

E. Hutson's Foot Power.

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Fig. 1.

PATENTED

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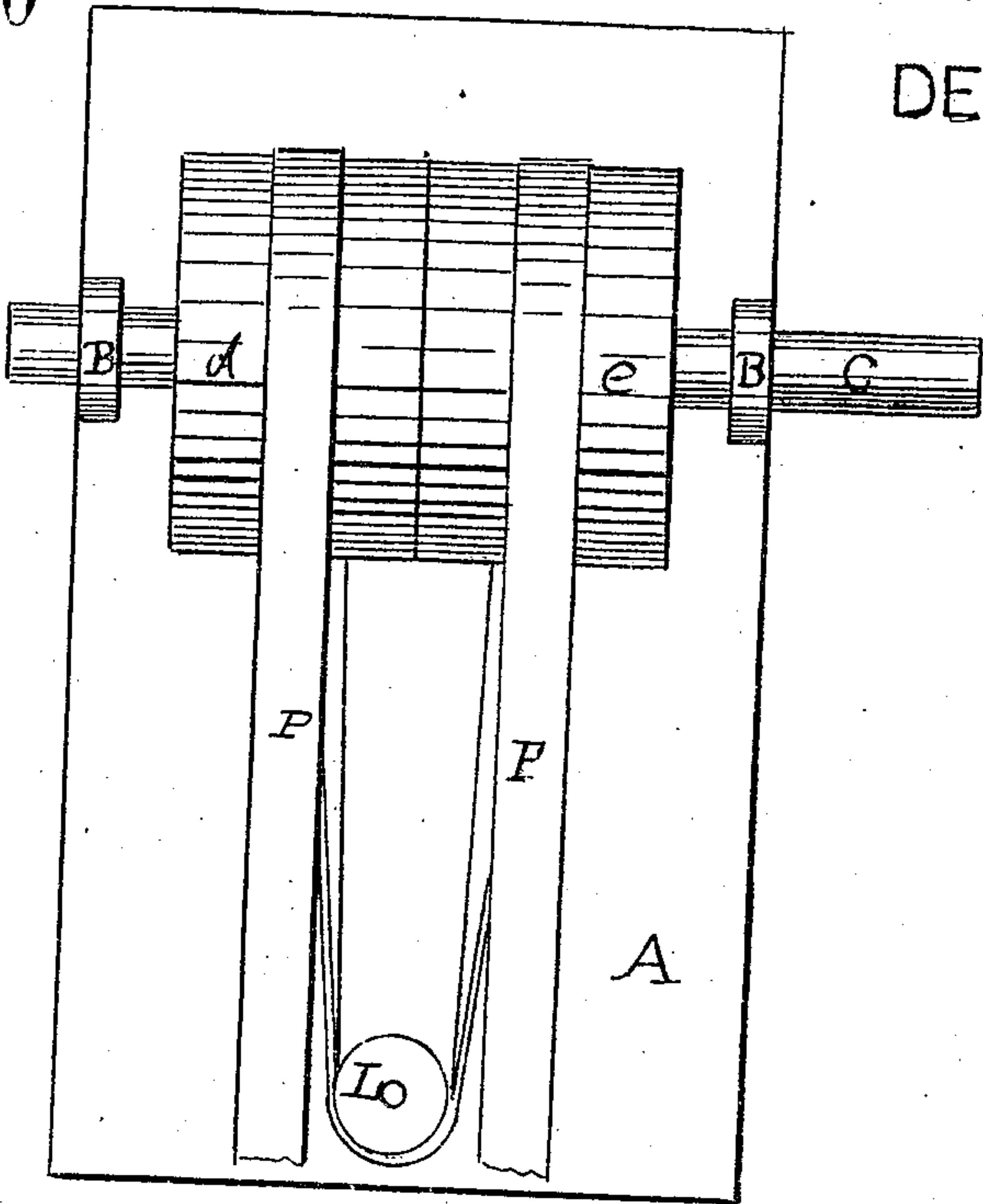


Fig. 2.

