

E. & H. HARDING.
Foot-Power Apparatus.

No. 141,928.

Patented August 19, 1873.

Fig. 1.

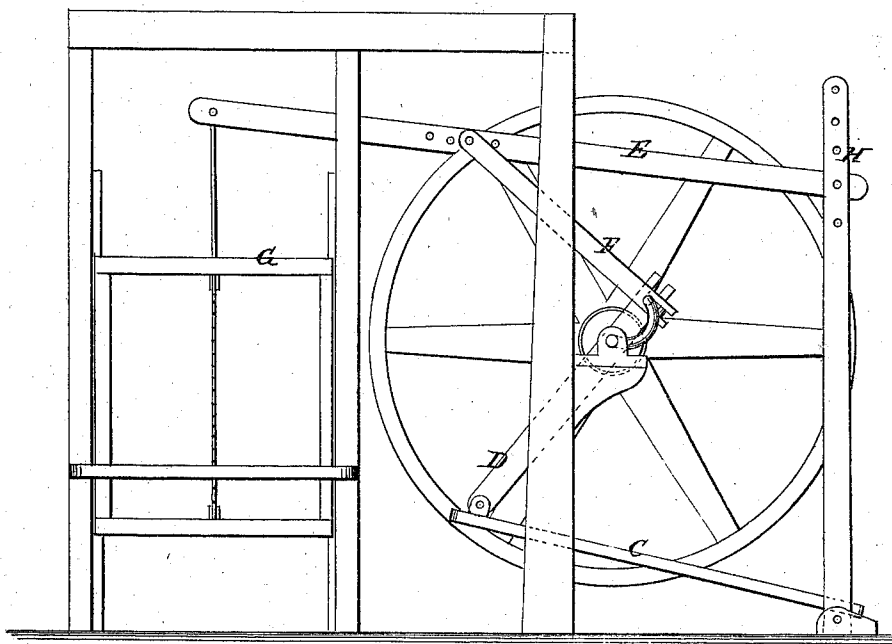
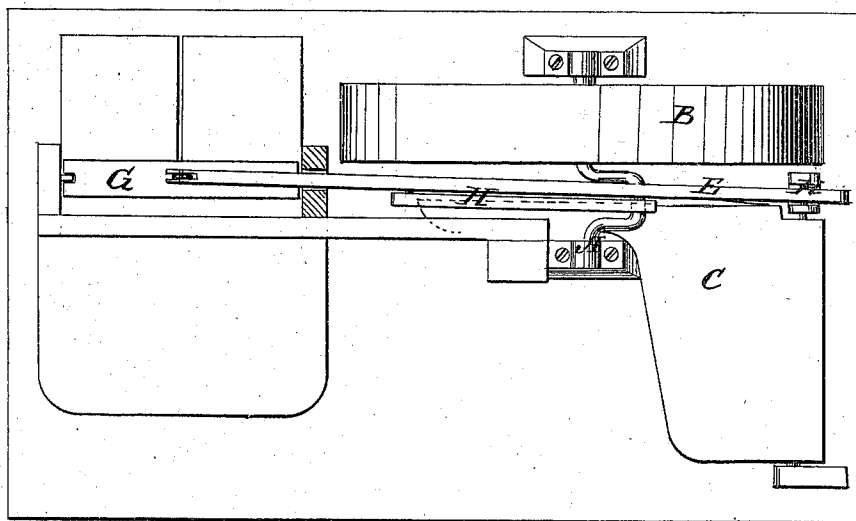


Fig. 2.



Witnesses.

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EBENEZER HARDING AND HENRY HARDING, OF DELAVAN, MINNESOTA.

IMPROVEMENT IN FOOT-POWER APPARATUS.

Specification forming part of Letters Patent No. 141,928, dated August 19, 1873; application filed July 5, 1873.

To all whom it may concern:

Be it known that we, EBENEZER HARDING and HENRY HARDING, of Delavan, in the county of Faribault and State of Minnesota, have invented a new and Improved Foot-Power Apparatus, of which the following is a specification:

Our invention consists of a fly-wheel, foot-treadle, and crank for obtaining motion, and a lever and connecting-rod for transmitting and converting the motion to work vertical saws, mortising-machines, and the like, arranged in a simple and efficient way, calculated to provide driving mechanism for small shops, by which sawing, mortising, and the like can be done to better advantage than with the ordinary hand-power machines.

Figure 1 is a side elevation of our improved machine, and Fig. 2 is partly a horizontal section and partly a plan view.

A is the crank-shaft; B, the balance-wheel; C, the foot-treadle; and D, the pitman by which the power is obtained. The wheel is intended to be larger than the wheels of ordinary foot-power machines, to obtain as much power as can be had by one or, if need be, two persons treading only. E is the transmitting and connecting lever. F is the pitman for working it; and G, a saw-gate, which is represented in this example as the machine to be

driven. The transmitting and converting lever is pivoted at one end to a fixed object, H, and is connected at the other end to the mechanism to be operated, while the pitman for working it is connected to it at or near the middle. The connections of the lever to the fixed object and the pitman to the lever are variable to make necessary changes for different machines to be worked. This power may be permanently connected to the machine to be driven, or it may be movable to shift about to different machines; or it may be permanently fixed and the machines to be operated movable to and from it.

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

The combination of a foot-treadle, crank-shaft, balance-wheel, transmitting and converting lever, and connecting-rod, the transmitting-lever being connected at one end to a fixed bar, and at the other end to the machine to be driven, and the connections of said rod with said fixed bar and with the connecting-rod by which it is worked being variable, substantially as specified.

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Witnesses: HENRY HARDING.

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