

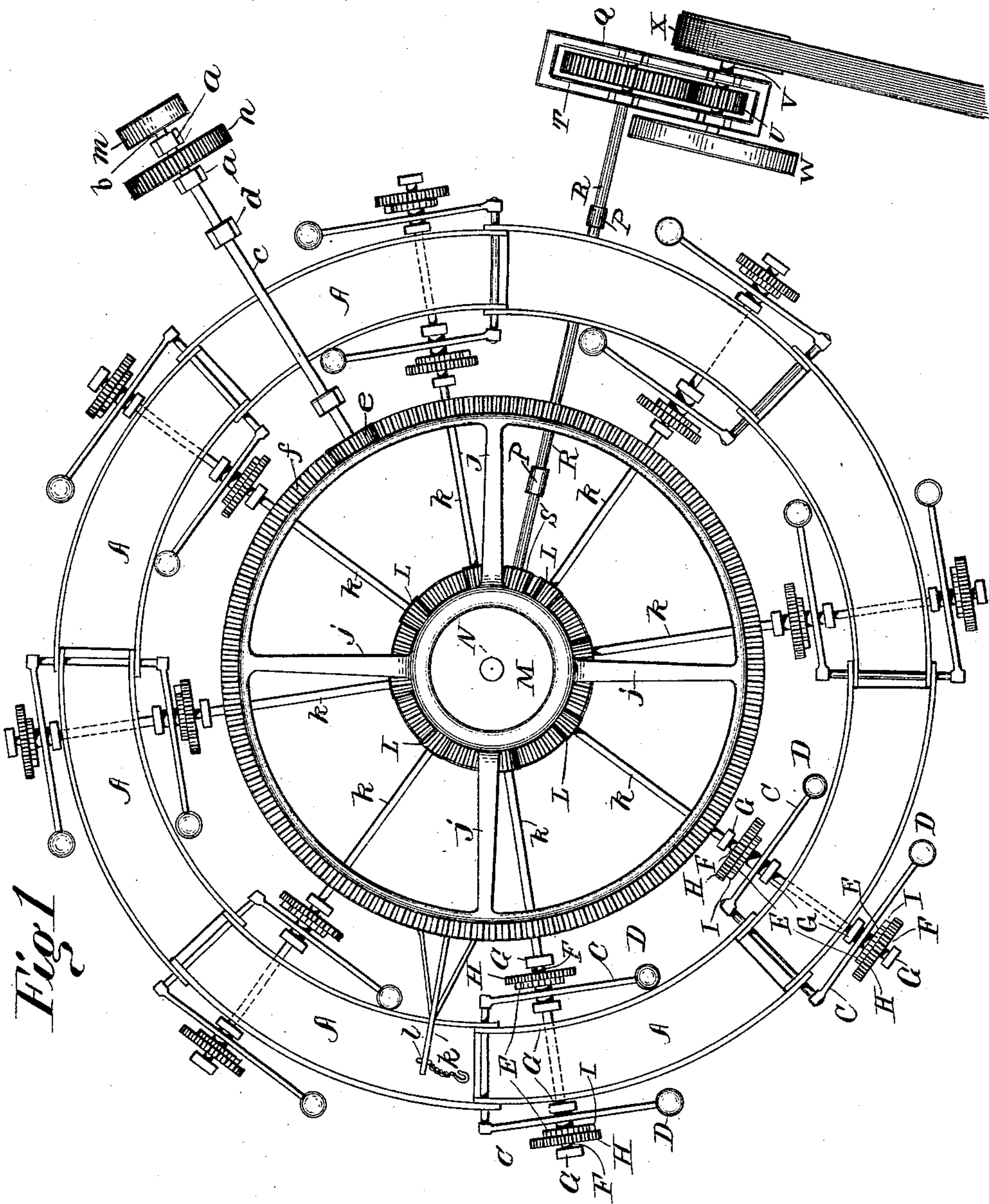
(No Model.)

2 Sheets—Sheet 1.

W. M. LEWIS.
MECHANICAL MOTOR.

No. 475,580.

Patented May 24, 1892.



Attest;
C. C. Burdine
J. B. Owens.

Inventor;
William Miles Lewis
per *De Poindor & Co.*
Attys.

(No Model.)

