J. E. HOPPEN.

Grindstone-Frame.

No. 211,096. Patented Jan. 7, 1879.

Fig. 1.

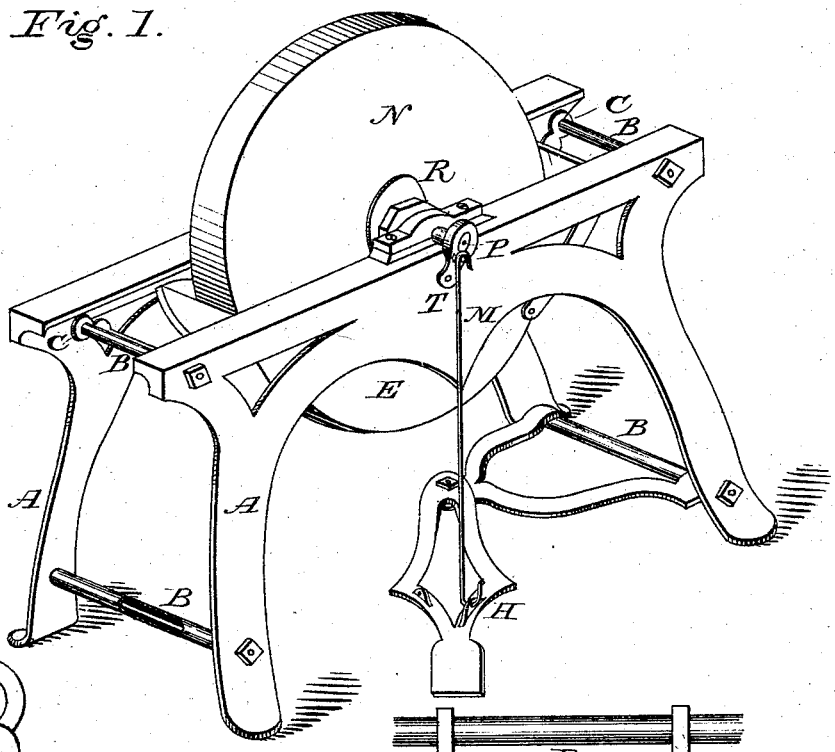


Fig. 3.

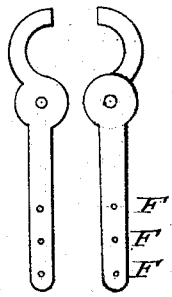


Fig. 4.

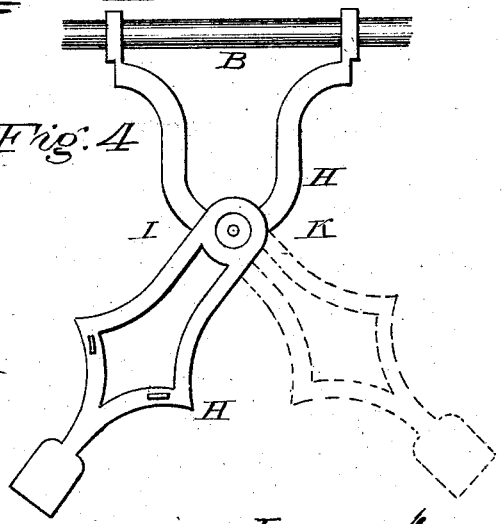
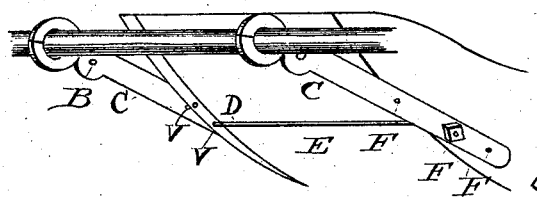


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH E. HOPPEN, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN GRINDSTONE-FRAMES.

Specification forming part of Letters Patent No. **211,096**, dated January 7, 1879; application filed July 2, 1877.

To all whom it may concern:

Be it known that I, JOSEPH E. HOPPEN, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Grindstone-Frames, which improvements are fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of a grindstone and frame with my adjustable water-trough and swivel-pedal attached. Fig. 2 is an end view of the trough attached to the cross-bars of the frame by clamps or tongs. Fig. 3 represents the two halves of the tongs. Fig. 4 represents the pedal with swivel near its middle.

The object of my invention is, first, to furnish a device by which to attach an adjustable trough to a grindstone-frame, so that it can be raised or lowered to fit the diameter of any stone, or so that it can be easily detached at one or both ends for the purpose of cleaning or recovering lost tools; and, second, to apply a movable pedal, arranged with a swivel at or near its center, so that it may be used on either side of the frame, or by either the right or left foot of the operator.

In the drawings, A A are the two parts of the frame, each side being made in one piece of cast metal and held together firmly at cross-bars B B B B by bolts having nuts on each end, and running through hollow metal cylinders or tubes placed between the two halves of the frame, and resting against them, and by the use of a series of which tubes or cylinders of different lengths the frame can be more easily adapted to grindstones of different thicknesses than if solid shouldered cross-bars were used. C C are the tongs, two at each end, fastened by screw-bolts D D to water-trough E, and clamped around the two upper cross-bars, B B, of the frame, these clamps or tongs having holes F F F, by which to raise or lower the trough. H H represent the pedal attached to one of the lower cross-bars, B, and provided with a swivel at I, which pedal can be adjusted to either side of the frame by a bolt held by nut K, the pedal being attached to the shaft P by the hook M. The grindstone A is attached to the shaft P by flanges R R and nuts turning on a thread with which the shaft is provided, which shaft P runs in suitable journals, and has a movable crank, T, which may be adjusted to either end of the shaft by a set-screw.

It will be seen from the foregoing that the water-trough may be made of cast or sheet metal, or even of wood, and is suspended either higher or lower by means of bolt-holes in it at V V, in addition to those in the clamps F F F.

The application of my trough and device for suspending it is not confined to a foot-power grindstone, but may be used in connection with a grindstone operated by steam or other power.

It is obvious that any suitable rest may be applied to the frame, and that various methods of attaching the shaft to the stone may be adopted, none of which I claim.

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

1. The combination, with the side pieces, A A, of rods and nuts, and a series of tubes of different lengths, as and for the purposes set forth.

2. An adjustable water-trough, E, suspended by tongs C to a grindstone-frame, substantially as described.

3. A grindstone in combination with frame A A, trough E, tongs C, pedal H H, hook M, crank T, and shaft P, all substantially as shown and described.

J. E. HOPPEN.

Witnesses:

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