J. & W. W. Porter,
Converting Motion.

No. 68,900. Patented Sep. 17, 1867.

Fig. 2.

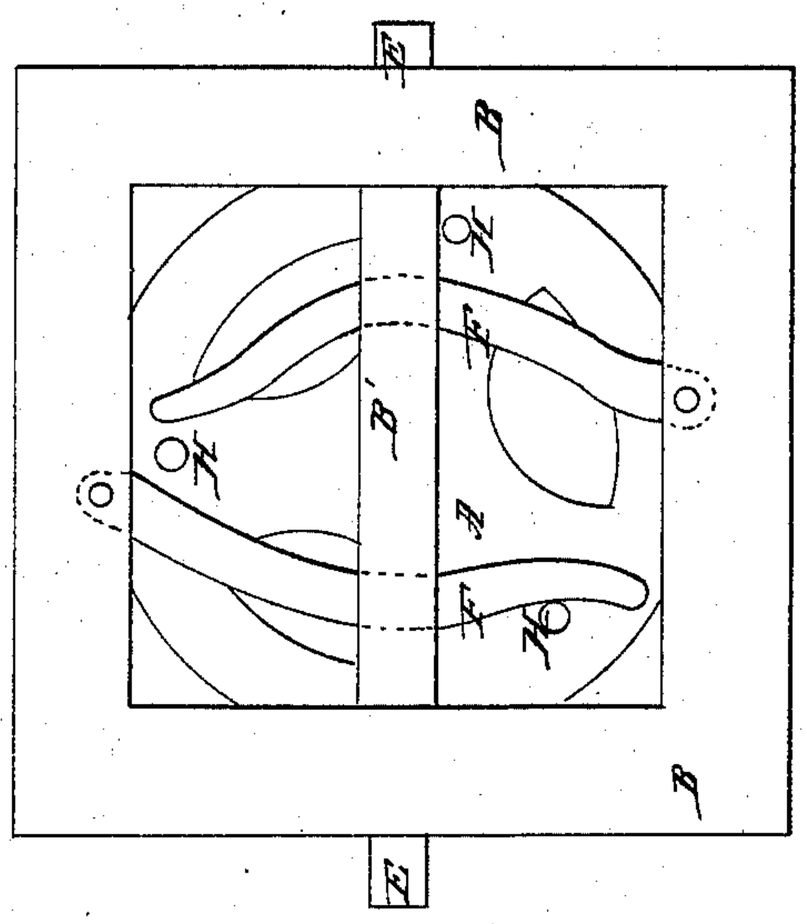


Fig. 4.

