

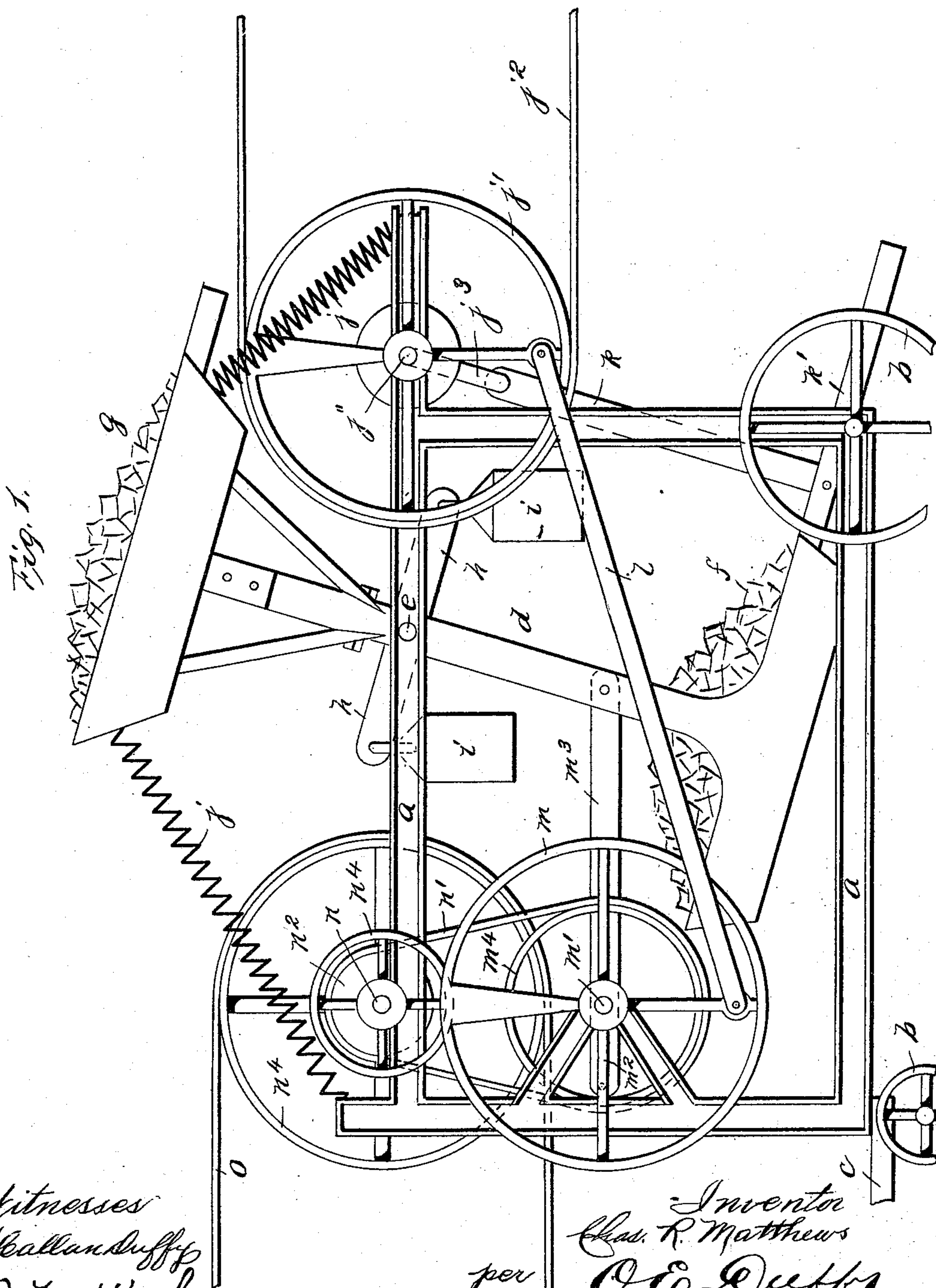
(No Model.)

2 Sheets—Sheet 1.

C. R. MATTHEWS.
MECHANICAL POWER.

No. 543,392.

Patented July 23, 1895.



