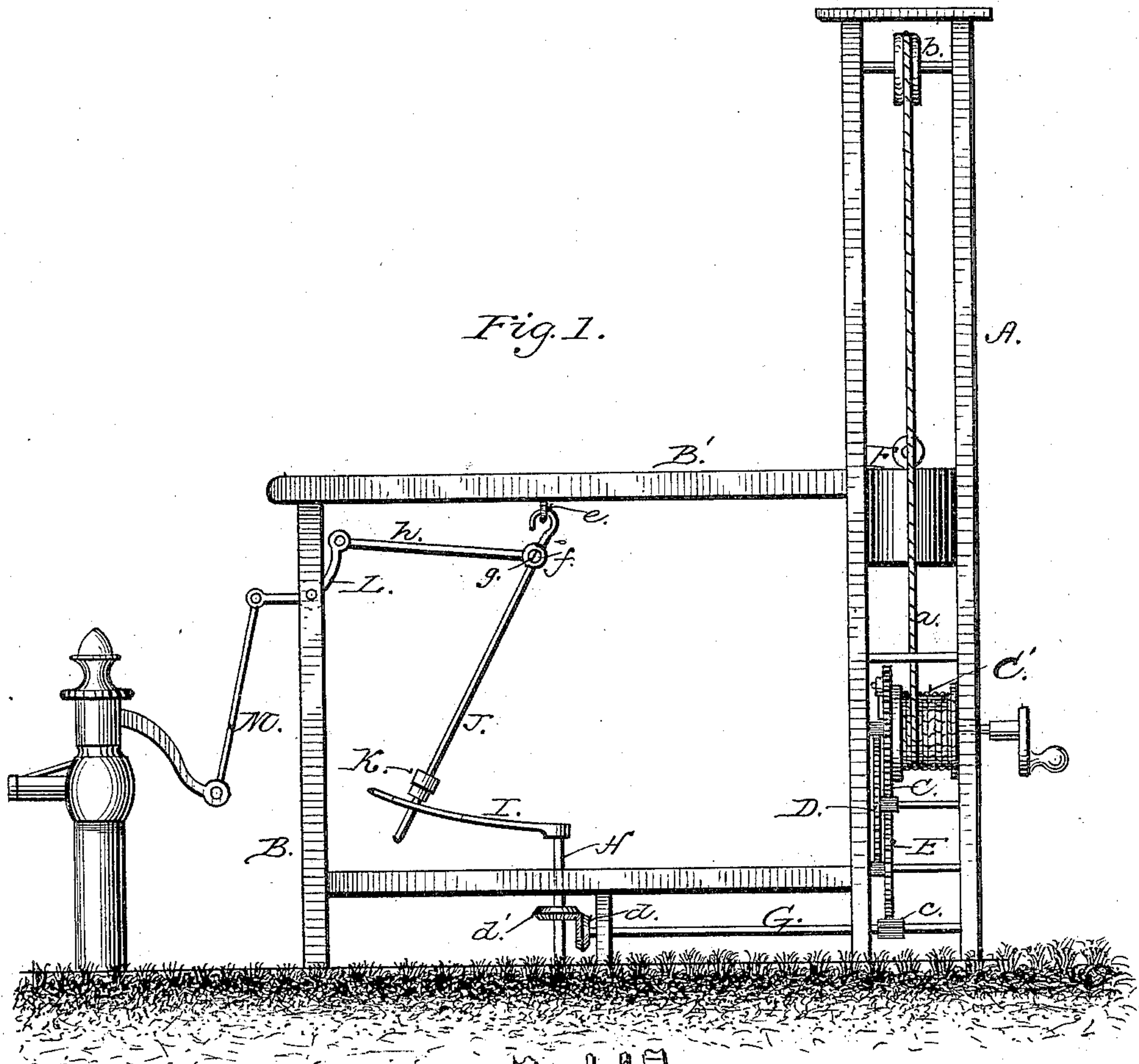


(No Model.)