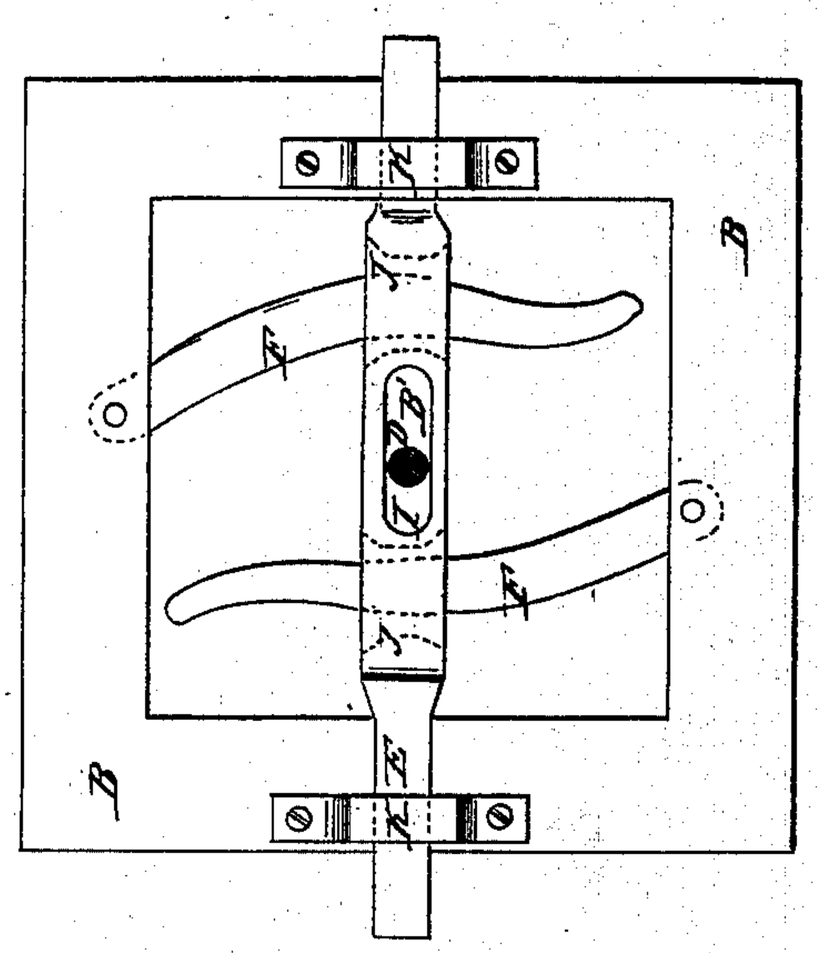


Fig. 1.

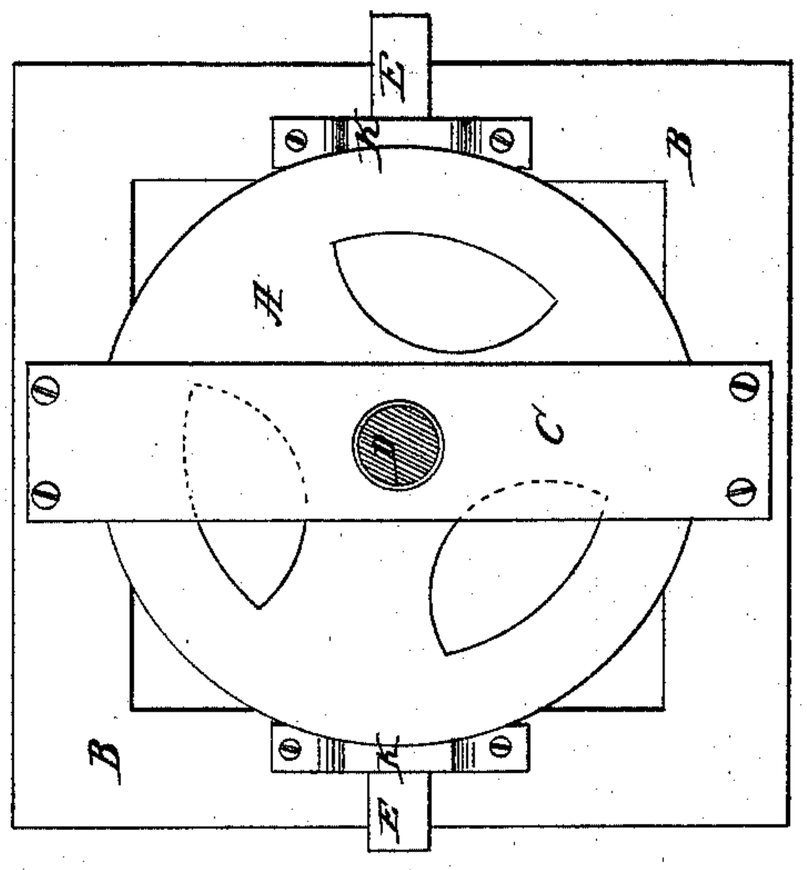
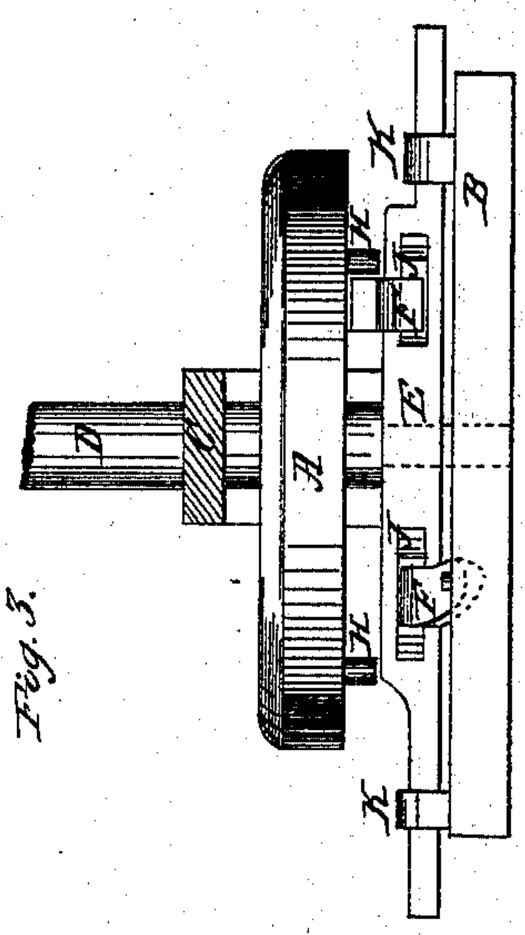