Witnesses
E. Ballantruff
C. M. Werle

per

Inventor
Chas. R. Matthews
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Attorney

(No Model.)

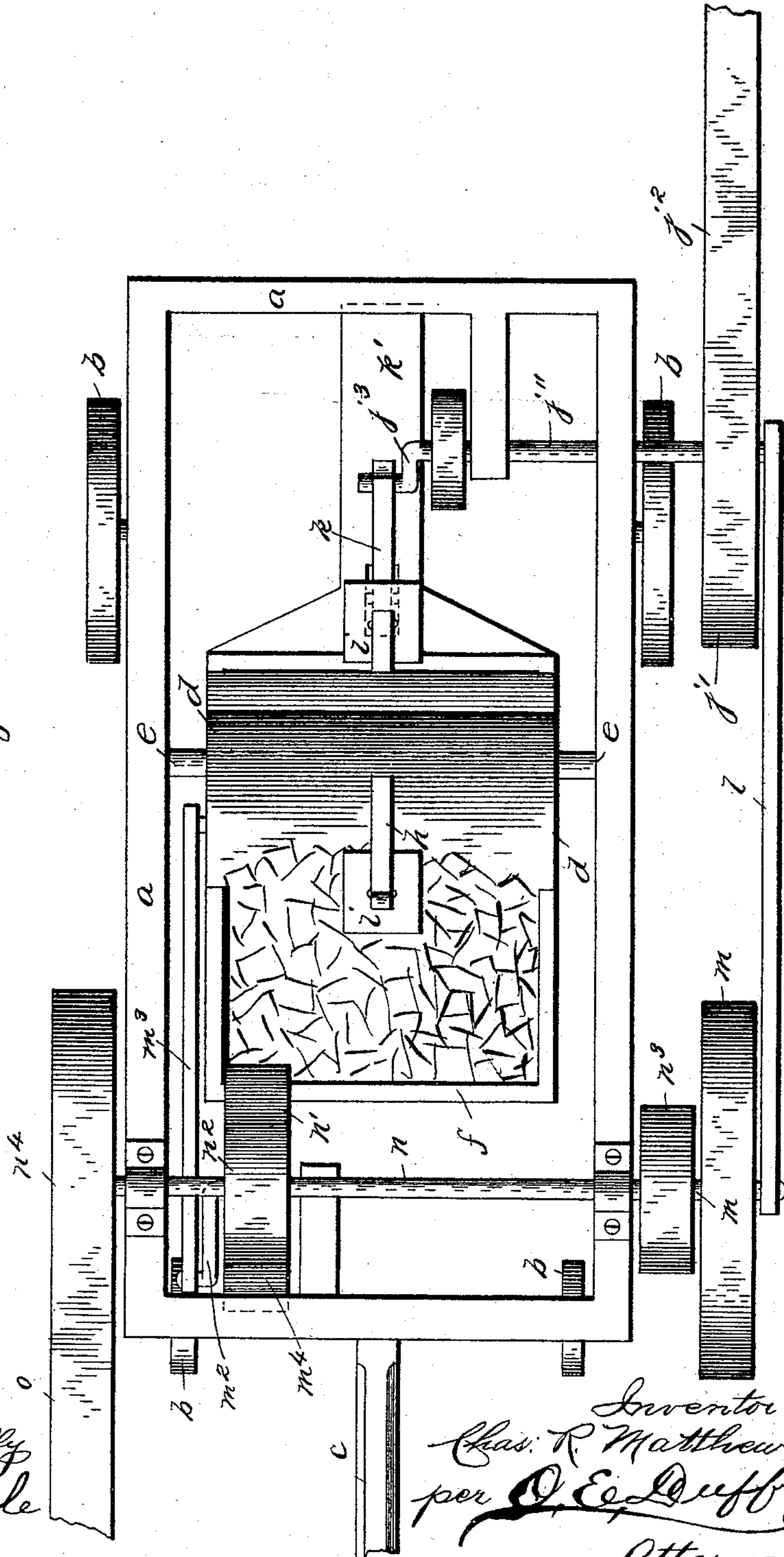
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Fig. 2.



