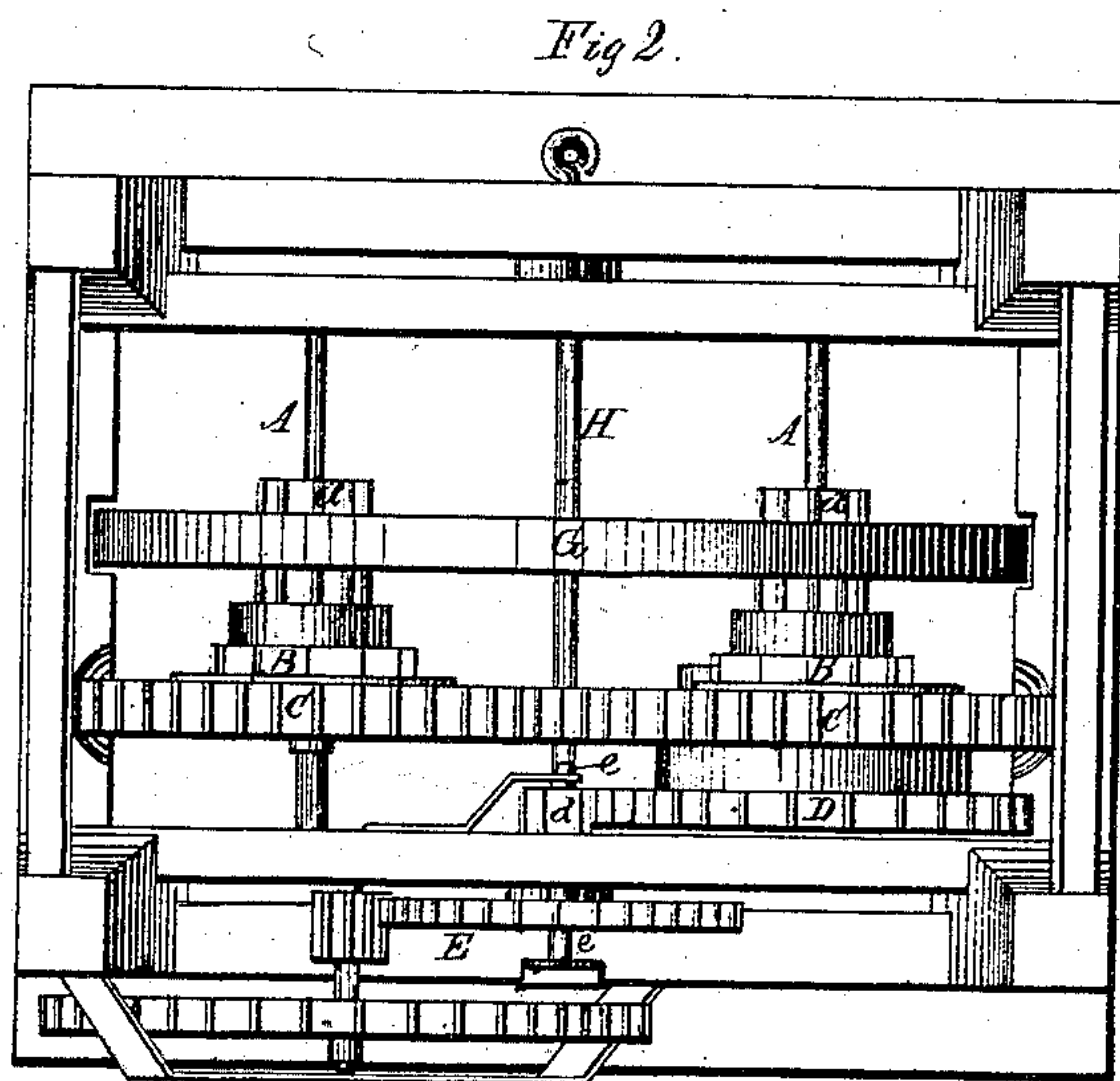
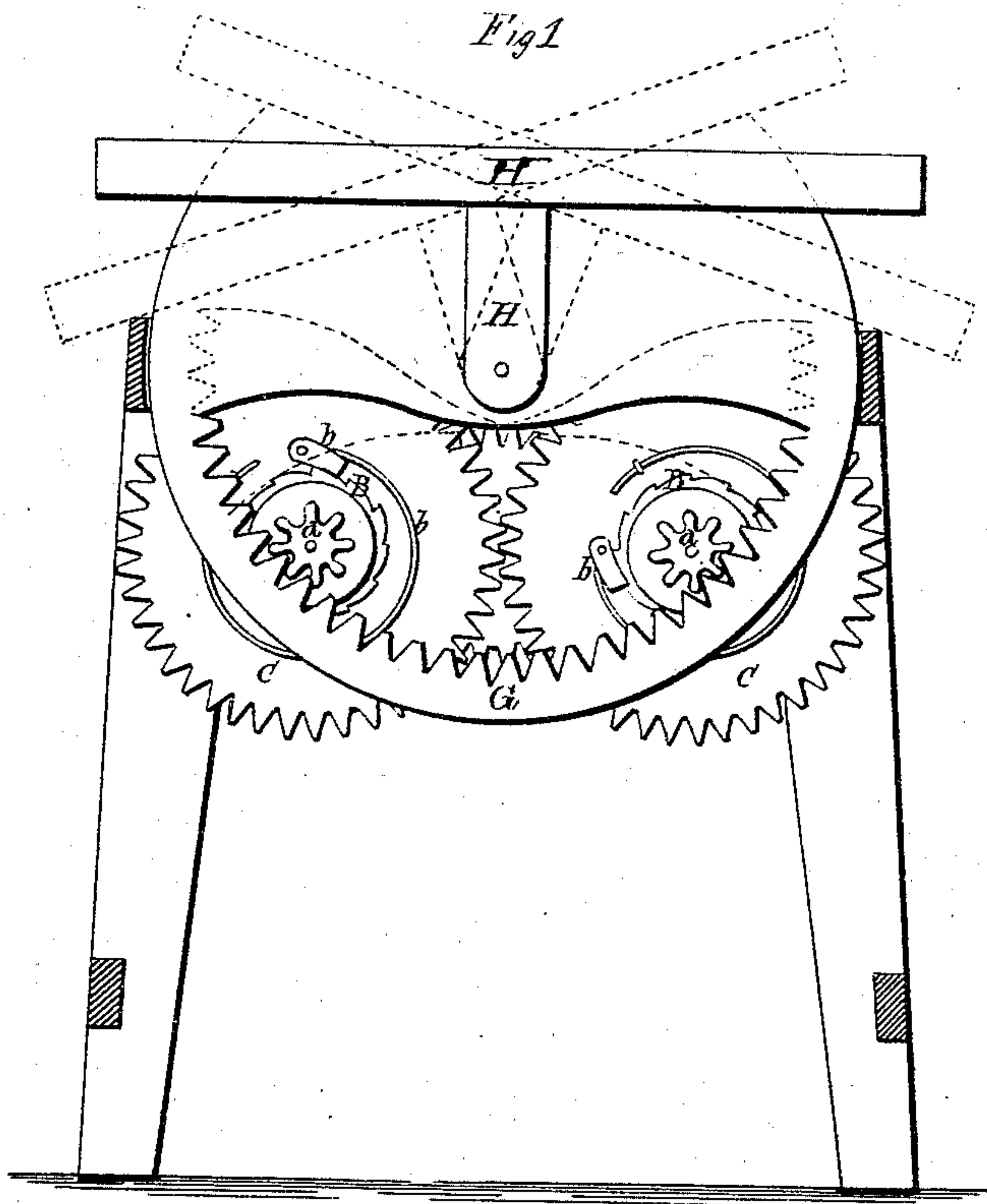


