

(No Model.)

2 Sheets—Sheet 1.

J. A. EMMERT & L. P. KLUTTS.
MECHANICAL MOTOR.

No. 314,441.

Patented Mar. 24, 1885.

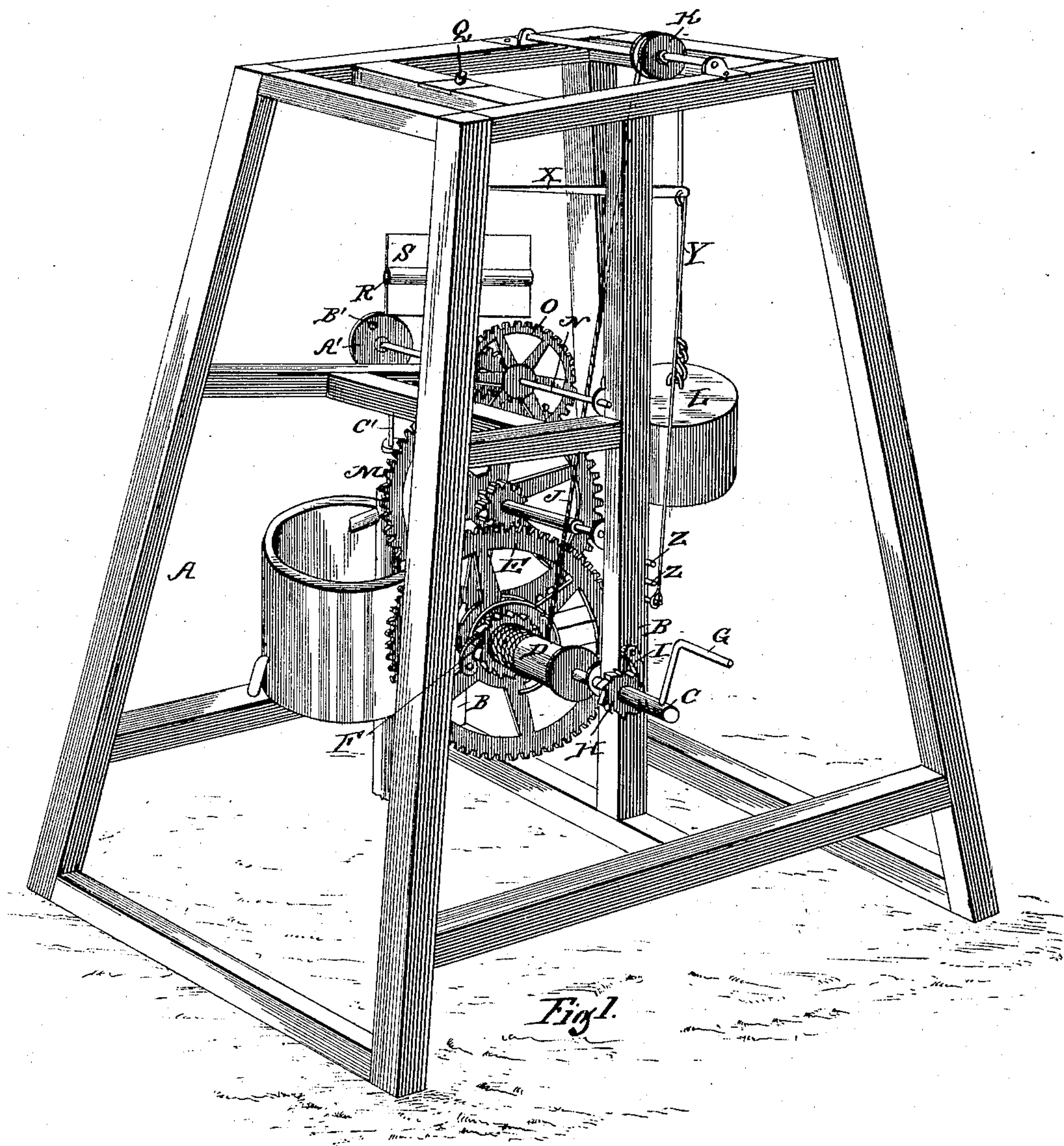


Fig. 1.

