J. Woolf,

Mechanical Movement.

No. 108,547. Patented Oct. 18. 1870.

FIG. 1.

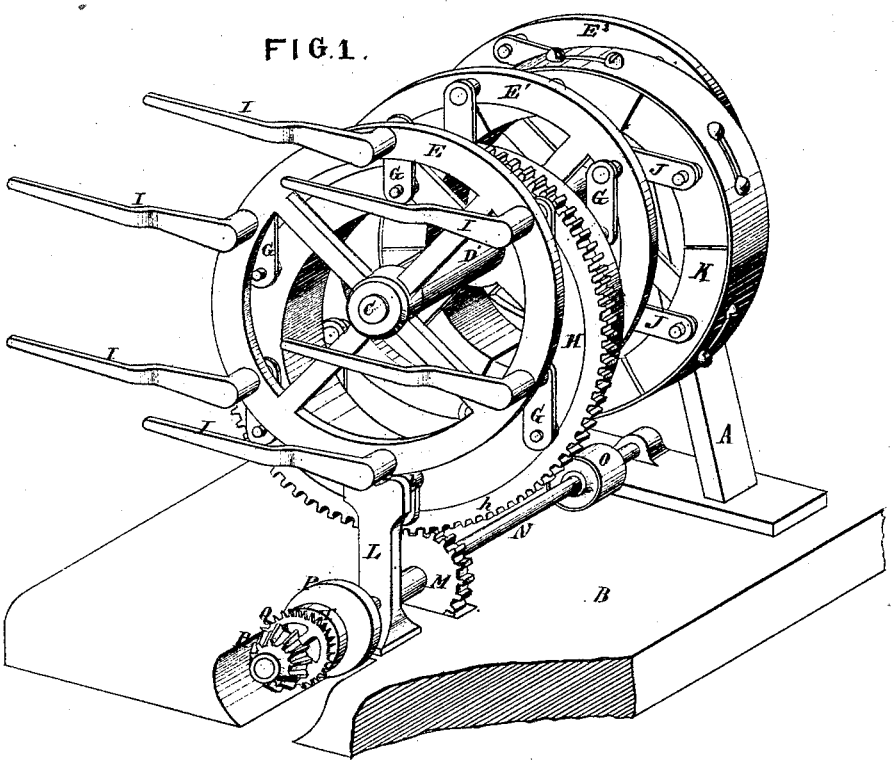
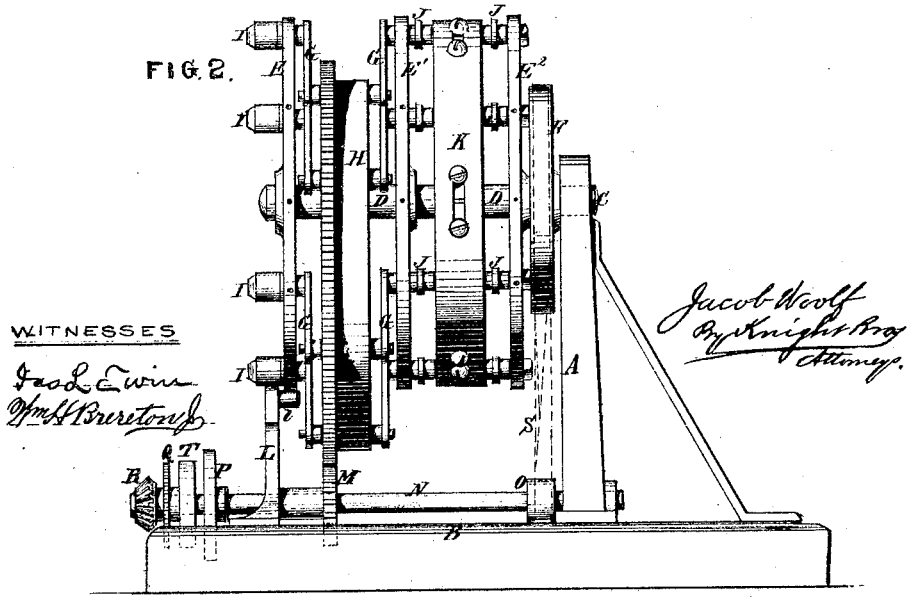


FIG. 2.



