A. FREDERICK.

Balancing Millstones.

No. 87,656. Patented March 6, 1869.

Fig. 1.

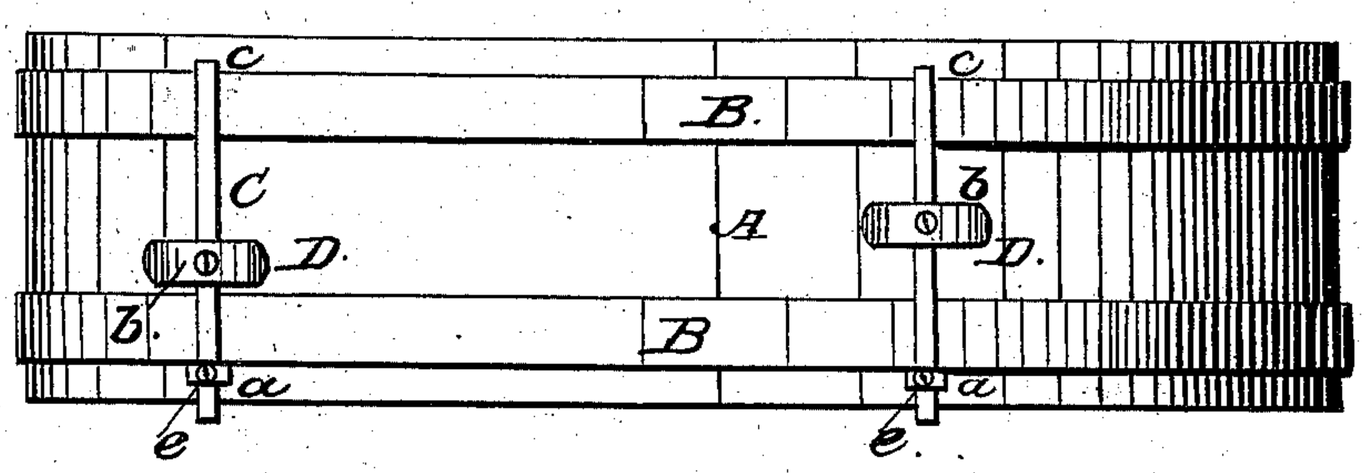


Fig. 2.

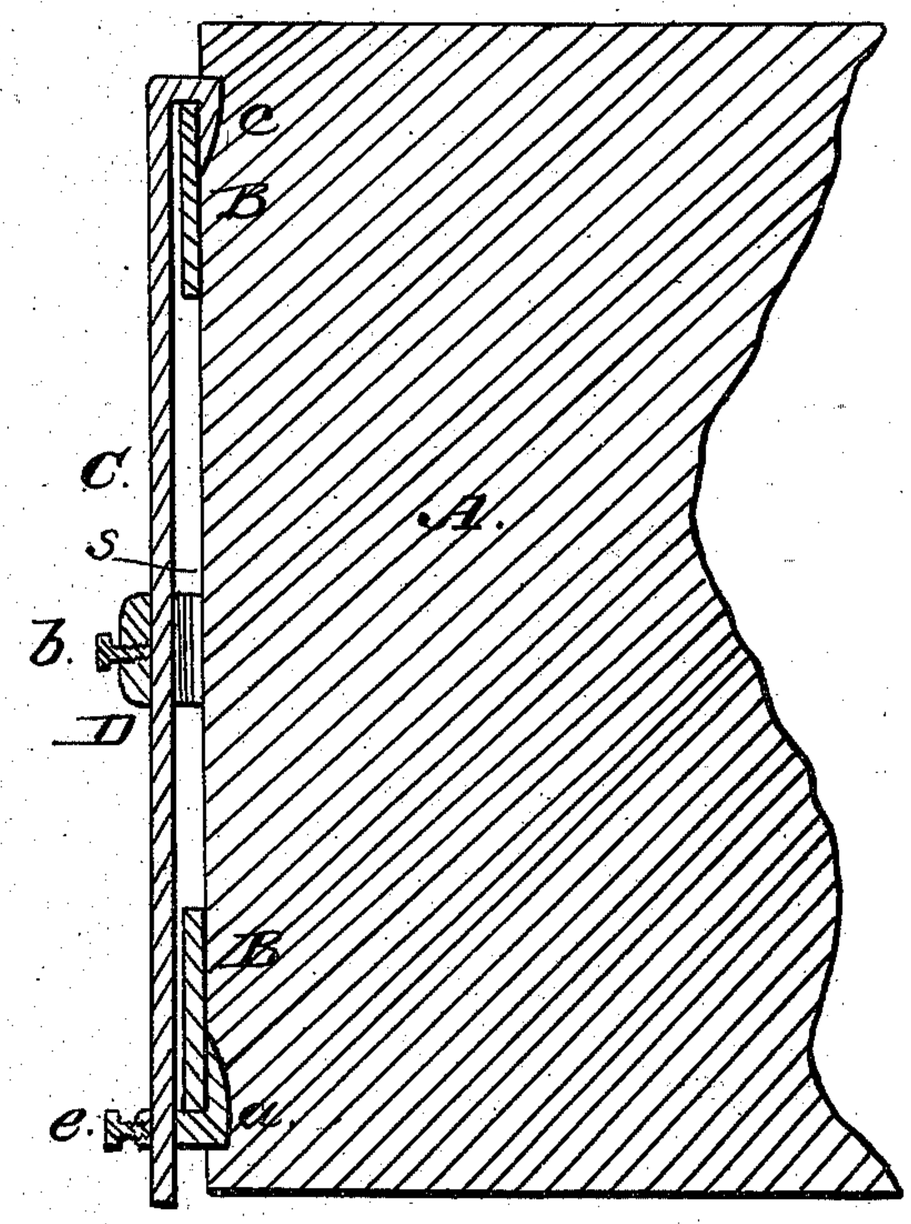
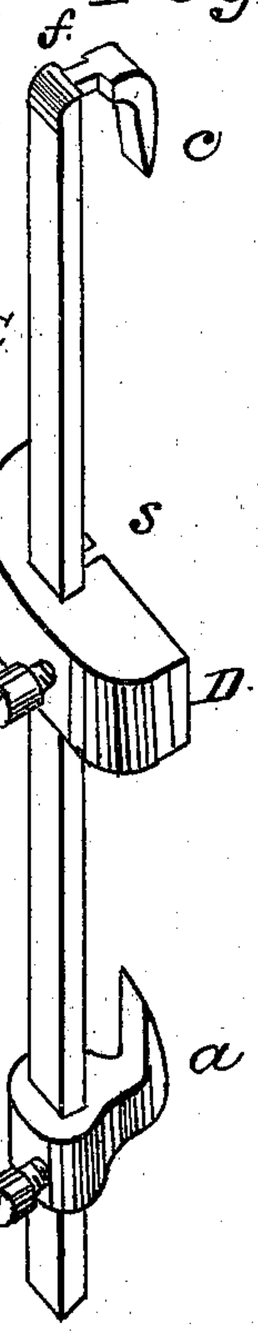