Fig. 3.



Witnesses

H. W. Palmer

O. L. Coburn.

Inventors

James Porter

Wheelock W. Porter

by Coburn & Mann

Attorneys

United States Patent Office.

JAMES PORTER AND WHEELOCK W. PORTER, OF WAUCONDA, ILLINOIS.

Letters Patent No. 68,900, *dated September* 17, 1867.

IMPROVED REVERSE-LEVER PITMAN.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JAMES PORTER and WHEELOCK W. PORTER, of Wauconda, in the county of Lake, and State of Illinois, have invented a new and useful improvement in Reverse-Lever Pitmen; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and letters and figures marked thereon, which form a part of this specification, and in which—

Figure 1 represents a top view of our invention.

Figure 2, a bottom view.

Figure 3, a side elevation, and

Figure 4 a top view, with the wheel A removed.

The nature of our invention consists in conveying motion from a wheel to a pitman or rod by means of pins and levers, as hereinafter described, in such a manner that the pitman or rod receives a direct vibrating motion, and no lateral motion, which does away with the necessity of a joint or coupling in the pitman.

To enable those skilled in the art to manufacture and use our invention, we will proceed to describe the same with particularity.

The same letters represent corresponding parts in the different figures.

B is any suitable frame, to which the different parts of our invention are attached. A is a wheel, and D its shaft, which has one bearing in the cross-piece B′ of the frame B, and the other bearing in the support C. The pitman-rod E slides on the frame B, and is held in position by the straps K. The perpendicular slot I allows the shaft D to pass through the pitman without preventing it from vibrating. There are also two horizontal slots J J through said pitman, through which the levers F pass, which slots are cut in such form, as shown by dotted lines in fig. 4, that the said levers will not bind in them as the pitman vibrates. The levers F are attached at or near one end to the frame B, and pass through the slots J in the pitman, being so constructed and arranged that the pins H, which are firmly attached to the wheel A, will strike one end of the levers as the wheel A is revolved, while they pass over the other end. This arrangement is clearly shown in fig. 3.

Having described the construction of our invention, we will now proceed to describe its operation. As the wheel A is revolved by any known power, one of the pins H strikes against one of the levers F, and causes it to turn on its fulcrum, or the point where it is attached to the frame B, and move the pitman E in one direction till the pin H passes by the end of said lever F. Then another of the pins H strikes against the end of the other lever, and turns that in the same way, which slides the pitman E in the opposite direction. Thus, by the action of the pins H upon the levers F, power is communicated from the wheel A to the pitman E in such a manner as to cause it to vibrate rapidly. The number of vibrations which the pitman E is caused to make to each revolution of the wheel A depends upon the number of pins H. With three pins, the number shown in this application, the pitman makes three full vibrations to each revolution; but if the number of pins should be increased the number of vibrations of the pitman to each revolution of the wheel would be correspondingly increased. Care should be taken, however, to so arrange the pins that each pin will pass by the end of the lever upon which it is acting before another pin strikes the end of the other lever, otherwise they would act against each other and stop the machine.

Having fully described the construction and operation of our invention, what we claim, and desire to secure by Letters Patent, is—

The combination of a wheel, A, provided with pins H, or their equivalents, levers F, and pitmanE, arranged and operating substantially as and for the purposes specified.

JAMES PORTER,
WHEELOCK W. PORTER.

Witnesses:
JOHN NIMS,
E. L. HORSON.