

S. L. BIGNALL.
Grindstone-Hangers.

No. 143,952.

Patented Oct. 28, 1873.

Fig. 3.

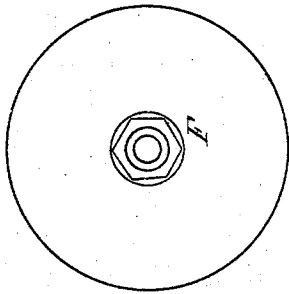


Fig. 2.

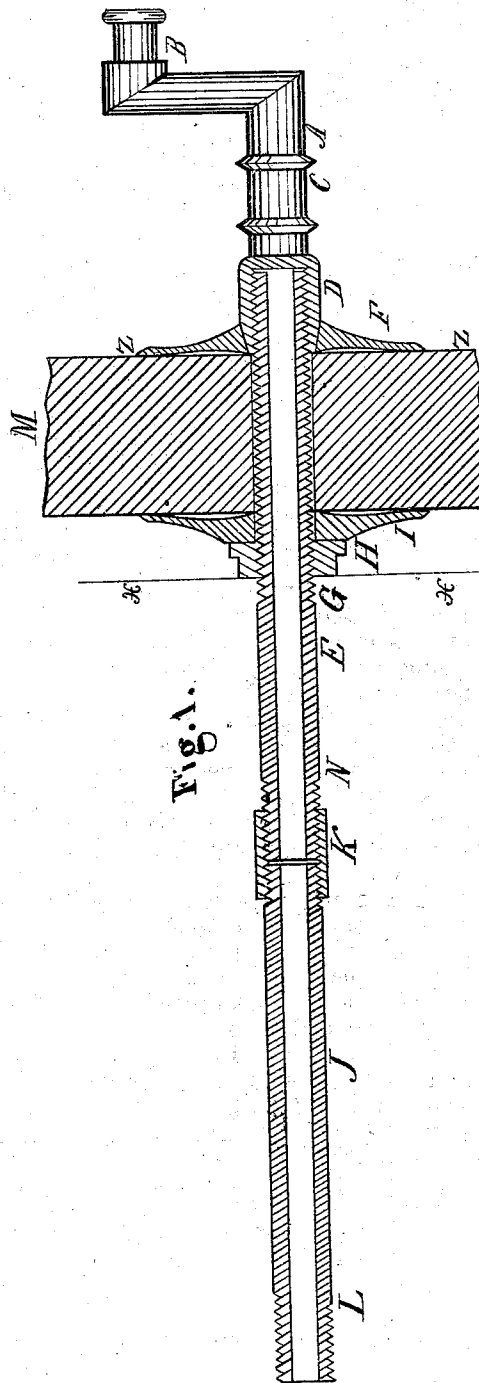
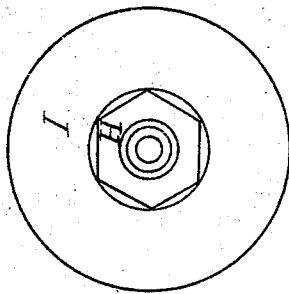


Fig. 1.

Witnesses:

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J. H. Elliott

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UNITED STATES PATENT OFFICE.

SOLOMON L. BIGNALL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN GRINDSTONE-HANGERS.

Specification forming part of Letters Patent No. **143,952**, dated October 28, 1873; application filed June 19, 1873.

To all whom it may concern:

Be it known that I, SOLOMON L. BIGNALL, of Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Grindstone-Hangers, of which the following is a specification:

This invention consists of a solid pitman-shaft provided with a bearing for friction-rollers—with a collar against which one side of the grindstone bears, and with a wrought hollow shaft which is provided with a movable collar and jam-nut for holding the grindstone in place. The central part of shaft is removable from the pitman-shaft and extension-shaft that the grindstone may be put on it, and that the extension-shaft may be removed from the other parts when not grinding implements which require that the crank be placed at a distance from the stone, as hereinafter fully described and shown.

In the drawing, Figure 1 is a longitudinal section of my improvement in grindstone-hangers; Fig. 2, a transverse section on line *x x*, Fig. 1; Fig. 3, a section on line *z z*, Fig. 1.

A represents the pitman-shaft, which is provided with a short crank, B, to be used when a foot-treadle is employed, and with a bearing, C, for the ordinary anti-friction rollers to travel on in the usual manner; and it is provided with an enlarged part or thimble, D, in which is cut a screw-thread to receive the screw-thread of a central shaft, E, and a collar F. One end of the shaft A is formed six-squared, and tapered down to receive the collar F and keep it from rotating, but the collar may be cast solid to it. The central shaft E is provided with an extended screw-thread, G, reaching past the jam-nut H, by means of which different thick-

nesses of grindstones may be clamped between the collars I F. On the end of the extension-shaft J is fixed a thimble, K, which is provided with an internal thread to turn onto the central shaft E, and with a thread, L, to receive an ordinary crank for rotating the stone, a broken section of which is shown at M, Fig. 1. The shafts E J, in this case, are made of gas-pipe, which is hollow, light, and strong, but they may be made of malleable iron. The pitman-shaft A is cast-iron, but it may be either made of wrought or malleable iron.

To use the device, the central shaft E is to be detached from the pitman-shaft A, to allow the grindstone to be put in place, as it is shown in Fig. 1. The jam-nut H is then to be turned up tight, and the shafts A E are put on anti-friction rollers, in the ordinary manner. The extension-shaft J is to be removed from shaft E when tools to be ground do not require the hand-crank to be considerable distance from the stone; but when scythes or other tools are to be ground the extension-shaft J is to be used and the crank removed from the end N of shaft E and put on the end L of the shaft E.

I claim, and desire to secure by Letters Patent of the United States—

The solid pitman-shaft A B, provided with a bearing, C, for the anti-friction rollers to travel on, with a collar, F, and a removable shaft, E, which shaft supports a collar, I, and jam-nut H for hanging the stone in place, as set forth.

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Witnesses:

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