

(No Model.)

J. STEFFENSON.  
MANUAL MOTOR.

No. 571,545.

Patented Nov. 17, 1896.

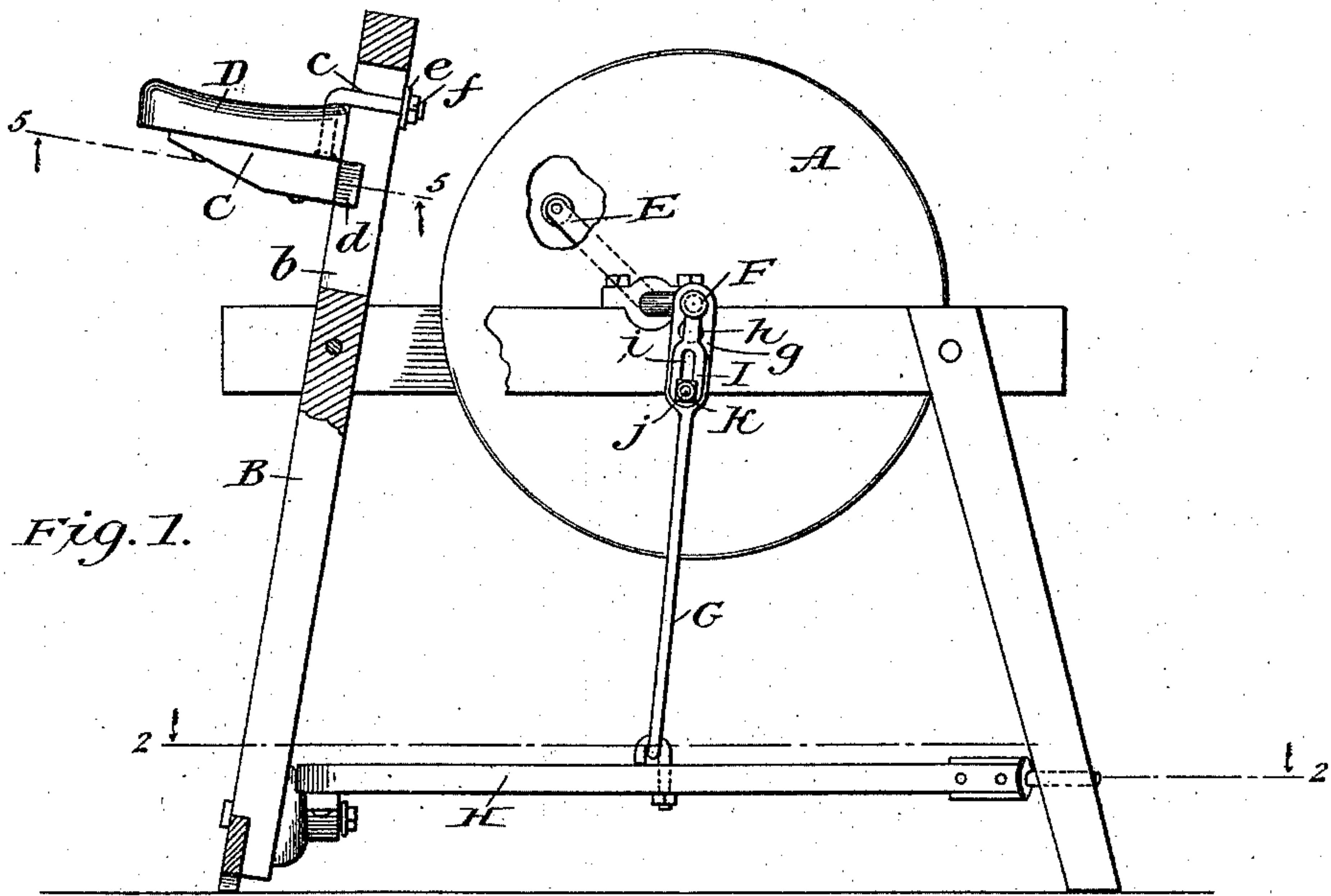


Fig. 3.