2 Sheets—Sheet 2.

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Fig 2

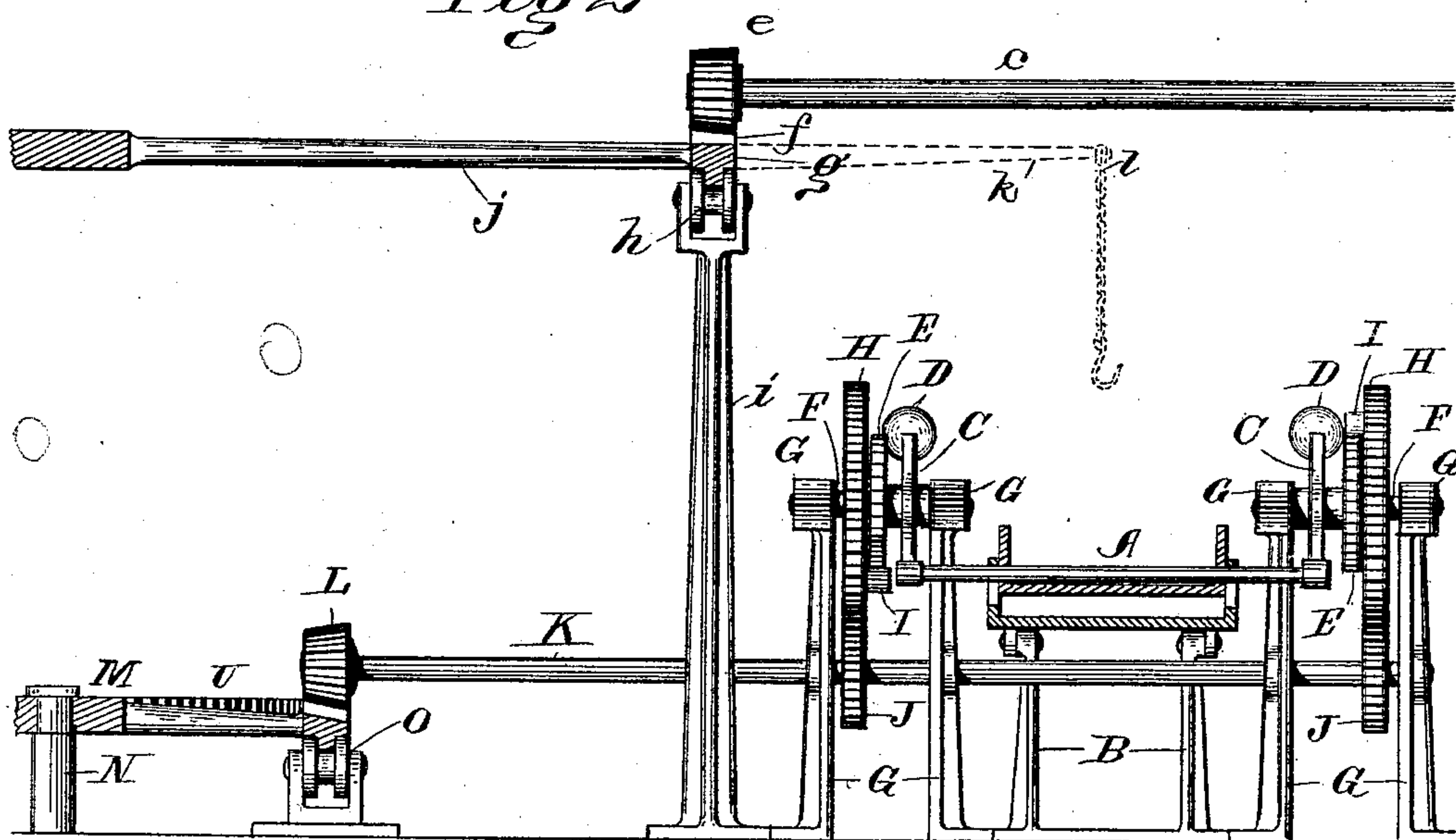


