M. P. LOCKE.

ADJUSTABLE CRANKS FOR GRINDSTONES, &c.

No. 183,061. Patented Oct. 10, 1876.

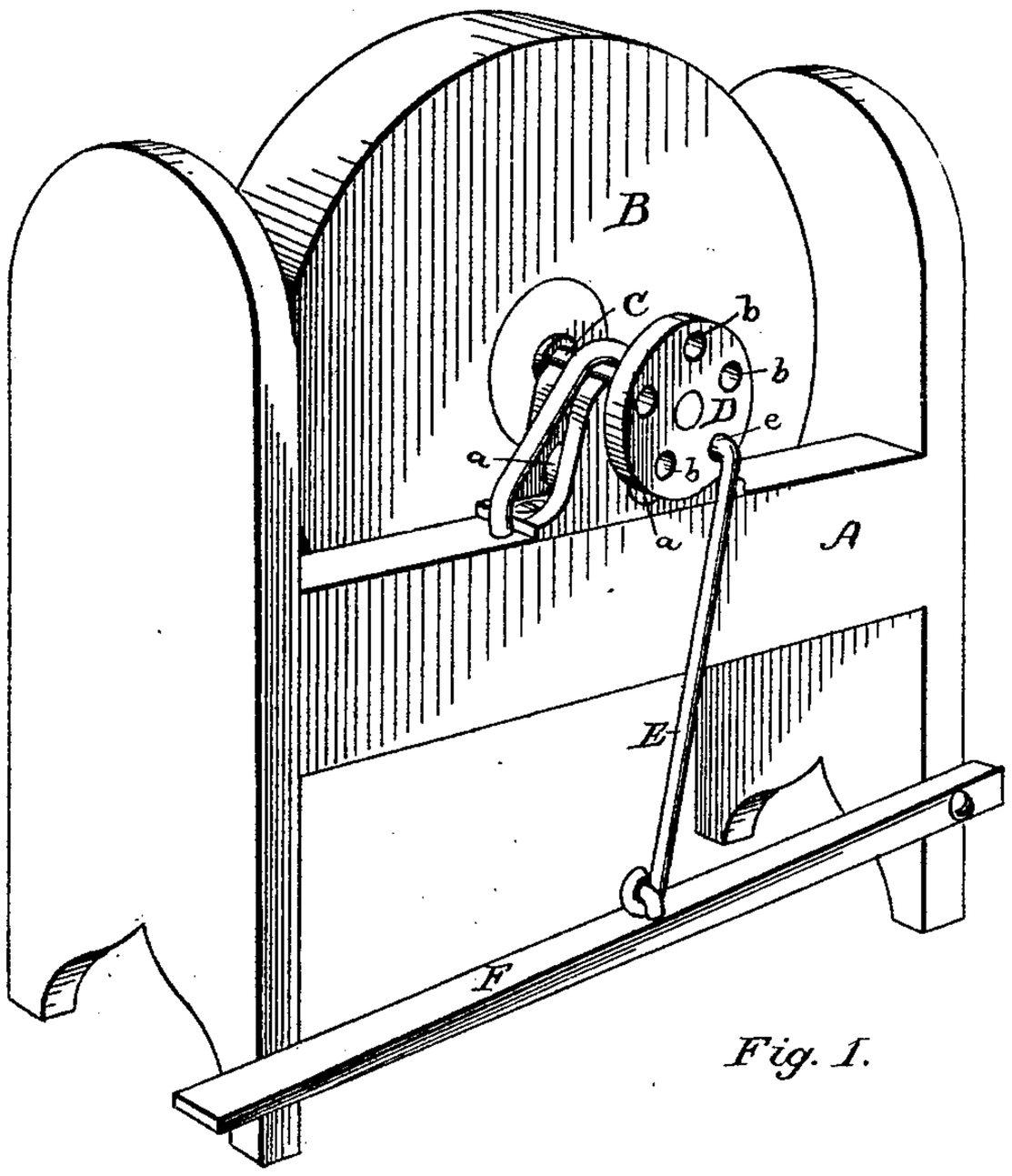


Fig. 1.

Fig. 2.