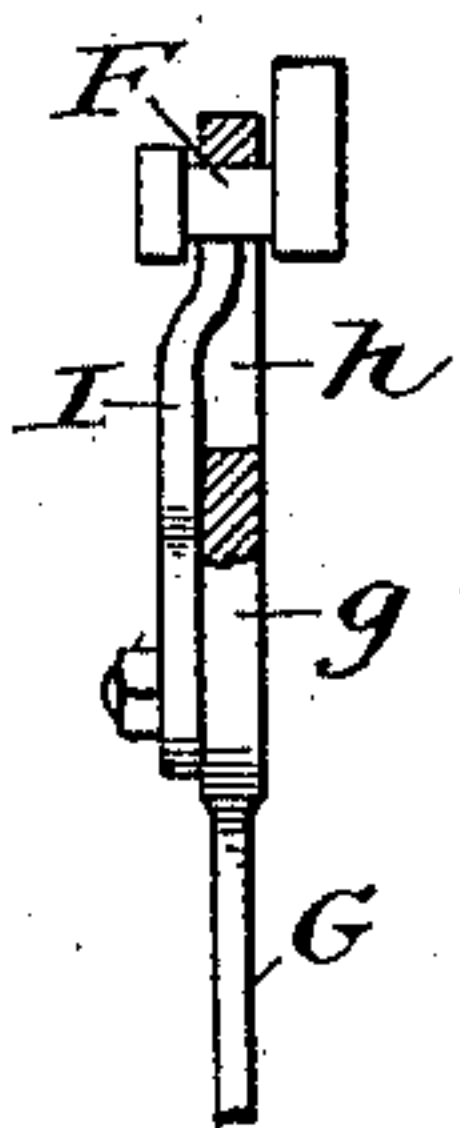


Fig. 2.

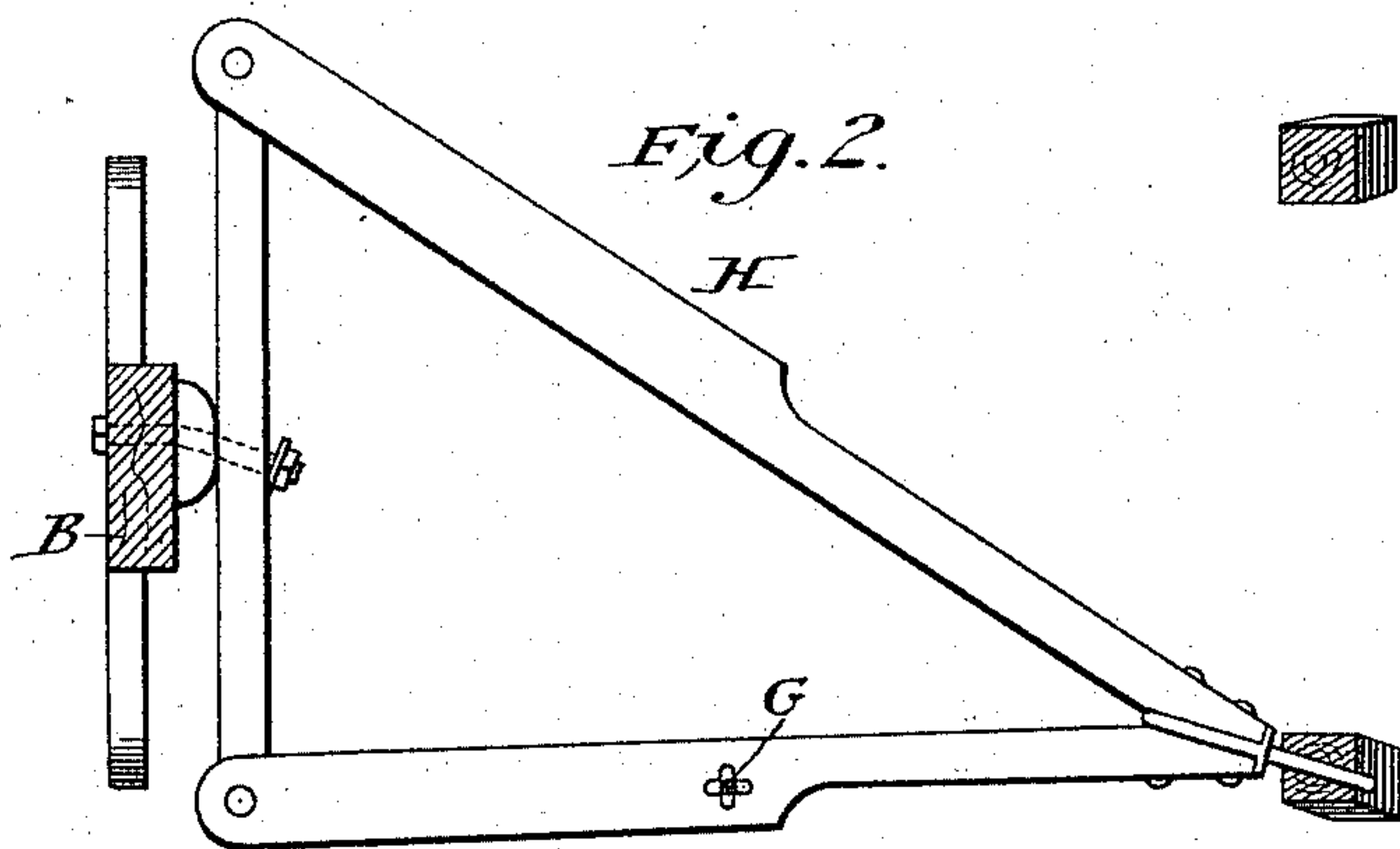
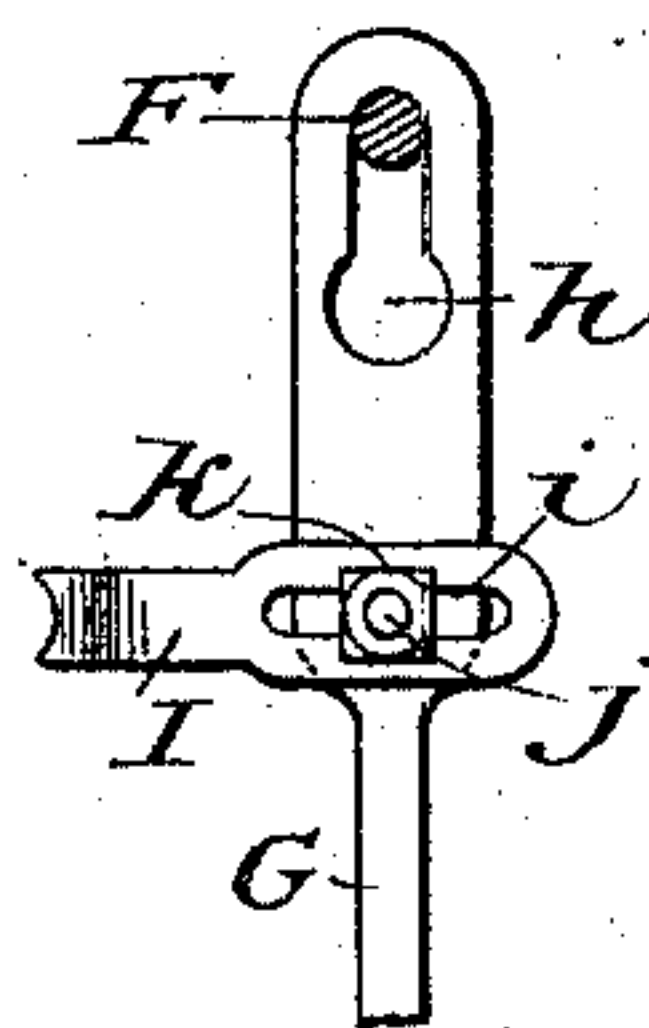