Fig 3

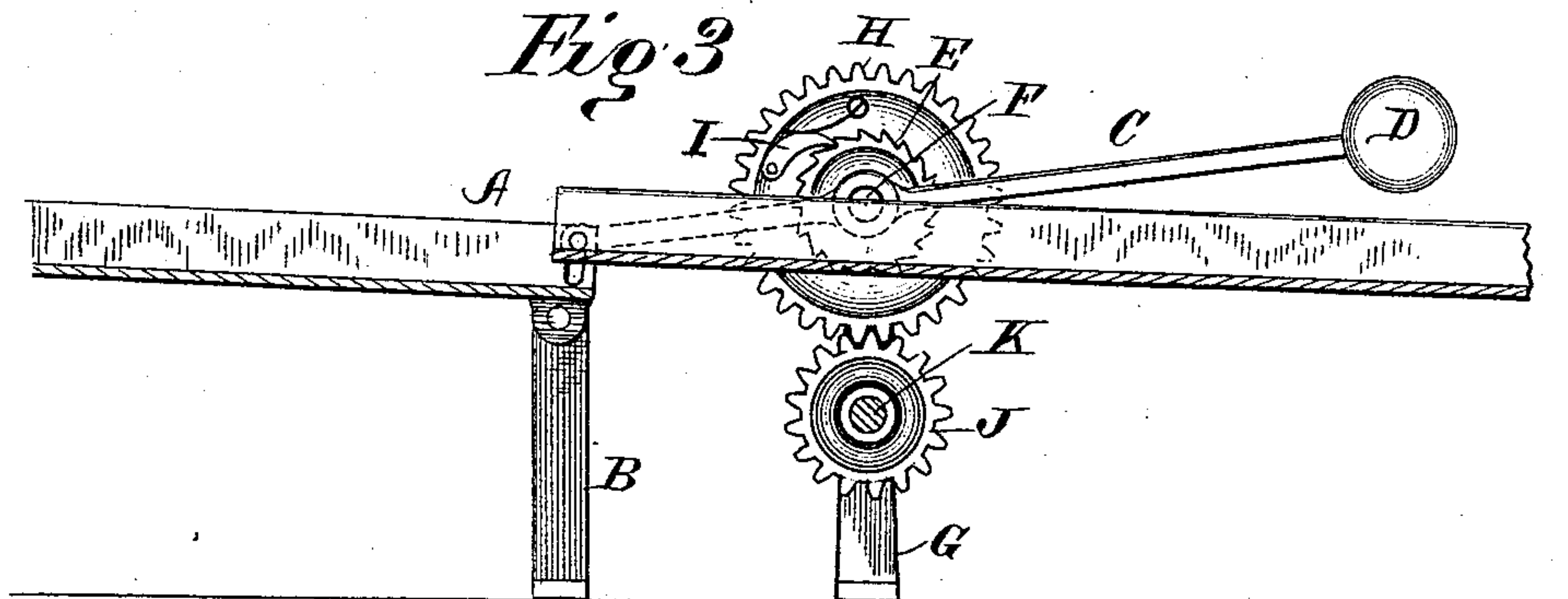
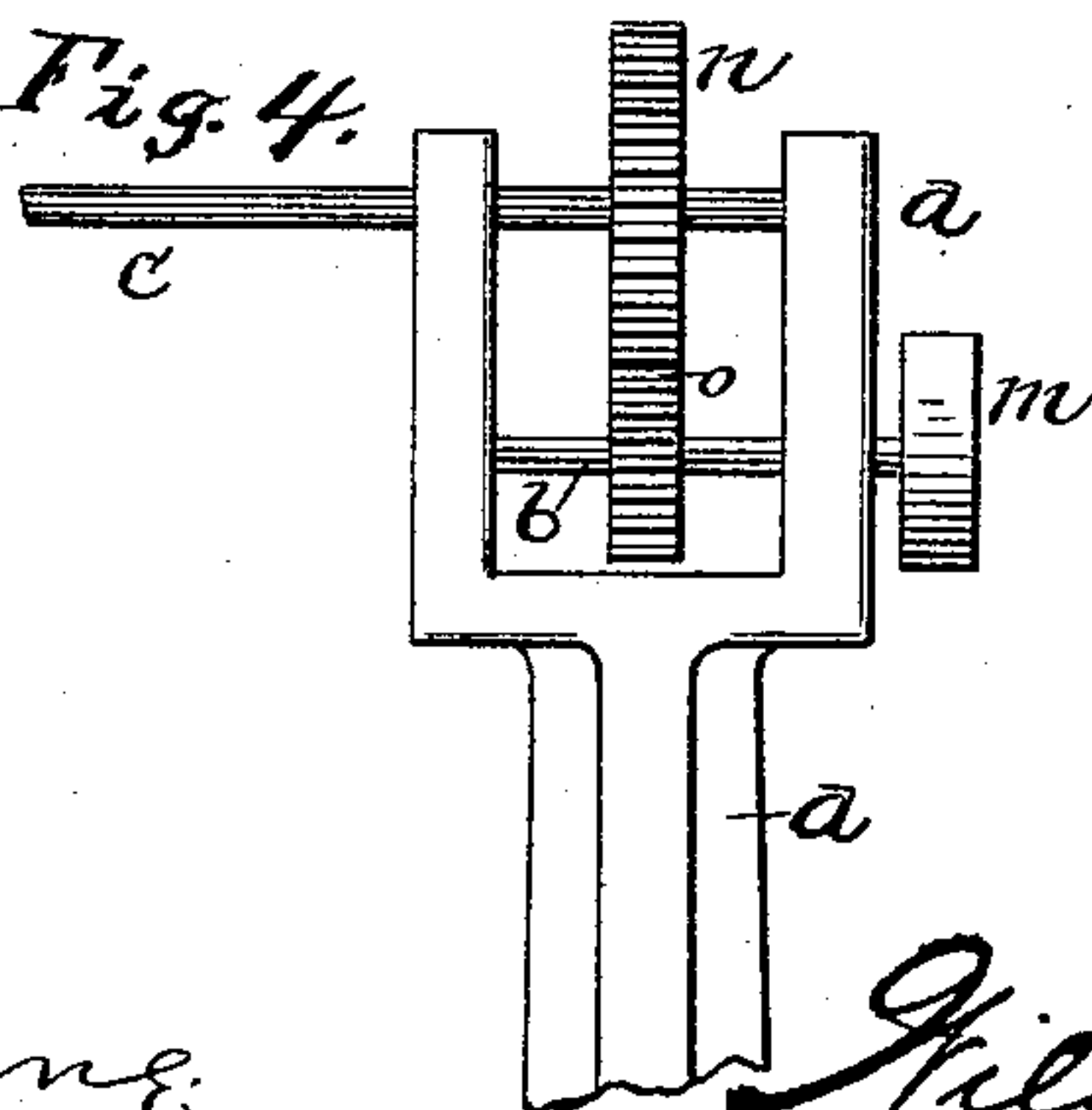