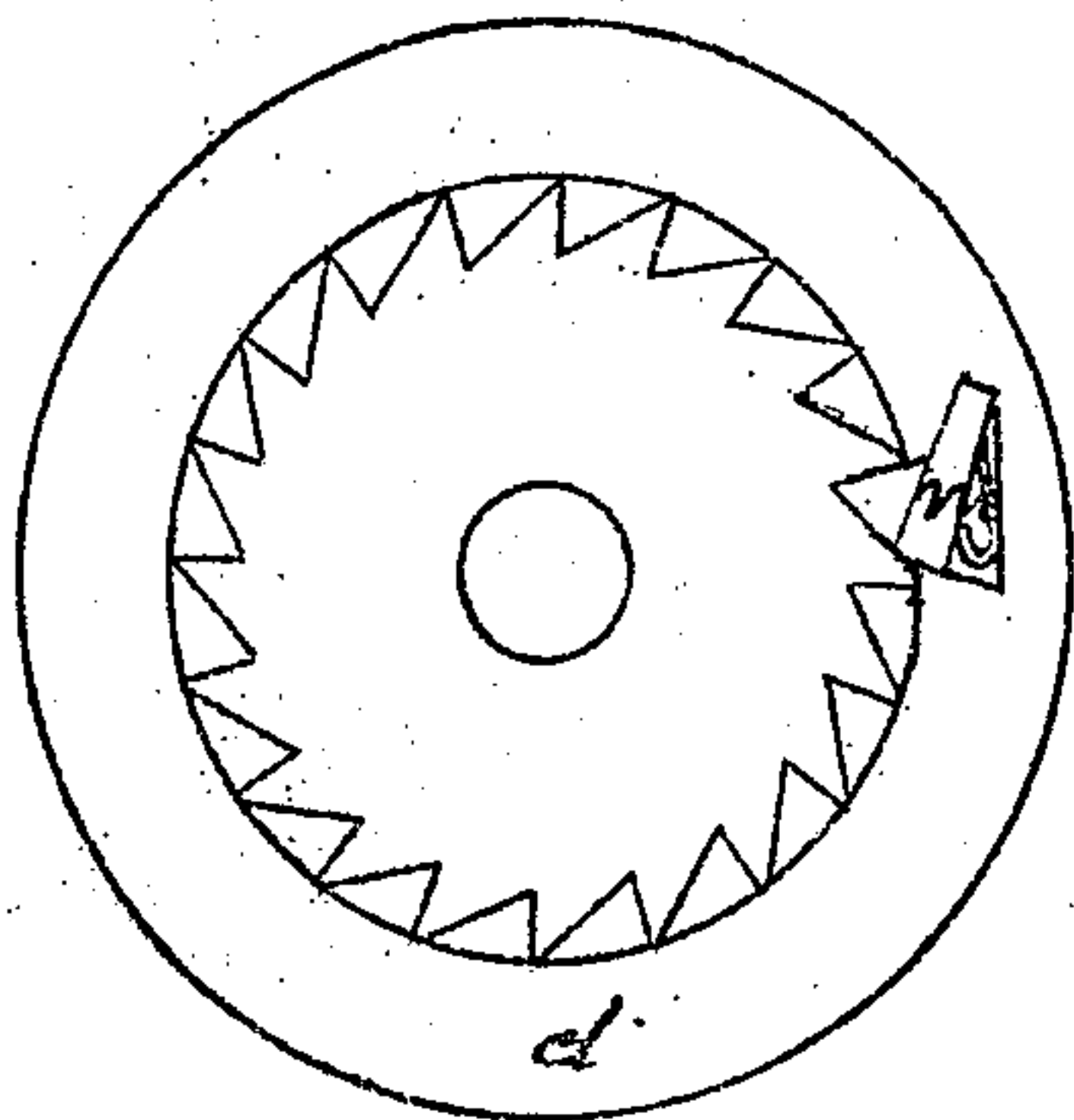


Fig. 3