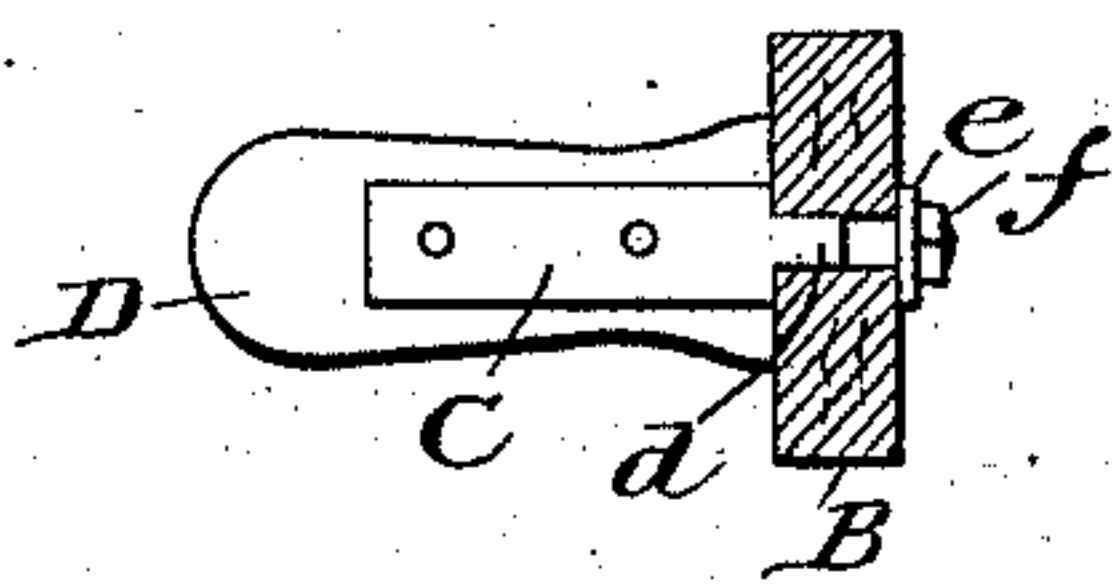
Fig. 4.



