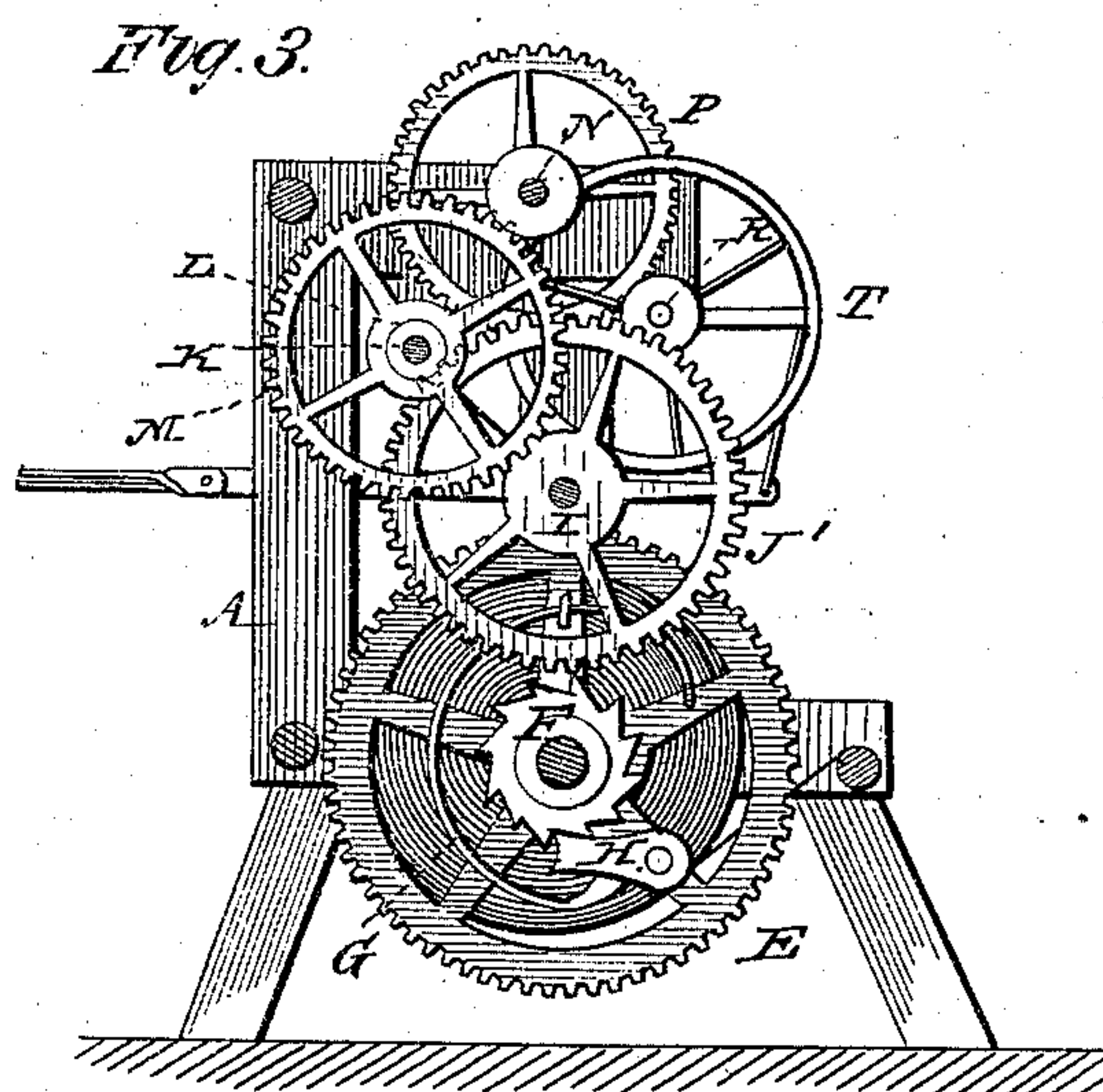
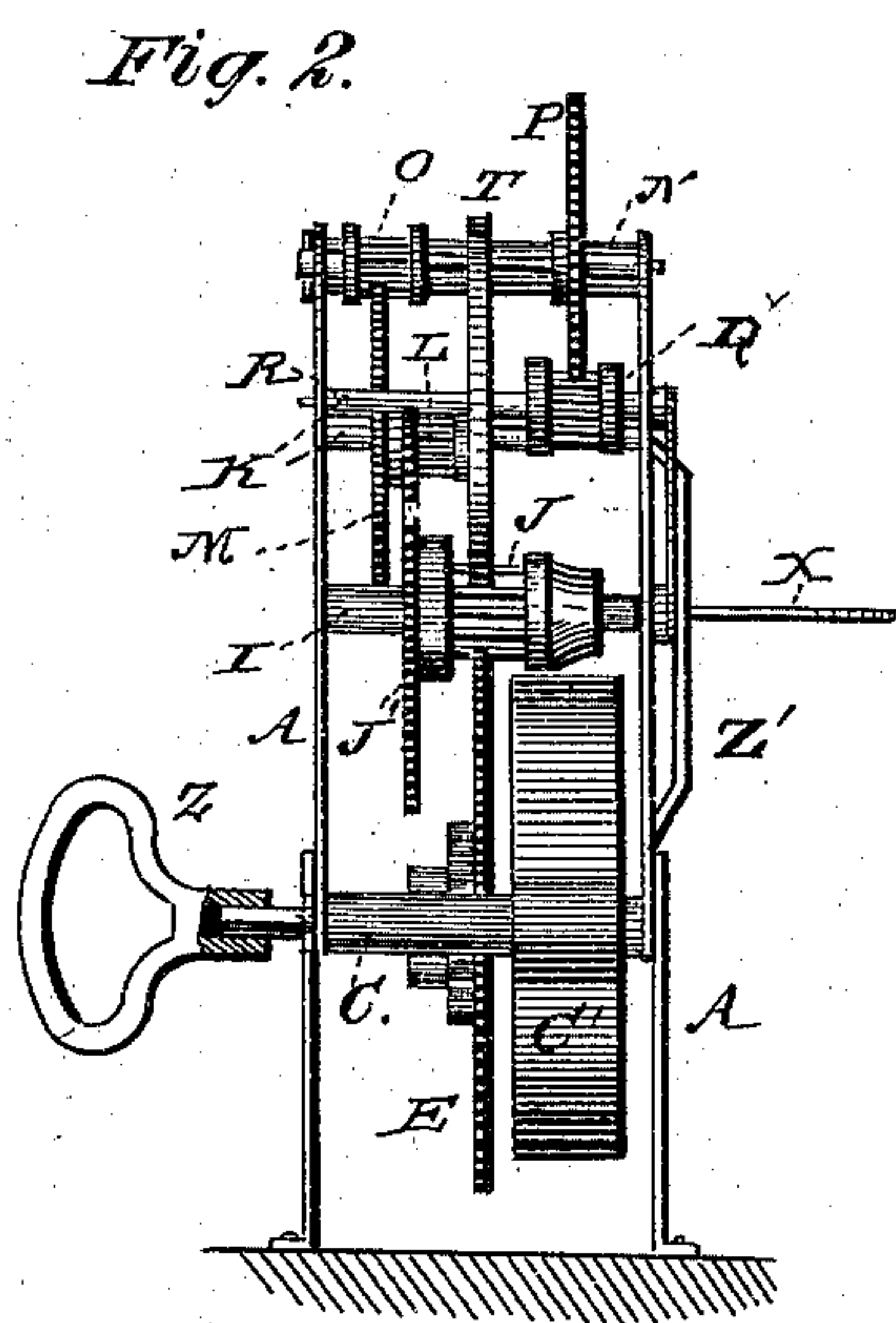