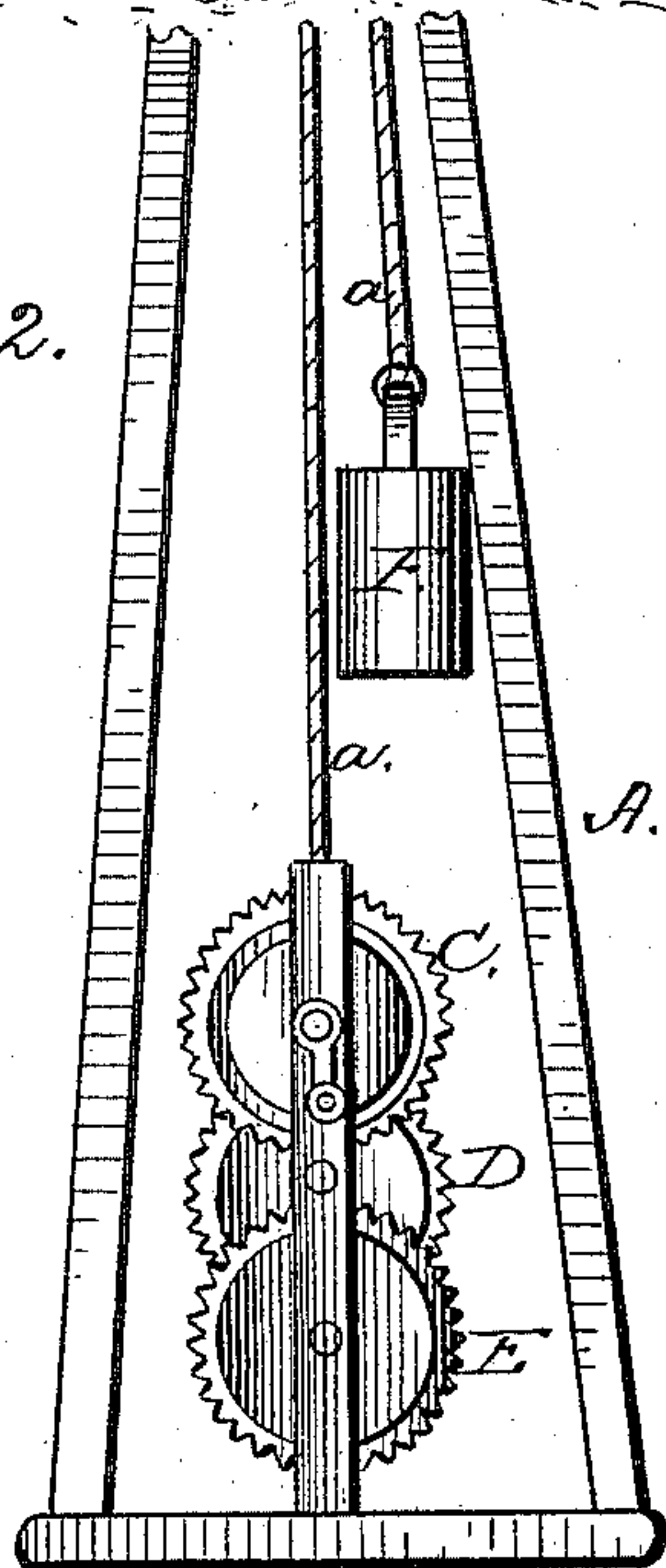
G. W. REAMS.  
MECHANICAL MOTOR.

No. 299,164.

Patented May 27, 1884.



*Fig. 2.*



Witnesses:  
Parker H. Greet, Jr.  
C. Fred. Keller.

Inventor:  
George W. Reams.  
By J. B. Lawyer,  
Att'y.



# UNITED STATES PATENT OFFICE.

GEORGE W. REAMS, OF BURLINGTON, KANSAS, ASSIGNOR TO FRANKLIN D. JONES, OF SAME PLACE, AND HAMILTON MILTON HART, OF PERRY, IOWA.

## MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 299,164, dated May 27, 1884.

Application filed April 7, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. REAMS, a citizen of the United States, residing at Burlington, in the county of Coffey and State of Kansas, have invented certain new and useful Improvements in Mechanical Motors; 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 and figures of reference marked thereon, which form a part of this specification.