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UNITED STATES PATENT OFFICE.

CHARLES R. MATTHEWS, OF CHARLIE HOPE, VIRGINIA.

MECHANICAL POWER.

SPECIFICATION forming part of Letters Patent No. 543,392, dated July 23, 1895.

Application filed April 27, 1895. Serial No. 547,331. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. MATTHEWS, of Charlie Hope, in the county of Brunswick and State of Virginia, have invented certain
5 new and useful Improvements in Mechanical Powers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in power-motors.

The object of the invention is to provide an improved construction of oscillating or swinging weight-motor for multiplying power, and which is particularly adapted to be interposed
20 between the prime motor and the machine or devices to be driven, and which will be kept in motion by the prime motor and will increase the power thereof and apply it to the machine to be driven.

The invention consists in certain novel features of construction and in combinations and arrangements of parts more fully and particularly described hereinafter, and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a side elevation of the improved machine. Fig. 2 is a top plan view with the upper weight of the pendulum removed.

In the drawings, *a* indicates a supporting frame comprising main side bars and uprights, which is most rigidly and strongly constructed and preferably mounted on supporting-wheels *b*, and provided with a tongue *c*, so that the machine can be easily transported.

d is a strongly-constructed swinging pendulum comprising an upright pivoted or fulcrumed at *e* between its ends and the top bars of the frame. The greater portion of the length of the pendulum is preferably arranged
45 beneath its fulcrum, and at its lower end is provided with the weight *f*, here shown as a receptacle containing rock or any suitable weight. The upper end of the pendulum is also provided with the heavy weight *g*, here
50 shown in the form of a receptacle containing stone or other material. Arms *h* extend out through opposite sides of the pendulum at or

about its fulcrum-point and are provided with weights *i*.

j represents springs connected with opposite sides of the upper end of the pendulum and secured to opposite ends of the frame, having a tendency to maintain the pendulum in its normal upright position, so that as the pendulum swings these springs will alternately distend
60 and compress.

j'' is a drive-shaft mounted in the frame and having pulley *j'* driven from the prime motor, such as an engine or horse-power, (not shown,) by belt *j²*. This shaft *j''* has a crank
65 *j³*, connected by link *k* to the rigid arm *k'* from the lower end of the pendulum, so that the rotation of shaft *j''* will rock pendulum and maintain the same oscillating at the uniform stroke.

l is a pitman eccentrically pivoted to pulley *j'*, and at its opposite end eccentrically pivoted to pulley *m*, rigid on the shaft *m'*, journaled in the opposite side of the machine and having the crank *m²* loosely connected
75 by pitmen *m³* with the pendulum below the fulcrum thereof. This shaft *m'* has a pulley *m⁴*, driving shaft *n* through the medium of belt *n'* and pulley *n²*. The shaft *n* has pulleys *n³* and *n⁴*, which can be connected with
80 the machine or other devices to be driven by means of belt *o*, or any other suitable power-transmitting means.

It should be observed that two crank-shafts *m'* and *j''* are coupled together to rotate in
85 unison by the pitmen *l*, and that the prime power coupled to these shafts is connected with the pendulum and keeps the pendulum oscillating back and forth at a uniform stroke and carries the same beyond the dead-centers,
90 so that said power is only necessary to start the pendulum and keep it going and that through the medium of this pendulum the initial power is multiplied and transmitted to the machine or other devices to be driven.

It is evident that various changes might be made in the forms, arrangements, and constructions of the parts described without departing from the spirit and scope of my invention. Hence I do not wish to limit myself
100 to the exact construction herein set forth, but consider myself entitled to all such changes as fall within the spirit and scope of my invention.

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

5 A frame, a pendulum fulcrumed therein between its ends and having the weights at both ends and on opposite sides thereof and the oppositely acting springs, a shaft connected with the prime motor and having a crank connected to one end of the pendulum,
10 another shaft arranged to be connected with the device to be driven and having a crank

connected with the same end of the pendulum and the pitman eccentrically connecting said two shafts.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES R. MATTHEWS.

Witnesses:

O. E. DUFFY,
L. M. WERLE.