Fig. 3.



Witnesses

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A. FREDERICK, OF TOLEDO, OHIO.

Letters Patent No. 87,656, *dated March* 9, 1869.

IMPROVED MILLSTONE-BALANCE.

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. FREDERICK, of Toledo, in the county of Lucas, and State of Ohio, have invented a new and improved Mode of Applying Balancing-Weights to the Running Stones of Grist-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of the running stone of a mill having my invention applied to it.

Figure 2 is an enlarged sectional view, showing more particularly the manner of constructing the improved balancing-device.

Figure 3 is a perspective view of the improved device.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved mode of constructing millstone-balances, and applying the same to the peripheries of the running stones of mills.

Prior to my invention, a great many contrivances had been employed and essayed for attaching weights to millstones, in such manner that these weights could be adjusted higher or lower, according as the stone may be more or less heavy at one point than at another, for the purpose of so balancing the stone as that it will run true. But none of these devices have been made, as I verily believe, so that they could be readily adjusted for bands, which are placed at different distances apart, or for bands of different widths.

The nature of my invention consists in applying an adjustable balancinn-weight to a hooked bar, one of the hooks of which is made to slide upon this bar, and is provided with a suitable fastening, by which it can be rigidly secured to the bar at any desired point, thereby admitting the attachment of the weight and bar to millstone-bands, which are placed at different distances apart, or which may be made of different widths, and also allowing such attachment to be readily made without a previous preparation of the bands for a purpose which will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings—

A represents the upper, or running stone of a grist-mill; and

B B are metallic bands, which are employed on such stones, to prevent them from flying to pieces while running; also, for the purpose of confining the sections or segments of the stones together, when these stones are made up of segments, as is most commonly the case.

These bands B necessarily vary in their distance apart upon different stones; and on some of the stones a single band is used, instead of two bands, so that it is important and desirable to provide the balancing-attachments with means whereby they can be readily applied to bands on different stones.

Such a balance is shown in the drawings, and consists of a rod, C, of proper length, which is rectangular or prismatic in cross-section, and which has one end bent, so as to form two right angles, thus making a hook, *c*, the end of which is tapered or made wedge-form.

This hooked portion *c* is also notched at *f*, for the purpose of allowing a ready removal of the weight D.

The balancing-weight D is made of a crescent-form, and has a slot, *s*, of T-form, through it, which slot receives the rod C, and allows the clamping-screw *b* to be used for confining the weight D firmly at any desired point on the rod. The T-shaped slot *s* also allows the weight D to be readily removed from the rod C, by sliding off at the upper end of this rod.

Beneath the balancing-weight D, a sliding hook, *a*, is applied upon the rod C, which hook can be secured at any desired point on rod C, by means of the clamp-screw *e*.

To apply this balancing-device to the circumference of a millstone, the hook *c* is forced over the upper edge of the top handle B. The sliding hook *a* is then slipped upon the lower end of the rod C, and its tapering end driven between the lower band B and the stone, after which the screw *e* is set up tightly, thus confining the rod C with its weight firmly to the two bands surrounding the stone. Weight D can then be adjusted between the two hooks *a c*, and fixed at any desired point; and when desired to remove one weight D, to substitute a lighter or heavier one in its place, this can be done, without loosening or removing the rod C, by snugly slipping the weight off at the upper end of said rod through the notches *f*.

Having described my invention,

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

1. The combination of adjusting balancing-weight D and rod C, provided with a permanent hook, *c*, and an adjustable sliding hook, *a*, substantially as described.

2. The notched hook *c* on rod C, in combination with a T-shaped slot, in the balancing-weight D, whereby this weight can be readily removed from the rod C, without detaching the latter from the bands on a millstone, substantially as described.

A. FREDERICK.

Witnesses:

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