My invention has for its object to provide an improved and simplified mechanical motor for operating a pump, grindstone, or for other like purposes; and it consists, essentially, of a frame-work provided with a series of cog-gears, which are driven by means of a weight, cord, and drum, said cog-gears operating a novel mechanism for imparting motion to a vertical rod or shaft, all as will be hereinafter fully described, and specifically designated in the claims.

In the accompanying drawings, Figure 1 represents a front elevation of my complete invention, and Fig. 2 a side view thereof.

Similar letters of reference occurring on the several figures indicate like parts.

In carrying out my invention I provide a wooden or metallic frame of a suitable height and dimensions, one portion, A, of which is adapted to receive the weight and driving-gears, and extends some distance above the other portion, B, of the frame, which contains the mechanism for imparting motion to the vertical rod or shaft. In the lower part of the frame A are journaled three cog-gears, C, D, and E, which mesh with each other, as shown, the upper gear-wheel, C, being rigidly attached to the one end of a drum, C', and provided with a suitable pawl and ratchet. To the drum C' is attached the one end of a suitable cord or chain, a, the opposite end of which passes upward and over a pulley, b, journaled in the upper part of the frame A,

and, extending downward, is secured to the weight F, as fully shown in Fig. 1. The shaft to which the drum C' and cog-gear C are attached is made square at its outer end, so as to receive a crank or ratchet wheel, with a lever of any required length, for winding up the cord and weight when it is desired to set the apparatus in motion. The lower cog-gear, E, meshes into a smaller cog-wheel, e, which is arranged upon a horizontal shaft, G, journaled in the lower part of the frame, and extending into the central part of the frame B, where it is provided with a bevel-gear, d, which engages with a corresponding gear, d', arranged upon a vertically-journaled shaft, H, as fully shown in Fig. 1. To the top of the said shaft H is secured the one end of a curved arm, I, the opposite end of which is slotted to receive the lower end of the pendulum J, which is provided with a ball, K, above the surface of the said arm I, as shown. The upper end of the pendulum J is hooked to a ring, e, arranged upon the under surface of the cross-beam B' in a true vertical line with the center of the vertical shaft H. Just below the point where the pendulum is hung is provided a collar, f, having a set-screw, g, so that said collar may be raised or lowered upon the pendulum to regulate the stroke of the pump. To this collar f is attached the one end of a rod or chain, h, the opposite end being secured to the upper end of an elbow-lever, L, which is pivoted in a slot in the side of the frame B, as fully shown in Fig. 1. The vertical rod or pitman M, which imparts motion to the pump, churn, or other kindred device, is attached to the lower end of the elbow-lever L, as shown.

In the operation of my invention the cord or chain is wound upon the pulley, thus drawing up the weight, which, as it runs down, sets the mechanism in motion and causes the pendulum J to swing around in a circle, the stroke of the pitman-rod M being increased as the pendulum-ball K swings outwardly to the full length of the slot in the arm I.

By my improvements a ready means is provided for pumping water, turning a grindstone,

churning, or for other similar purposes, without requiring attention of any kind except to start the mechanism.

The apparatus may be constructed so as to run a great length of time, if deemed desirable.

Having thus described my invention, what I claim as new and useful is—

1. The herein-described mechanical motor, consisting of the frame A B, provided with the weight F, cord *a*, pulley *b*, drum C', cog-gears C, D, E, and *c*, shafts G and H, provided with bevel-gears *d d'*, arm I, pendulum J, having weight or ball K, collar *f*, and set-screw *g*, elbow-lever L, and pitman M, the several parts being constructed and arranged substantially as and for the purpose specified.

2. The frame A, provided with the cog-gears C, D, E, and *c*, drum C', weight F, cord *a*, and pulley *b*, in combination with the frame B, provided with the shafts G and H, bevel-gears *d d'*, arm I, pendulum J, ball K, elbow-lever L, and pitman M, constructed and arranged substantially as and for the purpose specified.

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

GEORGE W. REAMS.

Witnesses:

F. D. JONES,  
ORSON KENT.