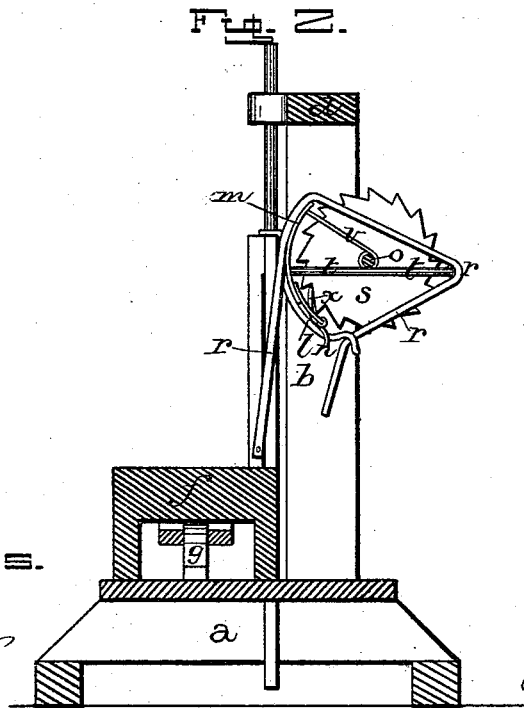
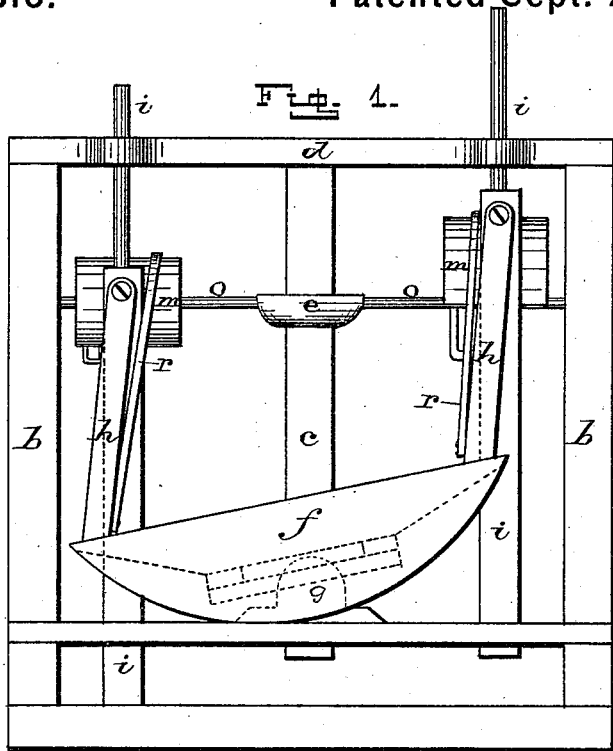


A. J. HOOD.
Foot Power.

No. 208,316.

Patented Sept. 24, 1878.



Witnesses.

J. W. Garner
W. D. Garner

Inventor.

A. J. Hood,
per
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Atty.

UNITED STATES PATENT OFFICE

ALEXANDER J. HOOD, OF RICHLAND CENTRE, WISCONSIN.

IMPROVEMENT IN FOOT-POWERS.

Specification forming part of Letters Patent No. **208,316**, dated September 24, 1878; application filed May 16, 1878.

To all whom it may concern:

Be it known that I, ALEXANDER J. HOOD, of Richland Centre, in the county of Richland and State of Wisconsin, 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 the arrangement and combination of parts, whereby a rocking movement is made to give a continuous rotation to a shaft without the interposition of any dead-points, as will be more fully described hereinafter.

The accompanying drawings represent my invention.

a represents a frame of any suitable construction, from which rises the three standards *b* and *c*, all of which are rigidly secured together by means of the cross-bar *d*. Fastened to the central standard *c* is the seat *e*, upon which the operator sits, so that his feet may bear down upon the ends of the rocking-treadle *f*.

Upon the top of the frame is formed a semi-circular block, *g*, which fits in a suitably-shaped recess in the bottom of the treadle, so as to allow the treadle to rock freely back and forth, and yet prevent it from moving sidewise and thus become displaced.

To the inner side of each end of the treadle is fastened a connecting-rod, *h*, the upper ends of which rods are fastened to the vertically-moving rods *i*. These rods *i* are guided by the cross-bar *d* at their tops and the frame *a* at their bottoms, and have the operating-belts *l* fastened to them at any suitable point. These belts pass downward through the loops *n*, that project from the lower edge of the shields or guards *m*, which prevent the belts from coming in contact with the ratchets on the shaft *o*.

To the rods *h* are fastened the belts *r*, which pass up over the guards, down by the side of the ratchets *s*, out over the rods *t*, which pro-

ject from the inner sides of the guards, and then have their ends fastened to the ends of the belts *l*.

The guards *m* are made semicircular, and are loosely attached to the shaft *o* by means of the rods *v*, so that they can be moved back and forth through a portion of a circle around the edges of the ratchets. Hinged or pivoted below the edges of these guards are the pawls *x*, which engage with the teeth of the ratchets and alternately urge the shaft *o* around.

The weight of the operator being alternately pressed down upon the ends of the treadles, the belts alternately pull one guard forward while the other is drawn backward; and as the pawls are hinged to the guards and are in constant contact with the ratchets, the pawls alternately push the ratchets forward, thus giving the shaft a constant rotary motion without having to overcome any dead-centers. The guards *m* also act as levers, and by giving a leverage to the straps enable the operator to exert a greater and more constant power upon the shaft than can be done in any other way.

This machine may be used for running lathes, churns, and all other machines where only a light power is required.

Having thus described my invention, I claim—

1. The combination of a rocking treadle, *f*, connecting-rods *h*, pitman-rods *i*, and operating-belts connected thereto, the rods *i* having their ends moving in guides, substantially as shown.

2. The guards or levers *m*, loosely connected to the shaft *o*, and carrying the pawls *x*, substantially as described.

3. The combination of the guards *m*, pawls *x*, rods *t*, and operating-belts, substantially as set forth.

4. The rocking treadle *f*, having an aperture in its under side, in combination with the block *g*, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand.

ALEX. J. HOOD.

Witnesses:

JAMES HOLMES, Jr.,
MARTIN MCFARLAND.