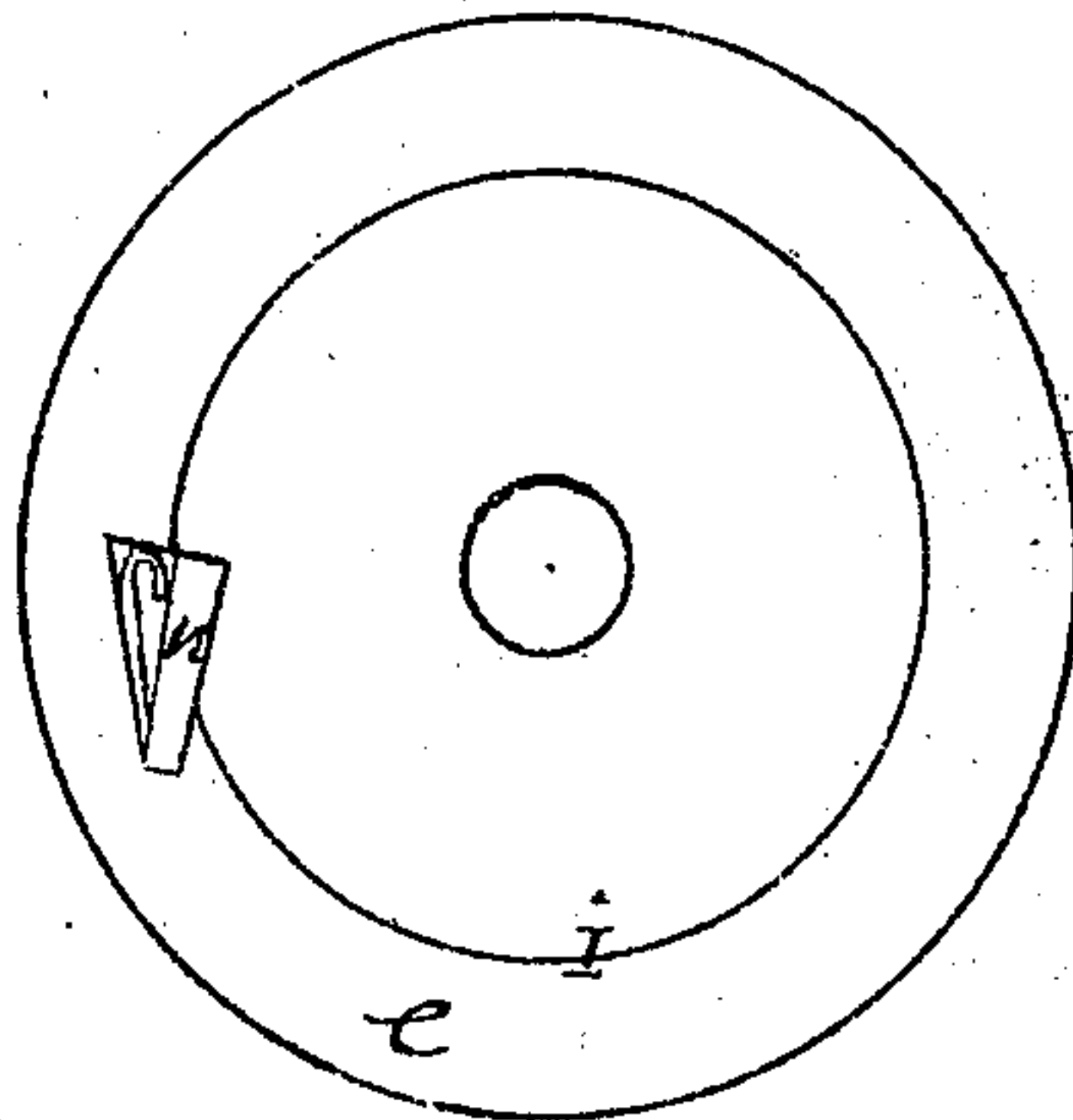
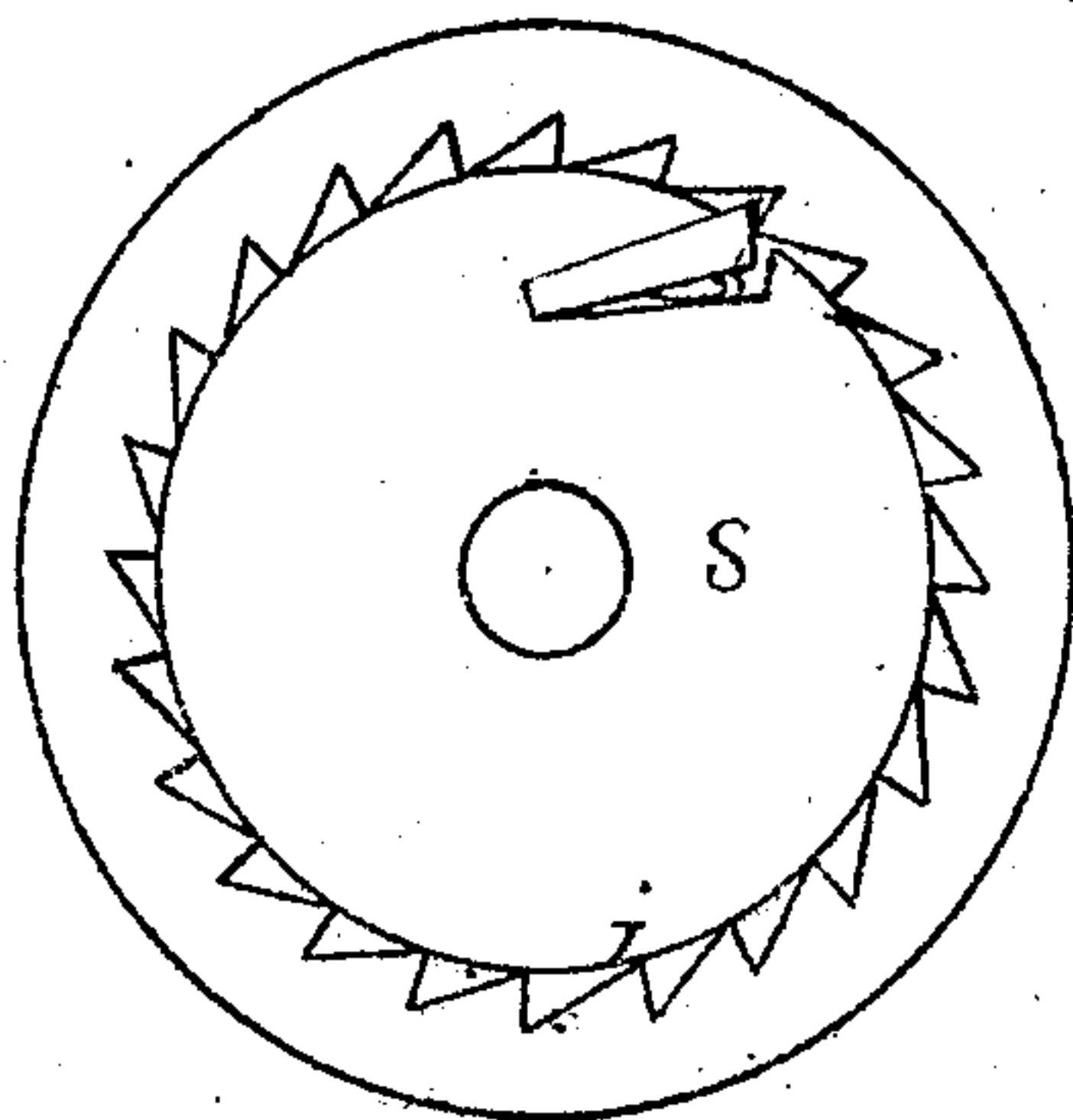