Witnesses.

N. E. Oliphant  
Geo. W. Young

Fig. 5.



Inventor.

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# UNITED STATES PATENT OFFICE.

JACOB STEFFENSON, OF NORTH CAPE, WISCONSIN, ASSIGNOR OF ONE-HALF  
TO JAMES FREDRICKSEN, OF SAME PLACE.

## MANUAL MOTOR.

SPECIFICATION forming part of Letters Patent No. 571,545, dated November 17, 1896.

Application filed March 27, 1896. Serial No. 586,052. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB STEFFENSON, a citizen of the United States, and a resident of North Cape, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Manual Motors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide a simple economical manual motor applicable to various machines for the purpose of converting oscillative into rotary reciprocative motion, but which is especially designed for use in connection with grindstones; and it consists in certain peculiarities of construction and combination of parts hereinafter set forth with reference to the accompanying drawings and subsequently claimed.

In the drawings, Figure 1 represents a side elevation of my motor in connection with a grindstone and its supporting-frame; Fig. 2, a plan view, partly in horizontal section, on the plane indicated by line 2 2 in Fig. 1; Fig. 3, a detail sectional view of a pitman-and-crank connection embodied in my improvements; Fig. 4, a detail elevation of the parts in said connection, the crank-latch being out of working position; and Fig. 5, a partly-sectional view on the plane indicated by line 5 5 in Fig. 1.

Referring by letter to the drawings, A represents a grindstone having the axle mounted in bearings on a frame of any suitable construction, but which is shown as having a central post B at one end, this post being extended above the main portion of said frame and provided with a longitudinal slot *b* for the engagement of a bolt-arm *c* and the shouldered end *d* of a rib C, the latter being fast on the under side of a saddle D for a person employed in the act of holding anything to the stone, and the top of said post may be utilized at times as a rest for the object held. A cross-head *e*, loose on the bolt-arm *c*, is held against the inner side of post B by means of a set-nut *f*, run on said arm, and the saddle may be readily adjusted to various elevations for the purpose hereinafter specified.

The axle of the grindstone is shown provided at one end with the usual hand-crank E, and the other end of said axle is provided

with a crank F for connection with the head *g* of a pitman G, that has its lower end in shackle connection with a treadle H, arranged to be rocked by the feet of a person astride of the aforesaid saddle, the latter being adjusted in a vertical direction to accommodate the leg-reach of the treadle-operator.

It will be noticed that it only requires a slight tilt of the saddle in order to disengage the shouldered end *d* of rib C from the post-slot *b* when adjustment is necessary, and said rib being again engaged with said post-slot the weight of said saddle will hold the latter in position. It also follows that the weight of a person on the saddle tends to bind the latter absolutely rigid in its adjusted position.

The treadle may be suspended by any suitable means and be of any suitable contour, its oscillation imparting rotary motion to the crank with which it may be connected.

The pitman-head *g* is herein shown provided with a vertical keyhole-slot *h* to facilitate its connection with the flanged crank F, and to prevent loose play of said crank in said slot a stay-plate I is employed. This plate is provided with a longitudinal slot *i*, engaged by a screw-threaded stud *j* on the pitman-head, and a set-nut *k* is run on the stud to bind said plate in adjusted position. One end of the plate is offset to come within the keyhole-slot of the pitman-head, and also notched to correspond with the circular contour of the crank, which it opposes when in working position.

From the foregoing it will be understood that while the grindstone may be rotated by the hand-crank the treadle mechanism may be employed by the grinder to supplement the power of a person operating said crank or to do all the work alone. It also follows that the improvements herein specified are applicable for use in connection with light machinery of various kinds.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a suitable frame embodying a vertically-slotted post, a saddle having an arm engaging the post-slot, a cross-head on the saddle-arm opposed to the inner side of the post, a rib depending from the

saddle and having a shouldered end engaging said post-slot, a treadle arranged to be rocked by a person astride said saddle, and a pitman for connection of the treadle with another movable machine element.

5 In testimony that I claim the foregoing I have hereunto set my hand, at North Cape,

in the county of Racine and State of Wisconsin, in the presence of two witnesses.

JACOB STEFFENSON.

Witnesses:

JOHN H. KAMPER,  
SADIE E. HOOD.