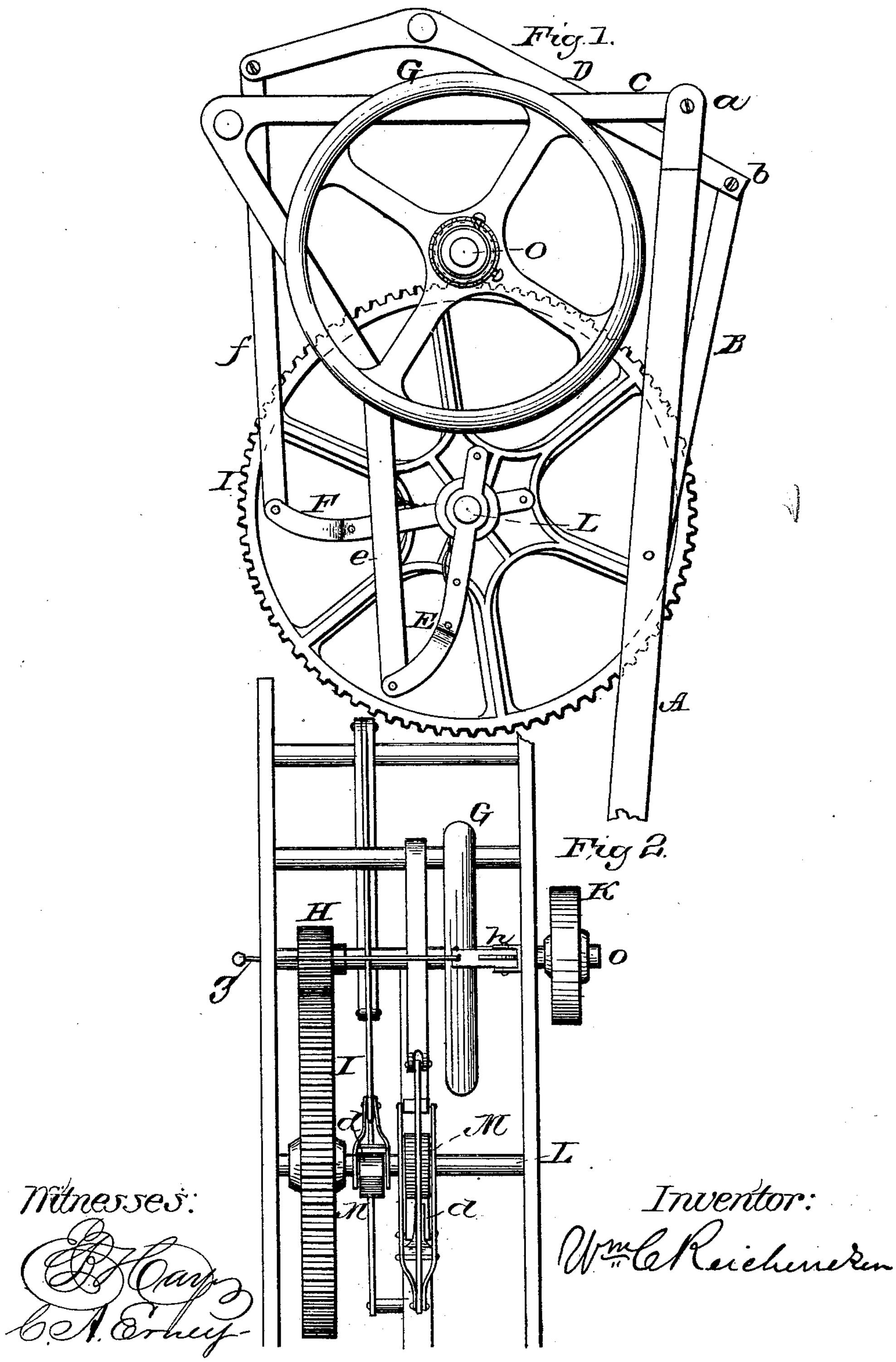
W. C. REICHENEKER.
Motor.

No. 218,576. Patented Aug. 12, 1879.



UNITED STATES PATENT OFFICE.

WILLIAM C. REICHENEKER, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF HIS RIGHT TO ALBERT W. McINTIRE AND FRANK H. WRIGHT, OF SAME PLACE.

IMPROVEMENT IN MOTORS.

Specification forming part of Letters Patent No. **218,576**, dated August 12, 1879; application filed July 16, 1879.

To all whom it may concern:

Be it known that I, WILLIAM C. REICHENEKER, of Denver, in the county of Arapahoe, State of Colorado, have invented a new and useful Improvement in Motors, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is for an economical and efficient motor, the power of which may be applied to a variety of useful purposes—more especially to sewing-machines, jewelers' lathes, or any kind of light machinery—and to overcome the great objections now existing to the usual method of operating sewing-machines, &c., by pedal-power, which has been decided to be highly injurious to the physical condition of the operators, as the object attained is a desirable one—*i. e.*, the production of greater power or force with proportional less labor by the means of levers working elbow-cranks governed by a pitman or motion-pedal, which produces a continuous rotary movement, as more fully shown in the drawings.

Figure 1 represents the side view, and Fig. 2 the end view.

A represents the pitman, to which is attached, by a stud-screw, a supplemental pitman, B. At the points *a* and *b* of the aforesaid A and B are attached, by means of stud-screws, the ends of two elbow-cranks, C and D, at the other end of which are secured the cranks E and F.

G is the fly-wheel, to the axle or shaft O of which is securely fixed the pinion or small gear-wheel H in Fig. 2, which governs the rotation of the fly-wheel G and band-wheel K, because of it (H) impinging with the crown or large gear wheel I. To the axle or shaft L of the large gear-wheel I is rigidly attached the two milled-edge wheels M and M.

The cranks E and F are bifurcated, and pass on either side of the milled-edge wheels M and M, and are furnished with circular openings, through which passes the shaft or axle L; and in the space between that occupied by the milled-edge wheels M and M and the point of joining the elbow-lever is fixed a wedged tongue or ratchet-click, supplied with springs *d* and *d*, which operate upon the milled-edge wheels M and M, and communicate motion to the large gear-wheel I.

h is a brake, in any usual form, operated by a rod or shaft, *g*, under the pressure of the knee, for the purpose of controlling and stopping the motion at will.

The operation is as follows, to wit: Motion being applied by heel and toe pressure to the pitman A, it is drawn downward by toe-pressure, and operates the lever D, which is connected with lever A by pitman B, which is connected by pitman *f* with lever or crank F, and, raising it, thereby communicates motion to the large gear-wheel I through the pressure of the ratchet-click *d* upon the surface of the milled-edge wheel M. The heel-pressure or upward motion operates pitman A again, which is connected with lever C by pitman *e*, producing the continuous motion of the large gear-wheel I, as before mentioned, and at the same time returns F to the original position to perform its function upon the next motion of the pedal, and by this alternate action continuous rotary motion is given to the large gear-wheel I, governing the shaft of the fly-wheel G and the band-wheel K.

It will be evident by this combination that the band-wheel K will be made to revolve in the proportion as the pinion or small gear-wheel H is to the large gear-wheel I, thereby greatly increasing the number of revolutions for the same labor as used with the ordinary pedal-motion, and producing greater force with correspondingly less labor.

The force or speed may be increased without materially affecting the labor by the addition of one or more gear-wheels—the same as is used in the train of a clock.

The levers, cranks, and pitmen may be used with any and all kinds of gear.

I claim as my invention—

The combination of the levers, cranks, and pitmen, substantially as described.

WM. C. REICHENEKER.

Witnesses:

M. I. SOUTHARD,

E. B. HAY.