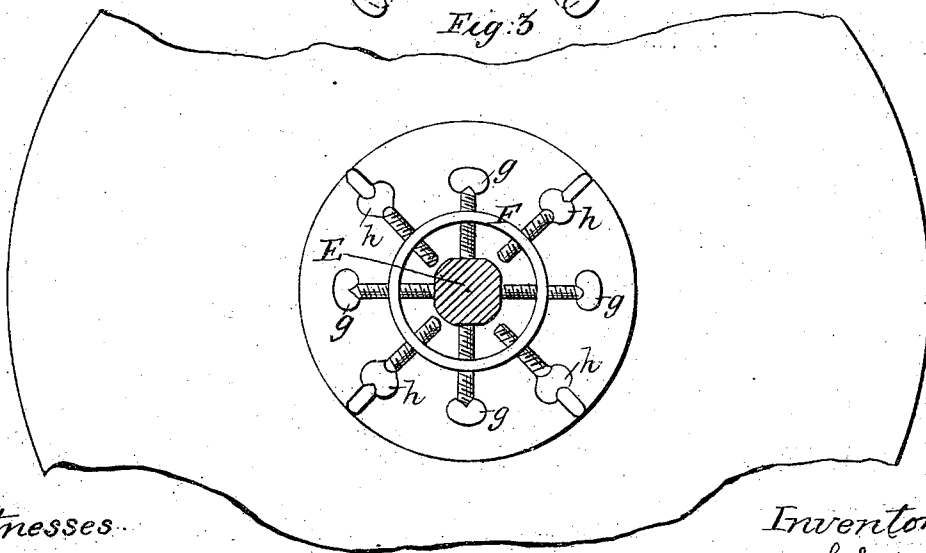
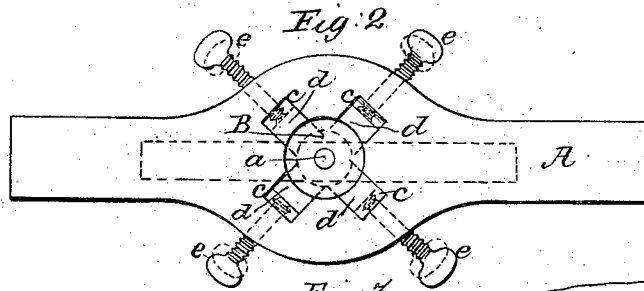
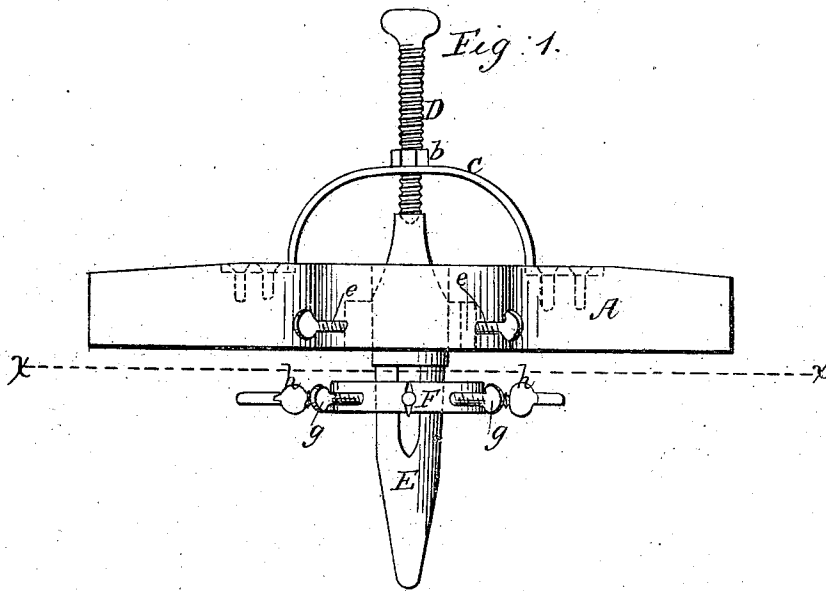


A. ESHELMAN.

Mill Staff.

No. 86,518.

Patented Feb. 2, 1869.



Witnesses
 Geo. Rothwell
 Phil. B. Lerner

Inventor
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 By Frederick H. Lee
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United States Patent Office.

A. ESHELMAN, OF EARLVILLE, PENNSYLVANIA.

Letters Patent No. 86,518, dated February 2, 1869.