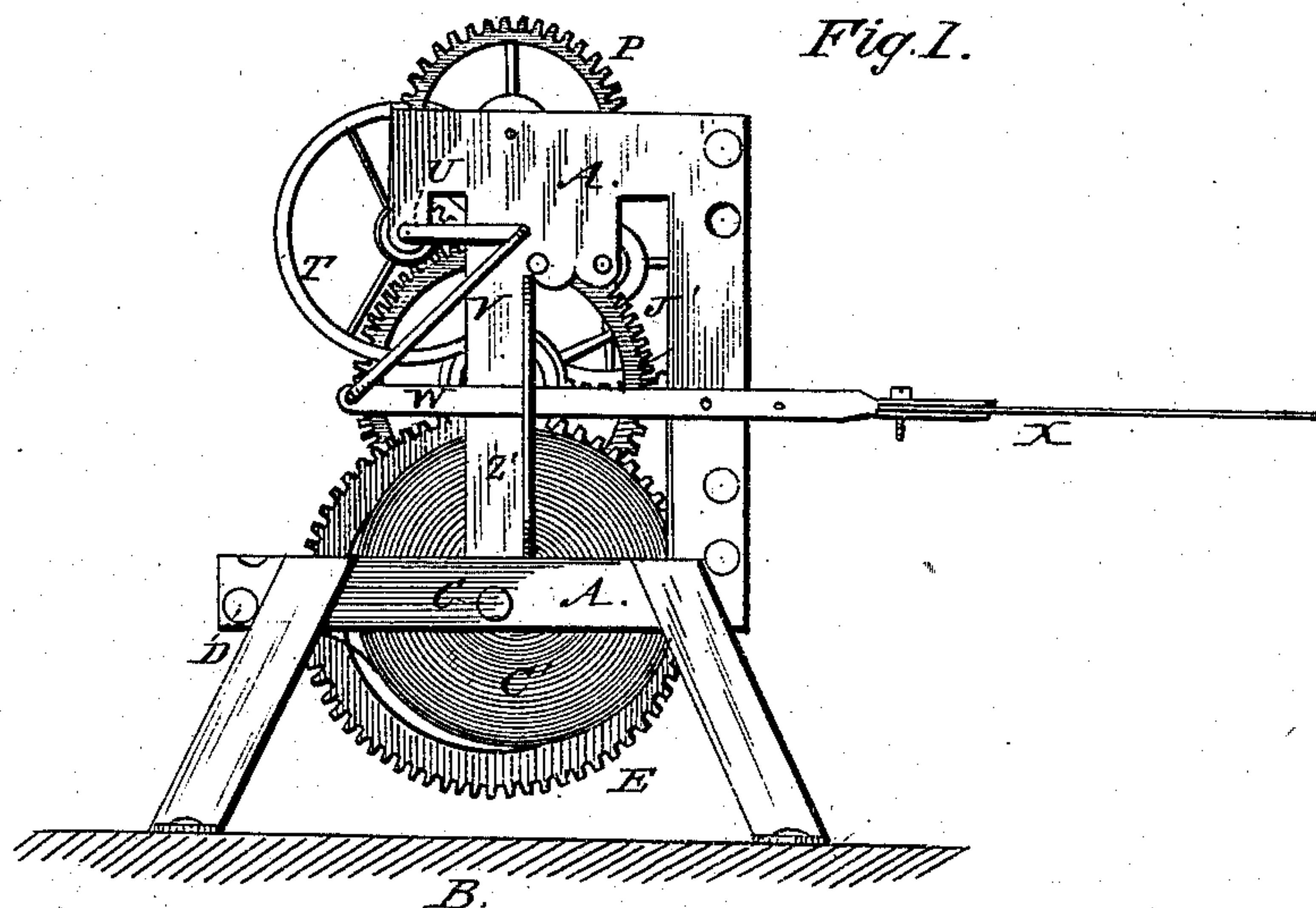


