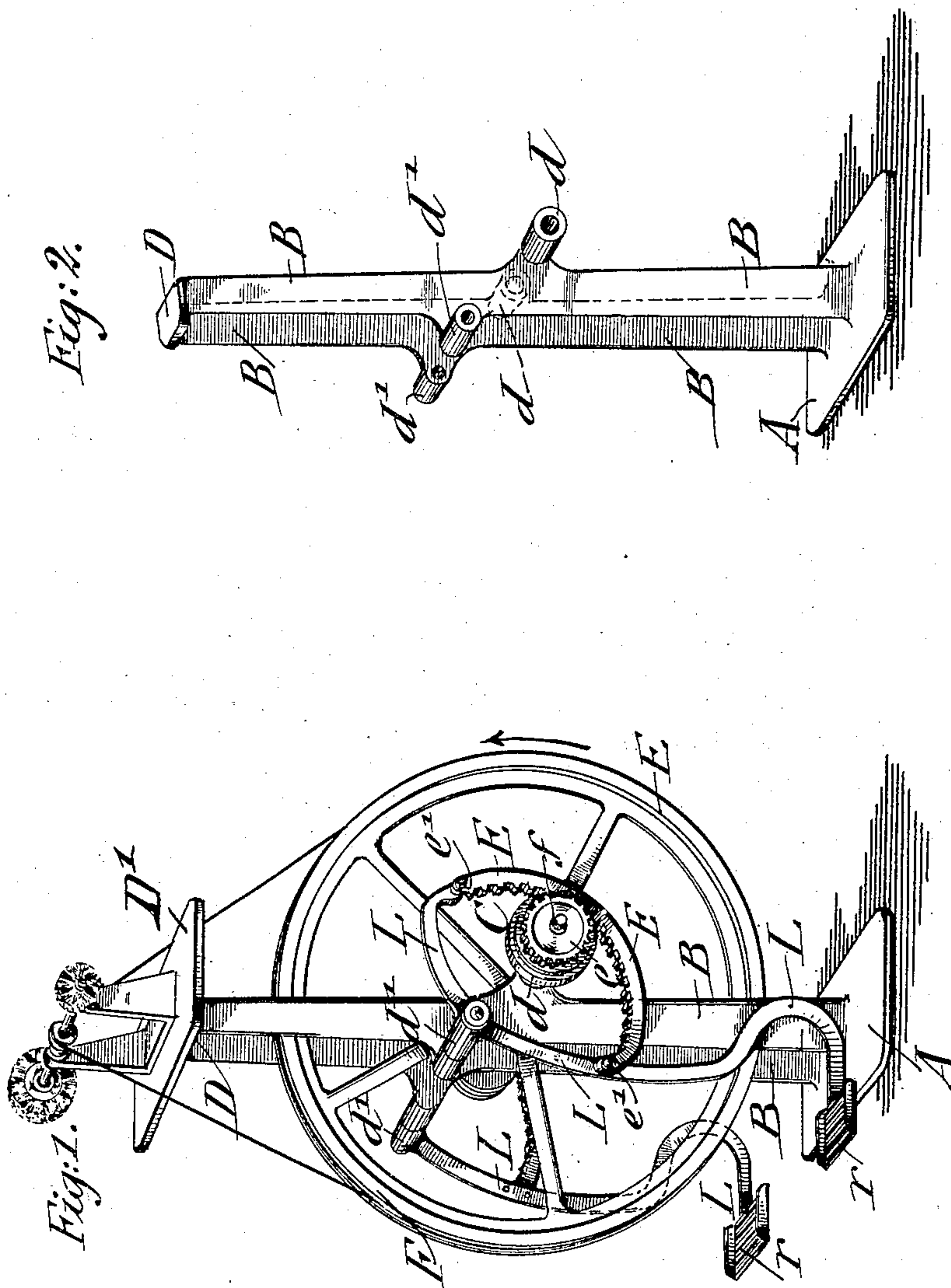


No. 767,177.

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M. SLOTKIN.  
FOOT POWER MECHANISM.  
APPLICATION FILED MAY 6, 1902.

NO MODEL.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## FOOT-POWER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 767,177, dated August 9, 1904.

Application filed May 6, 1902. Serial No. 106,142. (No model.)

*To all whom it may concern:*

Be it known that I, MAYER SLOTKIN, a citizen of the United States, residing in New York, borough of Manhattan, and State of New York,  
5 have invented certain new and useful Improvements in Foot-Power Mechanisms, of which the following is a specification.