Fig 4.



Attest;
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UNITED STATES PATENT OFFICE.

WILIAM MILO LEWIS, OF NEW HARTFORD, IOWA.

MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 475,580, dated May 24, 1892.

Application filed February 29, 1892. Serial No. 423,148. (No model.)

To all whom it may concern:

Be it known that I, WILIAM MILO LEWIS, a citizen of the United States, residing at New Hartford, in the county of Butler and State of Iowa, 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 ap-
10 pertain 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.

My invention has special reference to that
15 class of mechanical motors in which weights are employed; and the object sought to be obtained is to utilize the gravitating force of a moving weight which is adapted to operate on power-transmitting devices in its path.

20 To this end my invention consists of certain novel features and combination of parts more fully described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings,
25 which illustrate a machine embodying the essential features of my improvement, Figure 1 represents a plan view thereof; Fig. 2, a detail in section of one of the sections of the track; Fig. 3, a detail of the lever and pawl-
30 and-ratchet mechanism, and Fig. 4 a side elevation of the modified driving mechanism.

The reference-letter A represents an elevated circular track which is supported a convenient distance from the ground by means
35 of the standards or supports B. This track is made in section, the number in the present case being eight. This, however, may be varied according to the size of the machine. Each section of track is pivoted at one end
40 to the supports B, and has attached to its other end one arm of a lever C. This end of the track (the one to which the lever C is attached) overlaps the pivoted end of its neighbor and is held some distance above it by the
45 swinging weight D, which is fixed to the free arm of each lever C. This is clearly shown in Fig. 3.

To each lever C is fixed a ratchet-wheel E, which is mounted on the short shaft F, jour-

naled in bearings G. This ratchet-wheel 50 forms the fulcrum of the lever C.

