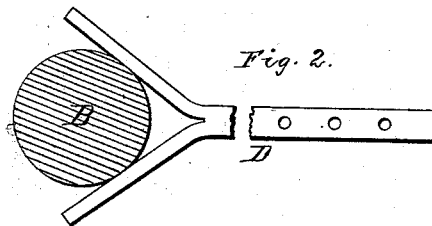
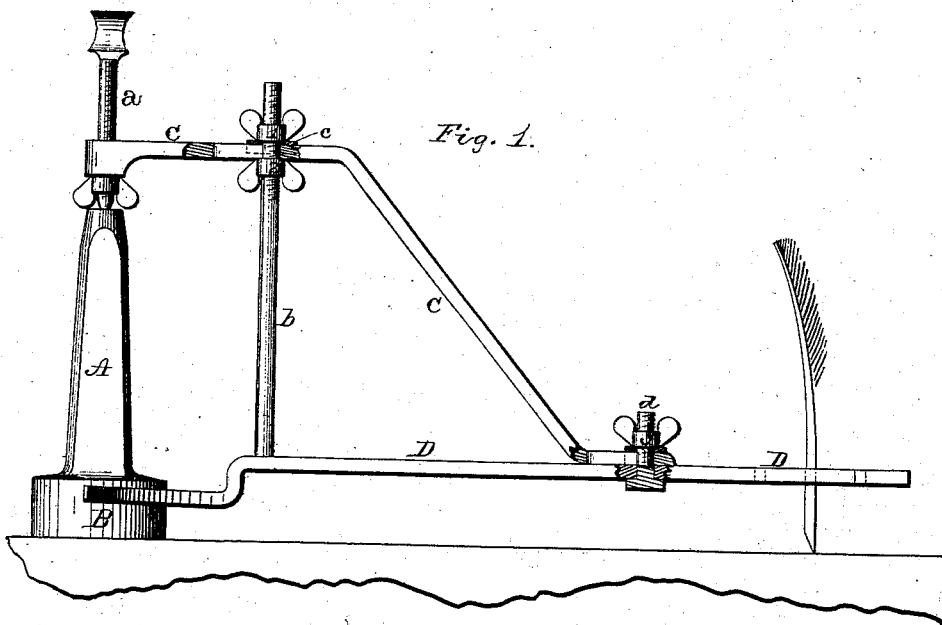


R. WHITAKER.

Device for Adjusting Mill-Stone and Spindles.

No. 166,174.

Patented July 27, 1875.



WITNESSES.

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UNITED STATES PATENT OFFICE.

SAMUEL WHITAKER, OF READING, PENNSYLVANIA.

IMPROVEMENT IN DEVICES FOR ADJUSTING MILLSTONES AND SPINDLES.

Specification forming part of Letters Patent No. **166,174**, dated July 27, 1875; application filed June 11, 1875.

To all whom it may concern:

Be it known that I, SAMUEL WHITAKER, of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Devices for Adjusting Millstones and Spindles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in devices for adjusting millstones and spindles; and it consists in an arrangement of parts by which the spindles used in millstones may be set exactly at right angles with the stones, or the stones may be adjusted so as to be at right angles with the spindle, as will be more fully described hereafter.

The accompanying drawing represents my invention.

A represents a spindle, and B its neck. In a depression in the center of the top of the spindle enters the lower end of a set-screw, *a*, which screw passes through the end of the brace C, and is provided with a jamb-nut under the brace. This brace C, extending side-wise and downward, supports the outer end of the arm D, the said arm having its inner bifurcated end braced against the neck of the spindle, around which it moves freely in every direction.

In the upper or horizontal part of the brace C is a longitudinal slot, over which a slide, *c*, moves, and through which slide and slot passes the rod *b* down to the arm D, to which it is secured. The rod *b* is provided with a thumb-screw, 1, on the top of the slide *c*, and with another, 2, which acts as a jam-nut under the brace C, by which, when properly adjusted, the brace is held in position.

At the extreme end of the brace C is another longitudinal slot, over which a slide moves, and through it the screw-bolt D passes, having a thumb-screw, 3, on its upper end.

By means of the rod *b* and the screw-bolt *d*, and their respective thumb-screws, the position of the arm D is determined and maintained.

The outward end of the arm D is provided with vertical holes, in one of which either a feather or a small stick is inserted, and allowed to slightly touch the stone underneath. If, now, the arm D be moved around its center, the end of the feather or stick, if the stone is placed exactly at right angles with the spindle, will, in whatever place of the circle described it may be, touch the stone just as it did before being moved. But if the stone is not at a right angle with the spindle, the feather or spindle will indicate it by rubbing against the stone or leaving a distance between the end of the stick and the stone. If it is found that the face of the stone is not at a right angle with the spindle, it becomes necessary to change the position of the bridge-tree or of the step.

It will be readily understood that the relative positions of the spindle and both the stones may be easily ascertained, and, if faulty, be corrected by the use of this instrument. The usually difficult task of adjusting millstones for grinding purposes is entirely removed, and one person can readily perform the work, where otherwise it would require two or three persons to accomplish the same.

Having thus described my invention, I claim—

1. The combination of the spindle A, brace C, arm D, set-screw *a*, rod *b*, and bolt *d*, substantially as and for the purpose described.

2. The combination of the slotted brace C, set-screw *a*, and bifurcated arm D, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of June, 1875.

SAMUEL WHITAKER.

Witnesses:

A. K. STAUFFER,
J. H. JACOBS.