IMPROVED MILL-STAFF.

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

To all whom it may concern :

Be it known that I, A. ESHELMAN, of Earlvile, in the county of Berks, and State of Pennsylvania, have invented certain new and useful Improvements in Mill-Staves; and I do hereby declare the following to be a full, clear, and exact description thereof, sufficient to enable those skilled in the art to which my invention appertains, to make and use the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side view of the staff and spindle;

Figure 2, an inverted plan of the staff; and

Figure 3, a section through the line *x x* of fig. 1, the device being shown applied to a millstone.

My invention is an improved device for detecting inequalities on the grinding-faces of millstones, so as to enable the miller, in dressing the same, to use his pick accurately, as hereinafter more fully described.

The invention consists in providing the staff with a "balance-rim," secured over the eye of the staff, and through the top of which a regulating, or "temper"-screw works; in the arrangement, within the eye of the staff, of adjustable blocks, operated by means of set-screws; and also in the use of a metallic ring, provided with long and short screws, alternately, for the purpose of securing said ring in the eye of the stone, and on the spindle, as will hereinafter be more fully set forth.

In order to enable others to fully understand and make use of my improvements, I will now proceed to describe the same more fully in detail, referring to the accompanying drawings, in which similar letters indicate like parts in the several figures.

In the drawings—

A represents the staff, made usually of wood, and enlarged in the centre, as clearly shown in fig. 2.

B is the eye through the centre of the enlarged portion of the staff.

C, fig. 1, represents a curved metallic strap or yoke, called the "balance-rim," secured to the staff A at the opposite sides of eye B.

Through the centre of this strap C is an opening, *a*, formed with a screw-thread, for the passage of a vertical adjusting or temper-screw, D.

The upper end of this screw is flattened, for convenience in turning it, while the lower end is pointed to enter a cavity, formed for its reception, in the upper end of the spindle E.

b is a screw-nut fitted on screw D, and resting upon the top of strap C.

In the staff A are formed recesses, *c*, opening into the eye B, and extending about half-way through the said staff from the under side.

In each recess *c* a block, *d*, having a concave outer face, is fitted.

e are set-screws, working in holes made through the sides of staff A, the inner end of each screw entering a recess, formed for its reception, in the rear side of a block, *d*. By means of these screws the blocks *d* are moved, so as to adjust the staff A.

F represents a broad metallic ring, perforated at equal distances around its periphery, for the passage of set-screws *g h*.

The screws *g* are of the common kind, and are used to hold the ring F on the spindle E.

Each screw *h* is formed with an extension at its outer end.

These screws are arranged alternately with the screws *g*, and are adapted to be screwed outward against the sides of the eye of the millstone, so as to support the ring F, spindle E, and staff A.

When the staff is used on the bed-stone, the lower end of the screw D is rested upon the top of the mill-spindle, which occupies the place of the spindle E in the accompanying drawings.

When the device is used on the runner-stone, the spindle E is placed in the eye of the same, and secured, as shown in fig. 3.

The staff having been placed on the spindle, I use it first as a trammer to plumb the spindle. This is done by turning the screw D down on the centre of the spindle, and laying the staff A, say, north and south. The spindle is then straightened.

The staff is now turned to a position at right angles to that which it before occupied, as east and west, and the spindle again straightened, so that the screw D will come down on the centre of the top of the spindle. We now have the spindle true to the face of the stone.

The screw D is then turned, so as to raise the staff off the surface of the stone.

I now apply to the staff a coat of fresh paint, and turn the staff around over the face of the stone. As it turns, it comes in contact with the unequal projections, and leaves thereon its mark in paint. The miller now proceeds with his pick to remove the inequalities so marked.

The use of the adjustable blocks *d*, in the eye of the staff, is to steady the latter as it turns, so that its under side may always be parallel with the face of the stone.

Foremost among the advantages of my mill-staff, is its extreme simplicity. As a whole, it is readily applicable and adjustable, while the staff proper is removable, by simply lifting it from the spindle, to make room for the use of the pick.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The ring F, provided with the sets of screws *g* and *h*, when the same are constructed and arranged substantially as herein shown and described, for the purposes specified.

2. The staff A, with yoke C, screw D, and blocks *d*, and the ring F, with screws *g h*, all constructed substantially as described, when arranged with relation to each other and to the spindle E, as set forth.

A. ESHELMAN.

Witnesses:

WM. R. RUBLE,
J. VAN REED.