Mounted upon the shaft F, beside the ratchets, is a spur-gear wheel H, to which is fixed the spring-actuated pawls I.

These pawls engage the ratchet-teeth on
75 wheels E, as shown in drawings. The spur-gears H mesh with the pinions J, which are fixed on shafts K, having bearings in the section G. To the other end of the shafts K are fixed pinions L, which mesh with the crown-
60 gear on the platen M. This platen revolves freely on a vertical shaft N, and is supported by the carrying wheels or rollers O.

Mounted in bearings P and Q is a shaft R, which is provided with a pinion S, meshing
65 with the teeth on the platen M. To the other end of this shaft is fixed a spur-gear T, which revolves between the sides of the compound bearing Q. This gear meshes with the pinion
70 U, fixed to shaft V. To this shaft V is also fixed a balance-wheel W and power-pulley X.

In using my machine a loaded wagon, car, or any weighted object capable of moving on the track A is placed thereon, and is drawn, preferably, by a team or a light locomotive,
75 although other means may be employed, which will be described hereinafter. As the weight moves over the track, the free ends of its sections are depressed, and the force of the weights D on the lever C overcome, where-
80 by the levers are tilted on their fulcrums and the ratchet-wheels E partly rotated. The pawls I, being in positive engagement with the teeth of the ratchets E, cause the spur-gears H to make a corresponding rotation. 85
This movement rotates the shafts K and pinions L, which in turn gives the platen M a partial rotation. By this time the weight has reached the next joint or section of track A and the foregoing operation is repeated. It
90 will be seen that by these means the platen M is given a continuous rotary motion, which imparts a like motion to shaft R and its gears S and T. As spur-gear T revolves, it rotates the shaft V through the medium of pinion S. 95
The balance-wheel W serves its usual functions—viz., to insure a continuous and steady rotary movement of shaft V.

Power is obtained from the machine by means of pulley X.

In some cases it may prove inconvenient to employ a team or locomotive to draw the weight on the track A. Realizing this I have provided means for drawing the weight through the medium of a stationary engine. Such means will now be described.

The reference-letter *a* represents a bifurcated standard forming bearings for the shafts *b* and *c*. To the first-mentioned shaft *b* is fixed a pinion *o*, which meshes with a spur-gear *n* on the shaft *c*. This shaft is further supported by means of the elevated bearings *d*, and has fixed to its opposite end a pinion *e*. This pinion meshes with the teeth *f*, formed on the upper face of the circular frame *g*, which frame moves in a circular path on the grooved carrying-wheels *h*, mounted on bearings *i*. The frame *g* is strengthened by means of the cross-braces *j*. To the other side of the frame is fixed an overhanging bracket or leader *k*, to which the weight is attached by means of the chain or rope *l*.

To use my machine in this connection, a stationary engine (not shown in the drawings) should be belted to the pulley *m*. As the shaft *b* revolves, a circular motion is imparted to the frame *g* through the medium of gears *o*, *n*, *e*, and *f*, before described. As this frame revolves, the weight moves over the track A, and the operation of the remainder of the machine, before described, is repeated.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a mechanical motor, of a sectional track, each section of which

is pivoted at one end and the other end having attached thereto a weighted lever, substantially as described.

2. The combination, with a mechanical motor, of a sectional track, each section of which is pivoted at one end and its other end located normally above the pivoted end of its neighbor, substantially as described.

3. The combination, with a sectional track, of a series of levers, each having one of its arms connected to a section of the track, a ratchet-wheel secured to each lever and forming its fulcrum, gear-wheels beside the ratchets, said gear-wheels having pawls fixed to its sides and adapted to engage the ratchets, and means for collecting the power, substantially as described.

4. The combination of a series of pivoted overlapping sections having weighted levers attached to their free ends, pawl-and-ratchet mechanism operated by said levers, and trains of gearing for collecting the power from the ratchets, substantially as described.

5. The combination of a sectional track, a series of levers adapted to actuate pawl-and-ratchet mechanism, spur-gears rotated by the same, and pinions meshing with the spur-gears, whereby the shafts K are rotated and a continuous motion imparted to the platen M, substantially as described.

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

WILLIAM MILO LEWIS.

Witnesses:

JESSE C. KNIPE,
OSCAR BOLTON.