(No Model.)

B. P. KIMBALL.
Motor.

No. 235,880.

Patented Dec. 28, 1880.



Witnesses:
Fred. G. Dietrich
J. R. Little

Inventor:
B. P. Kimball,
by Ch. Snow & Co. Attys.

UNITED STATES PATENT OFFICE,

BENJAMIN P. KIMBALL, OF ELMORE, OHIO.

MOTOR.

SPECIFICATION forming part of Letters Patent No. 235,880, dated December 28, 1880.

Application filed November 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN P. KIMBALL, of Elmore, in the county of Ottawa and State of Ohio, have invented certain new and useful
5 Improvements in Motors; 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 make and use the same, reference being
10 had to the accompanying drawings, which form a part of this specification.

Figure 1 is a side elevation of a motor embodying my improvements. Fig. 2 is a rear elevation; and Fig. 3 is a vertical longitudinal
15 section, showing one side of the frame removed.

This invention has relation to a motor for driving a fan or sewing-machine or the like; and it consists in the improved features of construction and combination hereinafter fully
20 described, and particularly pointed out in the claim.

Referring by letter to the drawings, A designates the frame for supporting the operative mechanism, and B the floor or base to which
25 it is secured. C designates the winding-shaft, and C' the power-spring, coiled around it and secured at one end to the same. The other end of the coil-spring is secured to a cross-bar, D, of the frame A.

30 Upon the shaft C is secured a gear-wheel, E, having a ratchet, F, spring G, and detent H, for detaining the spring when wound.

Above the winding-shaft C is a second shaft, I, provided with a trundle-wheel, J, and a gear-wheel, J'. The gear-wheel E engages with the
35 trundle-wheel J.

Above and in front of the shaft I is a third shaft, K, provided with a trundle-wheel, L, and a spur-gear, M.

40 Above the shaft K, and mounted in rear of the same, is a fourth shaft, N, provided with a trundle-wheel, O, engaging the spur-gear M, and having a spur-gear, P, engaging a trundle-

wheel, Q, upon a shaft, R, in rear and below the same. This last shaft carries a fly-wheel or
45 balance-wheel, T, and is provided at one end with a crank-arm, U, connected by a pitman, V, to an oscillating lever, W, carrying a fan, X, or connected to a sewing-machine in any
50 suitable manner.

Z designates the key by which the main-spring is wound, and Z' is the guard for the
55 oscillating lever W.

The operation of the motor is as follows: The spring C' is wound upon the shaft C by
60 means of the key Z, and the retractile power of the same causes the gear-wheel E to rotate the shaft I through the trundle-wheel J and the gears on this and the other shafts communicate, through their respective trundles, to
65 the crank-arm and pitman to the oscillating lever, which operates the fan or sewing-machine to which it is connected. Power may be increased by employing two springs or increasing the strength of the one shown.

The device is simple and inexpensive, and its advantages are obvious.

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

In a motor, the combination of the winding-shaft C, provided with the gear E and ratchet F, spring C', and detent H, the shaft I, having
75 trundle J and spur-gear J', the shaft K, having trundle L and spur-gear M, shaft N, trundle O, and spur-gear P, shaft R, trundle-wheel Q, and balance-wheel T, crank-arm U, pitman V, and oscillating lever W, constructed and operating substantially as and for the purposes set forth.

In testimony that I claim the foregoing as
80 my own I have hereto affixed my signature in presence of two witnesses.

BENJAMIN P. KIMBALL.

Witnesses:

WILLIAM CALDWELL,
OSCAR P. EVERSOLE.