS, OF WOODVILLE, TEXAS.

POWER-MOTOR.

SPECIFICATION forming part of Letters Patent No. 560,222, dated May 19, 1896.

Application filed January 27, 1896. Serial No. 576,979. (No model.)

To all whom it may concern:

Be it known that I, ENOC LEVINGS, a citizen of the United States, residing at Woodville, in the county of Tyler and State of Texas, have invented certain new and useful Improvements in Power-Motors; and I do hereby 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.

My invention is a power-motor; and it consists of gearing mounted on a frame, winding-drum, and horse-power, elevations and weights, with means for operating and regulating the same.

In the accompanying drawings, Figure 1 is a top plan view of my invention. Fig. 2 is a side elevation; and Figs. 3, 4, and 5 are detail views.

My invention is described as follows:

A is the frame.

A' are sills extending from one to the other side of the frame and secured in place by bolts or other fasteners. On the upper faces of said sills are bearings a , in which are journaled shaft a' and axles a^2 . On one end of the shaft a' is journaled a cog and ratchet wheel b . This wheel may turn upon the axle in one direction, but is prevented from turning in the other direction by means of a ratchet-pawl b' . On the same end of said shaft is secured a cog-wheel b^2 , bearing on one face the pawl b' . On the same end of said shaft is secured a spool b^3 . Said spool is provided with arms b^4 . This end of said shaft is cylindrical and hollow and is secured on the end by means of a pin b^5 , which passes down through perforations b^6 and b^7 in the shaft a' and spool b^3 , respectively. (See Fig. 3.) Said pin b^5 is provided with a notch b^8 , which, when placed in the perforations b^6 b^7 , are held in place by a notched spring-pin b^9 . On the other end of said shaft a' is rigidly secured a wheel c , carrying a pawl c' , and on the same end of said shaft is journaled a spool c^2 , bearing arms c^3 . This spool is exactly similar to spool b^3 , and is secured to the end of said shaft in exactly the same way that spool b^3 is secured to the other end of said shaft. The inner face of the inner end of said spool c^2 , however, is provided with ratchet-notches in which pawl c' catches, and

while said spool is free to turn in one direction it is prevented from turning in the other direction by means of said ratchet-notches and said pawl c' .

On the right-hand end of the frame A are erected elevations D, consisting of the standards d and braces d' and d^2 , or these elevations may be secured in the ground at the end of said frame. Between the upper ends of the braces are journaled double-grooved wheels d^3 . To the spools b^3 and c^2 is secured one end of a cable d^4 . The other ends pass up through the clamps d^5 d^6 , thence over the pulleys d^2 d^3 , and have secured to their ends weights d^7 d^8 .

Clamp d^6 (see Fig. 4) consists of a square frame e , having secured in one side a block e' and in the other side a moving block e^2 , and through a threaded opening e^4 works a screw e^5 and presses the two blocks e' and e^2 together, causing them to grasp and firmly hold the cable d^4 . When the screw e^5 is turned back, the movable block e^2 is pushed back by means of the spring e^6 , and thus the cable d^4 is released. Said clamp d^5 is pivoted between the standards d by means of the axles or projections e^7 .

Clamp d^6 (see Fig. 5) consists of a perforated axle d^9 , threaded spring-standards d^{10} , and nut d^{11} . Cable d^4 passes through the perforation in the axle d^9 and between the upper ends of the spring-standards d^{10} , and is clamped and held by turning down the nut d^{11} .

To the rear face and lower ends of the standards d are secured bearings f , and in these bearings are journaled axles f' , and on said axles are loosely journaled grooved wheels f^2 , and in the grooves of said wheels run cables d^4 . In the lower ends of the bearings f , attached to the nearest elevation D, is journaled a shaft f^3 , and on said shaft is secured a pinion-wheel f^4 , which meshes with cog-wheel b^2 , secured on the shaft a' . On said shaft f^3 is journaled a spool f^5 , provided with a dog, which catches in ratchet-teeth on the face of the cog-pinion f^4 . Said spool f^5 is also provided with arms f^6 , and is held from turning on the said shaft f^3 by means of a pin b^5 , which passes down through a perforation f^7 in said spool and through a corresponding perforation in the shaft f^3 .