Fig. 4



United States Patent Office.

EZRA HUTSON, OF BROCKPORT, NEW YORK.

Letters Patent No. 72,300, dated December 17, 1867.

IMPROVEMENT IN FOOT-POWER.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, EZRA HUTSON, of Brockport, in the State of New York, have invented certain new and useful Improvements in Foot-Power; and I hereby declare that the following is a true, full, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon. In the annexed drawings, which make a part of this specification—

Figure 1 represents a front elevation of my horse-power.

Figure 2 is a ratchet on the end of one of the rollers from which motion is derived.

Figure 3 represents the end of a second roller which co-operates with the first.

Figure 4 designates a ratchet which may be attached to the end of the second roller.

A represents a vertical frame, to the edges of which are firmly secured the two horizontal arms B. C is a shaft which has its bearings in holes made through arms B. Upon said shaft the two rollers *d* and *e* are adjusted. The said rollers are excavated at their inner ends as far out as the line I. The object of the excavation is to receive the fixed ratchet *g*, and thus admit of the inner ends of rollers *d* and *e* coming in contact. *m* and *n* represent two pawls designed to act on ratchet *g*. It will be seen that the pawls *m* and *n* are embedded at one end in the face of the rollers outside of the line I, while the opposite end will rest upon the teeth in ratchet *g*. On the upper side of said pawls a spring is placed to regulate their pressure on the ratchet *g*. In constructing my machine, the ratchet, in place of being attached to shaft C, as seen in fig. 2, may have its teeth cut in the face of either of the rollers *d* or *e*, and the pawls to act on said teeth will be adjusted to the wheel S, as seen in fig. 4, the said wheel being fastened to shaft C. L designates a pulley placed near the bottom of frame A. F is a leather band, the centre of which rests on pulley L, and the ends, after passing under the rollers *d* and *e* respectively, are brought back over the top of said rollers as far as pulley L, where they may be fastened to treadles for operating the machine.

In giving motion to the shaft C, which is designed to operate machinery, the treadles fastened to the ends of strap F must alternately receive the weight of the operator, as he bears down first with one foot and then with the other. It will be remarked that the band F will be nailed to each of the rollers *d* and *e*, at unequal distances from pulley L, and the end that is furthest from pulley L must be first pressed down with the foot. This will revolve the roller over which the band passes. The rotation of said roller will communicate a revolving motion to shaft C, in consequence of the ratchet *g* being securely fastened to said shaft. The rollers *d* and *e* must necessarily revolve with ratchet *g* alternately, in consequence of their respective pawls catching against the teeth of said ratchet, as the rollers are alternately put in motion by the action of the two bands.

By the operation above described, a continuous rotary motion is imparted to the shaft C. My foot-power can be applied to a great variety of purposes, such as to drive turning-lathes, propelling hand-cars, boats, &c.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The rollers *d* and *e*, ratchet *g*, and pawls *m* and *n*, the whole combined substantially as and for the purpose herein set forth.

In testimony that I claim the above, I affix my signature in presence of two witnesses.

EZRA HUTSON.

Witnesses:

T. H. ALEXANDER,

C. ALEXANDER.