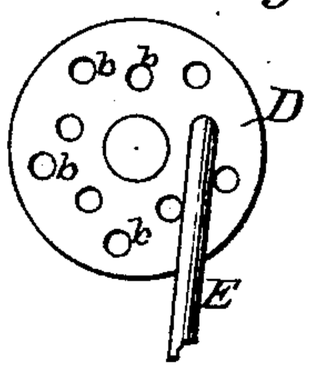
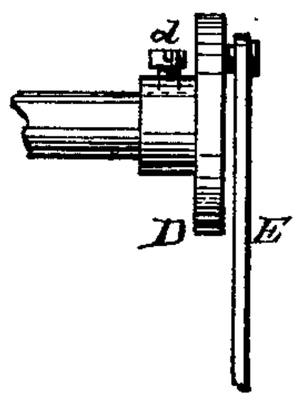


Fig. 3.



Witnesses:

C. Clarence Poole

R. D. O. Smith

Inventor:

Milton P. Locke

By J. B. Woodruff

Attorney.

JAMES R. OSGOOD & CO BOSTON.

UNITED STATES PATENT OFFICE.

MILTON P. LOCKE, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN ADJUSTABLE CRANKS FOR GRINDSTONES, &c.

Specification forming part of Letters Patent No. **183,061**, dated October 10, 1876; application filed August 7, 1876.

To all whom it may concern:

Be it known that I, MILTON P. LOCKE, of Salem, in the county of Essex and State of Massachusetts, have invented a certain new and useful Improvement in Changeable or an Adjustable Crank-Movement for Operating Grindstones or other Foot-Power Machinery; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a grindstone so hung as to be turned by the foot of the person grinding, showing the perforated crank-flange for changing the position of the pitman-rod. Fig. 2 shows a face view of the crank-flange detached from the grindstone, showing two series of holes. Fig. 3 shows an edge view of the flange, with a hub and set-screw, by which the crank-flange can be changed in position on a round shaft, to accomplish, in a measure, the object sought.

The object of my invention is to equalize the wear on the periphery of grindstones; and it consists in a device for changing the point of the pitman or the connecting-rod in the crank-flange on the grindstone-shaft, and attached to the foot-treadle, as hereinafter more fully described.

To enable others to make and use my invention, I will describe it more in detail, referring to the drawings and to the letters of reference marked thereon.

The frame A, in which the grindstone B is hung, may be made in any ordinary or desirable manner. The shaft C may be mounted on friction-rollers *a a*, or run in journal-boxes, as desired. On one end of the shaft C is secured the disk or flange D, to serve the purpose of a crank, to which the pitman-rod E is attached at the upper end by means of a hook, *e*, bent at a right angle, the lower end of the pitman-rod being connected with the foot-treadle F. The disk or flange D is provided with one or more series of holes, *b b*, through it, in which the hook *e* on the upper end of the pitman-rod E will freely enter, so that the position of the treadle F can be instantly changed in its position to the periphery of the stone, as may be required from time to time, to make the stone wear evenly on all of its sides, and keep it uniformly round.

It is a well-known fact to all mechanics and others that use a grindstone turned by a treadle or foot-power connected with the shaft that the stone hangs and runs on, that the periphery or face of the stone soon begins to wear unevenly, and gets out of round, and many have thought that the stone was softer on one side, which caused the imperfection in the wear; but observation and practical experience have demonstrated that the facts are otherwise. As the treadle is forced down by the foot of the operator, the tool or article being ground is pressed harder upon the stone, subjecting the side or portion to greater wear. The greater pressure seems to arise not only from the motion of the whole body with the downward motion of the foot, but also from the involuntary tendency to adapt the resistance to the power, and thereby produce a uniform motion of the stone.

The above-named difficulty may all be remedied by my changeable or adjustable crank-flange and pitman-rod, by means of which the greater wear can be shifted from point to point on the face of the stone, as may be necessary to wear it true, and in a circular form. And, again, should a stone be harder on one side than the other, it can be adjusted so as to be worn evenly by my device, as above described.

A modification of my improvement, in which the same result may be accomplished, is to fit the crank or flange D onto a turned shaft, with a set-screw, *d*, through the hub, so as to turn the crank or flange on the shaft, and secure it in any desired position, as shown in Fig. 3.

What I claim as my invention is—

Equalizing the wear of the periphery of grindstones, operated by a foot-treadle, by means of changing the position of the crank or wrist pin, or the upper end of the pitman-rod, to any desired point to effect the required result, substantially in the manner herein shown and described.

In testimony whereof I hereunto subscribe my name.

MILTON P. LOCKE.

Witnesses:

AARON BURR,
ALPHEUS C. LOCKE.