To the said spool f^5 is secured one end of a cable f^8 . The other end of said cable passes over a pulley f^9 and is secured to a beam f^{10} . Said beam is perpendicularly journaled in a frame f^{11} , and is provided with a horse-beam f^{12} and singletree f^{13} . Running from the drive-wheel (cog and ratchet wheel b) are a series of cog-wheels (clock-gearing) 1 2 3 4 5 with a circumference of ten to one. Thus one revolution of shaft a' will give wheel 5 a revolution of one hundred thousand, and to the last shaft is secured a band-wheel 6, and from this band-wheel is driven any kind of machinery. When I wish to wind up the weights, I attach a horse to the singletree f^{13} , and thus revolve the beam f^{10} . That in turn revolves the spool f^5 by means of the cable f^8 . Spool f^5 , by means of the ratchet between itself and cog-wheel f^4 , revolves said cog-wheel f^4 . This wheel revolves cog-wheel b^2 , and consequently shaft a' and spools b^3 and c^2 , which operation winds the cables d^4 around said spools and draws the weights d^7 and d^8 up to groove-wheels d^3 d^4 . As soon as the weights arrive at this point the motor is wound up, and when the horse no longer draws on the singletree f^{13} the wheel b^2 is started in the opposite direction by means of said weights, and by means of its ratchet connection revolves wheel b , which in turn revolves the other wheels 1, 2, 3, 4, 5, and 6.

The object of having the spools c^2 and f^5 loosely secured on the shafts a' and b^2 and having, in addition to their ratchet connections, pins b^5 to secure them rigidly to said shafts and arms b^4 and f^5 is to enable them to be turned by hand in case horse-power is not attainable or desirable, in which case the pins may be removed and the spool slipped out a little to release them from their ratchet connections, and then by means of their arms they can be separately turned and each weight separately wound up, and then said spools can be slipped back to their ratchet connections and the pins replaced as before.

The object of the clamps d^5 and d^6 is to enable the operator to arrest the motion of either weight at any time.

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

1. In a motor, having a series of cog-wheels, substantially as shown and described, the combination of shaft a' , journaled in proper bearings; ratchet and cog wheel b , journaled on one end of said shaft; dog and cog-wheel b^2 , rigidly secured on the same end of said shaft; elevation D, consisting of the standards d , having between their upper ends pulley d^3 , and near their lower ends shaft f^3 ; cog-pinion f^4 , rigidly secured on said shaft; spool f^5 , secured on said shaft and having a ratchet connection with pinion f^4 ; spool b^3 , rigidly secured on shaft a' ; cable d^4 , one end secured to spool b^3 , thence passing up over pulley d^3 , and secured to a weight d^8 ; cable f^8 , one end secured to spool f^5 , and the other end to a horse-power, adapted to be revolved and by means of said spool, wheels f^4 , b^2 , spool b^3 , cable d^4 , and pulley d^3 , to wind up a weight d^8 ; wheel c , rigidly secured on the other end of said shaft; spool c^2 , journaled on the same end of said shaft, having a ratchet connection with wheel c ; arms c^3 , on the outer end of said spool; perforations b^6 ; pin b^5 ; spring-pin b^9 ; cable d^4 , one end attached to spool c^2 , and the other passing up over pulley d^3 , and attached to a weight d^7 , substantially as shown and described and for the purposes set forth.

2. In a motor, substantially as shown and described, shaft a' , having hollow cylindrical ends and perforation b^7 ; spools b^3 and c^2 , having arms b^4 , c^3 , perforations b^6 , pins b^5 , spring-pin b^9 ; cables d^4 , having one end attached to said spools, the other ends passing up over pulleys d^3 , and secured to weights, substantially as shown and described and for the purposes set forth.

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

ENOC LEVINGS.

Witnesses:

BENJAMIN F. STEWART,
GEORGE POWELL.