J. HUGHES.
MECHANICAL-MOVEMENT.

No. 169,704.

Patented Nov. 9, 1875.



WITNESSES.

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JOHN HUGHES, OF NEW BERNE, NORTH CAROLINA.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **169,704**, dated November 9, 1875; application filed April 15, 1875.

To all whom it may concern:

Be it known that I, JOHN HUGHES, of New Berne, in the county of Craven and State of North Carolina, have invented certain new and useful Improvements in Mechanical Movements; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in mechanical movements; and it consists in applying a rocking seat, upon which the operator sits, directly over and to the operating parts, so that the motion of the body will operate the machine, while his hands will be left free to control his work, as will be more fully described hereinafter.

Heretofore mechanical movements have been made for the purpose of operating light machinery; but in no instance have they been so constructed that a simple rocking of the operator's body from side to side would propel the machine, and at the same time allow him to use his hands with perfect freedom for the purpose of handling and adjusting his work, and thus dispensing with one extra hand.

Figure 1 is a side elevation of my invention. Fig. 2 is an inverted view of the same.

A A represent two parallel shafts, supported and revolving in suitable bearings, and upon each shaft is loosely placed a ratchet-wheel, B, with elongated pinion *a* projecting from its hub. Alongside of each ratchet-wheel is secured a cog-wheel, C, on the shaft, and on the side of said cog-wheel is a spring-pawl, *b*, to take into the ratchet-wheel. The two cog-wheels C C mesh into each other, and to one of them is secured another cog-wheel, D, which gears with a pinion, *d*, on another shaft, *e*, forming part of a train of gearing, E, which may consist of any number of wheels and pinions, as desired.

Secured to the under side of the seat H is

a semicircular rim, G, cogged on its inner circumference, so as to mesh with and operate the two pinions *a*. The seat H is pivoted to the supporting-frame just above the operating devices just described, and is adapted to be rocked from side to side by a person sitting thereon.

By operating the seat in this manner, it will be seen that the ratchets are rigid in one movement and loose in the other, the two ratchets alternating, while the motion of the gear-wheels is continuous. This machine has no dead-center, and the reciprocal movement can be long or short, at the pleasure of the operator.

The movement, as above described, is not reversible; but where it is desired to have a machine that can be reversed, it is only necessary to have a double ratchet for each cog-wheel C, or two ratchets cut in opposite directions, each having its own spring-pawl, one of which should always be in gear. Then, by raising one pawl and letting the other come in gear, the motion is easily reversed. To both the axles may be attached, if necessary or desirable, similar gearing, so that, in fact, two sets of machinery may be run at the same time; or such gearing may differ in such a manner that that attached to one axle may be used for speed, and that on the other axle for power to be used in lifting weights. As here shown, the machine is adapted for running sewing and other machines.

I claim—

The combination of the rocking seat H, cogged segment G, pinions *a*, shafts A, and wheels C C, the said seat being located above said segment and gear-wheels, and the device adapted to be operated by a person sitting on the seat, as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of April, 1875.

JNO. HUGHES.

Witnesses:

J. A. GUION,
F. H. ROBERTS.