Jesse A. Emmert,
Leonard P. Klutts,

INVENTORS;

WITNESSES:

Ed. S. Dieterich,
Wm. Bagger

by: Louis Bagger & Co.
ATTORNEYS.

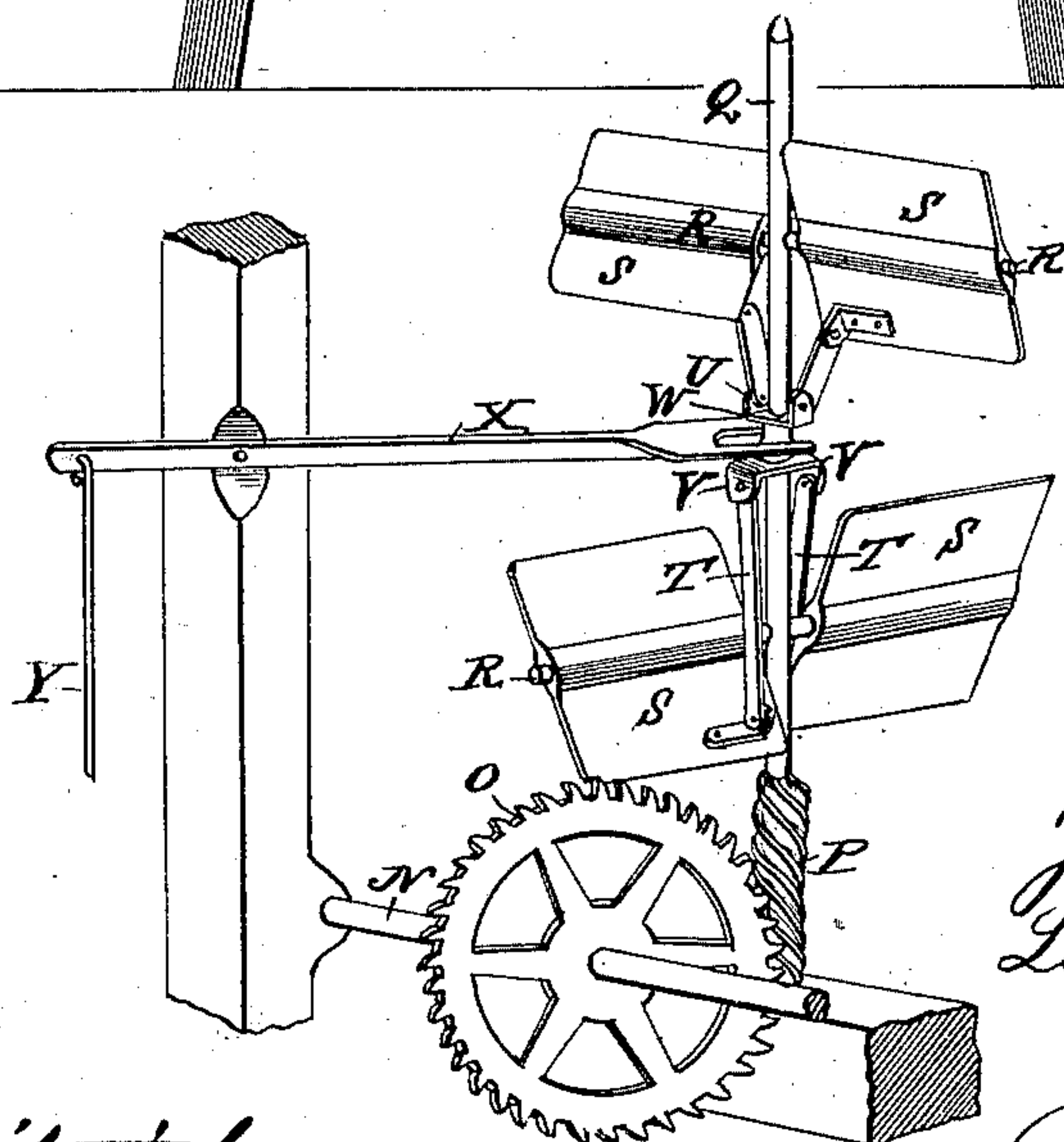
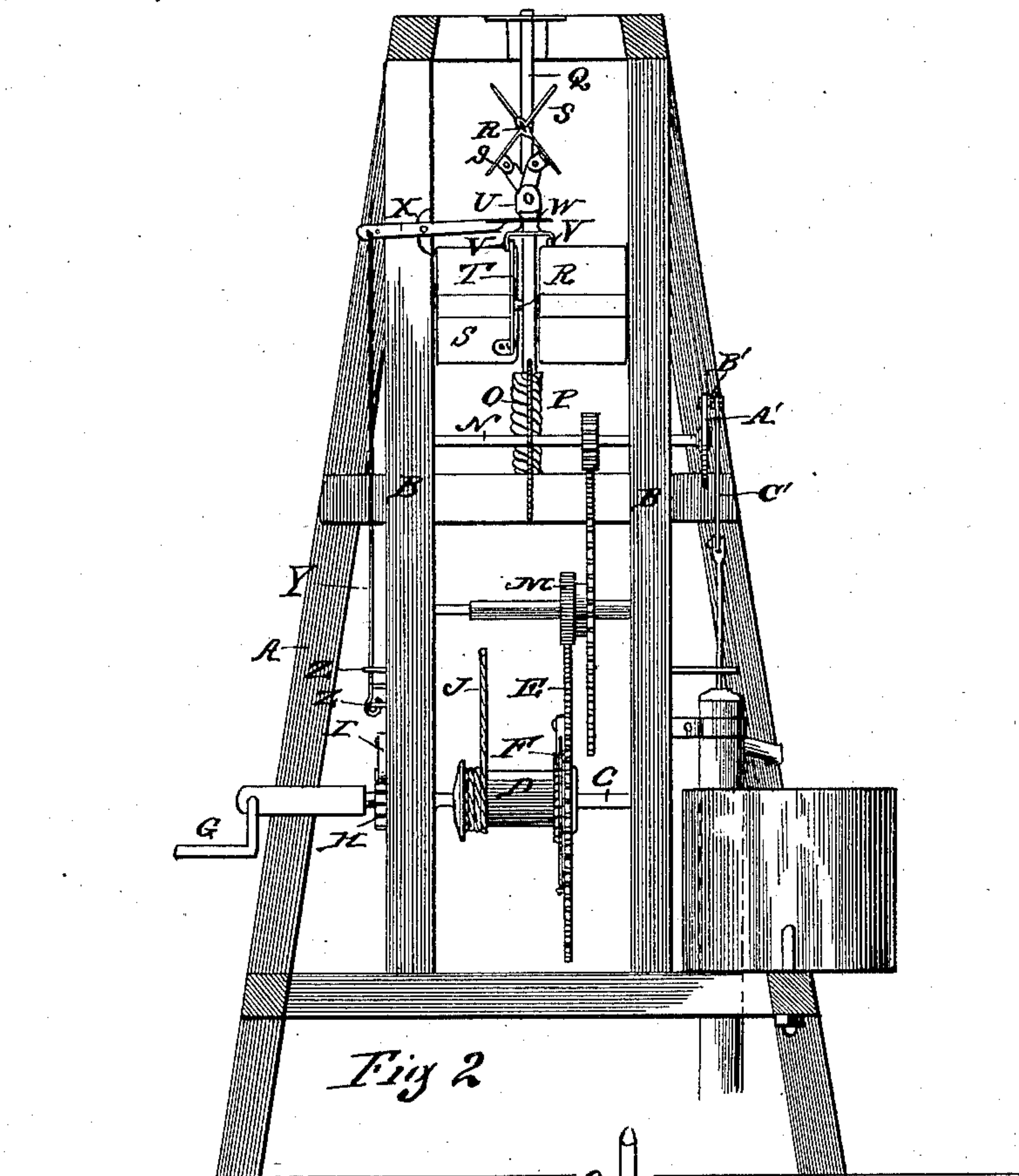
(No Model.)