This invention relates to certain improvements in foot-power mechanisms by which a  
10 convenient and effective foot-power can be given to drills, lathes, circular saws, or other light machinery in such a manner that the power can be imparted to the mechanism by the feet of the operator, the mechanism not  
15 acting as an oscillating treadle, but by means of forwardly-directed kicks whereby the fly-wheel is turned instantly in the required direction without the use of the hands and by which means a less-tiring motion of the feet is re-  
20 quired than when motion is given by the ordinary ankle movement; and for this purpose the invention consists in the combination, in a device of the character mentioned, of a stand comprising a base and two parallel standards  
25 extending upwardly from the base in close proximity and having a connecting top plate, a rearward extension on each standard, said extensions having alining journal-boxes, a fly-wheel having its shaft journaled in said jour-  
30 nal-boxes and extending between the said standards, a clutch device on each outer end of said shaft, a pinion on each end of said shaft adjacent to said clutches, a forward extension on each standard, a stud extending outwardly  
35 from each of said extensions, a foot-lever on each of said studs, and a toothed segment on each foot-lever meshing with one of the said pinions on the fly-wheel shaft.

In the accompanying drawings, Figure 1  
40 represents a perspective view of my improved foot-power mechanism, showing it arranged with a double foot-lever carrying a table above the standards for supporting a buffing-machine; and Fig. 2 is a perspective view of the  
45 stand used for the mechanism shown in Fig. 1.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the base-plate of my improved foot-power mech-

anism. On the base-plate are supported two 50 parallel standards B B, which are preferably cast integral with the base-plate A, said standards carrying at the upper portion suitable extensions having journal-boxes *d d* for the shaft *f* of the fly-wheel F. The journal-boxes are 55 preferably located at the rear part of the standards at some distance below the upper ends of the same. At the upper forward portion of each standard is arranged an extension *d'*, which extensions support studs forming each 60 a fulcrum of one of the foot-levers L L, which studs are inserted into the bearing D within these extensions and retained in the same in a suitable manner, so as to form the fulcrums on which the foot-levers L L swing. To the 65 shaft *f* are applied clutches C C of any approved construction, each of said clutches being so constructed that it will impart rotary motion to the fly-wheel shaft when the clutch is turned in one direction, but will clear the 70 said shaft when moved in the opposite direction. On the clutches are arranged pinions *e e*, respectively, which are placed in mesh with toothed segments E E, that are rigidly attached at their ends by fastening means in the form 75 of bolts *e' e'* to the upper curved portions of the fulcrumed foot-levers L L. (Shown in Fig. 1 of the drawings.) The lower ends of the foot-levers L L are curved backwardly and then in 80 forward direction, the foot-rests *r r* being applied to their front ends and ribbed in a suitable manner, so as to give the required support to the feet. The standards extend above the fly-wheel and are connected by a top plate D to which the table D', supporting the light 85 machinery to be driven, is attached. Said table D' may, however, be cast integrally with the standards.

When the feet are placed on the foot-rests *r r* and moved in forward direction, oscillat- 90 ing motion is imparted to the foot-levers L L, so that the toothed segments E E mesh with the pinions *e e* of the clutches C and C and impart rotary motion to the clutches and by the same to the fly-wheel, so that the latter is turned 95 in the direction of the arrow shown in the drawings. By the momentum imparted to the fly-wheel the foot-levers are alternately



returned into forward direction, so as to be ready to receive the next impulse or "kick" from the feet. By repeating these kicks a continuous rotary motion is transmitted to the fly-wheel and from the same by a belt and pulley to the spindle or shaft of a lathe, drill, buffing-machine, or other light machinery to be driven by foot-power, which power is placed below the bench of the machine. The foot-levers turn the fly-wheel always in the same direction whenever they are operated. When the motion of the foot-levers cease, the fly-wheel will continue its motion until the momentum imparted by the foot-levers is spent. This construction of a foot-power machine having two foot-levers, one at each side of the fly-wheel, and two motion-transmitting segments, pinions, and clutches, as shown in the drawings, permits the foot-levers to be operated jointly or alternately, as desired, and generates more power and produces greater speed than the ordinary mechanism generating power by treadle-motion.

My improved foot-power is of simple construction and can be operated so that the fly-wheel can be kept continuously in motion without the aid of the hands solely by the pendulum motion of the foot-levers, to which levers the whole strength of the limbs can be applied in a manner such that it results in less fatigue than with the usual ankle movement required for operating treadles. By means of the clutches momentum is imparted to the fly-wheel with each forward motion of the foot-levers, so that the fly-wheel will run smoothly and speedily for some time before

the next movement of the foot-levers or kick is necessary. The speed and power of the machine is increased by increasing the number of the kicks. Thus a very effective foot-power for all kinds of light machinery is obtained for shops in which no steam-power is available or in which it is not desirable to apply expensive transmission-power to all the smaller machines.

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

In a device of the character described, the combination of a stand, comprising a base and two parallel standards extending upwardly from the base in close proximity and having a connecting top plate, a rearward extension on each standard, said extensions having aligning journal-boxes, a fly-wheel having its shaft journaled in said journal-boxes and extending between the standards, a clutch device on each outer end of said shaft, a pinion on each end of said shaft adjacent to said clutches, a forward extension on each standard, a stud extending outwardly from each of said extensions, a foot-lever on each of said studs, and a toothed segment on each foot-lever meshing with one of the said pinions on the fly-wheel shaft, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

MAYER SLOTKIN.

Witnesses:

PAUL GOEPEL,  
HENRY SUHRBIER.