WITNESSES

Jas. L. Ewin

Wm. H. Breretons Jr.

Jacob Woolf
By Knight Bros
Attorneys.

United States Patent Office.

JACOB WOOLF, OF BURR OAK, MICHIGAN.

Letters Patent No. 108,547, dated October 18, 1870.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

The Schedule referred to in these Letters Patent and making part of the same

I, JACOB WOOLF, of Burr Oak, in the county of St. Joseph and State of Michigan, have invented a new and improved Mechanical Movement, of which the following is a specification.

Nature and Object of the Invention.

My machinery consists of a system of levers, fulcrumed in rotating wheels, and connected by cranks, or their equivalent, with eccentric weighted wheels or disks, or their equivalent, so arranged that power applied to the long arms of said levers acting directly on the primary wheel or wheels in which they are fulcrumed, and in an opposite direction on the eccentric, weighted wheels, will impart a continuous and uniform rotary movement to the primary wheels, the crank-arms serving to throw the weighted disks out from the center, in such a manner that their weight is applied in the direction of the rotation of the primary wheels, and any liability of stopping on dead points is entirely prevented.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of a machine embodying my invention.

Figure 2 is an elevation of the same.

General Description.

A is a standard, mounted upon a bed, B, and supporting a stationary shaft, C, upon which a sleeve, D, is fitted to turn freely.

On the sleeve D are firmly keyed one or more wheels, E E^1 E^2, and one or more pulleys, F.

A series of cranks G are mounted in the wheels E and E^1.

The wrists of the said cranks are pivoted to a weighted disk or annular, H, near the periphery thereof.

The arms of the cranks G are vertical, or nearly so, and to the shafts of said cranks, in front of the primary wheel E, are attached horizontal levers I.

J J are secondary cranks, having arms at right angles to those of the cranks G, but rigidly connected thereto, their axes passing through the wheels E^1 and E^2, in line with those of the cranks G and levers I.

The cranks J carry a weighted annulus or wheel, K.

The wheel E may be supported by rollers *l l* upon a short standard, L.

The rim or annulus H carries a toothed rim, *h*, gearing with a pinion, M, on the driving-shaft N.

The pulley F may be connected with a pulley, O, on the same shaft, by a crossed belt S, represented by dotted lines in fig. 2.

The shaft N may also carry a pulley, P, for driving machinery, and either a ratchet-wheel, Q, for an escapement, and pendulum to regulate the movement, or a pinion, R, to connect with a governor and a pulley, T, to which may be applied a brake, operated by the governor.

Operation.

Horse, water, steam, or other power being applied by any suitable mechanism, with a downward pressure to the levers I, in succession, at a point where the said levers project across the central shaft C, the cranks G bearing horizontally against the wheel H, and the cranks J pressing upward against the wheel K, the weight of these wheels counteracts the turning of the cranks, and will combine with the pressure upon the levers to impart a continuous, uniform revolution to all the various wheels, and to the driving-shaft N, from which power may be transmitted to any machinery.

The shaft N, in the manner in which it is combined with the connected system of wheels, either through the medium of the gearing M *h*, or the crossed belt S and pulleys O F, or other device to accomplish the same end, has an important effect in holding the weights H and K in proper relative positions, the center of gravity of the weight H being below the axis of main wheels E E^1 E^2, and that of the weight K on one side thereof.

From the above description it will appear that each of the weights H and K, while revolving around the shaft C, has a rotation upon its own proper axis.

Claims.

I claim as my invention—

The combination of the levers I, curved or bent, to adapt them to pass the fulcrum of each other and the end of the shaft C, two or more wheels E E^1 revolving on the said shaft, two or more annular weights H K, eccentric each to the other and to the shaft C, and each revolving on its own axis while traveling around the said central shaft; the connecting-cranks G J and the shaft N, with a toothed wheel, belt, and pulley, or other device, which will accomplish the purpose of holding the weights H and K from the shaft N, so as to keep the said weights in the eccentric position, above specified.

JACOB WOOLF.

Witnesses:

JAS. L. EWIN,

WM. H. BRERETON, Jr.