2 Sheets—Sheet 2.

J. A. EMMERT & L. P. KLUTTS.
MECHANICAL MOTOR.

No. 314,441.

Patented Mar. 24, 1885.



WITNESSES:

Ad. S. Dieterich
Wm. Bagger

Fig 3.

Jesse A. Emmert,
Leonard P. Klutts,

INVENTORS;

by *Louis Bagger & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JESSE A. EMMERT AND LEONARD P. KLUTTS, OF MONTROSE, MISSOURI.

MECHANICAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 314,441, dated March 24, 1885.

Application filed February 18, 1885. (No model.)

To all whom it may concern:

Be it known that we, JESSE A. EMMERT and LEONARD P. KLUTTS, both residents of Montrose, in the county of Henry and State of Missouri, have invented certain new and useful Improvements in Mechanical Motors; and we 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 had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of our improved mechanical motor. Fig. 2 is a vertical transverse sectional view of the same; and Fig. 3 is a detail perspective view, on a larger scale, of the governor or regulator.

The same letters refer to the same parts in all the figures.

This invention relates to that class of mechanical motors which are run by a weight, and adapted to run or operate pumps, churns, and various kinds of light machinery; and it has for its object to provide a device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency, and which shall be equipped with a governor, whereby the speed may be easily and effectually regulated.

With these ends in view the invention consists in the improved construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, A designates the frame of our improved motor, which is provided with two vertical or upright beams, B B, having bearings for the main shaft C, which is provided with the winding-drum D, connected with the gear-wheel E by pawl-and-ratchet mechanism F in the usual manner. The end of the shaft C has a key or crank, G, by which it may be wound; and it is provided with a ratchet-wheel, H, engaging a pawl, I, pivoted to the frame for the purpose of preventing back motion. Attached to the winding-drum is one end of a rope or chain, J, the other end of which passes over a pulley, K, at the top of the frame, and carries a weight, L, which furnishes the motive power. The

main shaft C is connected by a train of gears, M, with a shaft, N, having a bevel-toothed spur-wheel, O, adapted to engage and operate a spiral or worm, P, upon a suitably-arranged vertical shaft, Q. The latter is provided with radial arms R R, having pivoted wings or vanes S S, which are connected by means of pivoted rods T T with a collar, U, arranged to slide vertically upon the said shaft, and having lugs V V, to which the said connecting-rods are pivoted. The collar U has an annular groove, W, engaging a forked lever, X, which is suitably pivoted to the frame, and the outer end of which is provided with an operating-rod, Y, by means of which it may be manipulated, so as to adjust the collar U in any desired position. The connecting-rod may be attached to any one of a series of studs, Z Z, upon one of the frame-beams B, thus serving to retain the lever X and the collar U in any position to which they may be adjusted. One end of the shaft N is provided with a wheel or disk, A', having a wrist-pin, B', which is connected by a pitman, C', with the machinery to be driven. A band-wheel and belt, or other suitable means for conveying motion, may, however, be substituted, when desired.

The frame is, in practice, to be covered with siding and equipped with a suitable roof for the purpose of protecting the machinery; but this has not been shown in the drawings.

The operation of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed.

The general construction is simple and inexpensive.

The weight may be raised by winding the rope J upon the drum D, after which, by releasing the ratchet H from the pawl I, the weight will descend and cause the operation of the machinery.

By means of the lever X and its operating-rod the collar U may be adjusted upon the vertical shaft N, thereby setting the wings or vanes S at any desired angle or inclination and regulating their resistance to the atmospheric air, and consequently regulating the speed at which the motor shall be permitted to operate.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a mechanical motor, the herein-described governor, consisting of a shaft connected with and driven by the machinery of the motor, and provided with radial arms, in combination with wings or vanes pivoted upon the said arms, a sliding and adjustable collar connected with said vanes by pivoted rods, and means for adjusting the said collar to and retaining it at any desired position, thereby setting and retaining the vanes at any desired angle, substantially as and for the purpose herein set forth.

2. In a mechanical motor, the combination of the frame, the main shaft, the winding-drum mounted upon the latter, and connected by pawl-and-ratchet mechanism with a spur-wheel, the weight, weight-rope, and guide-

pulley, a shaft provided with a worm or spiral and having radial arms provided with pivoted vanes, means for adjusting and retaining said vanes, a shaft connected with the main shaft by a train of gears, and having a beveled-toothed spur-wheel engaging and operating the worm or spiral, and mechanism connecting the motor with the machinery to be driven, all arranged and operating substantially as and for the purpose herein shown and specified.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

JESSE A. EMMERT.
LEONARD P. KLUTTS.

Witnesses:

ALBERT R. BOOHER,
JAMES H. VICKARS.