J. Walsh,

Balancing Mill Stones.

No. 111,282. Patented Jan. 24, 1871.

Fig: 1.

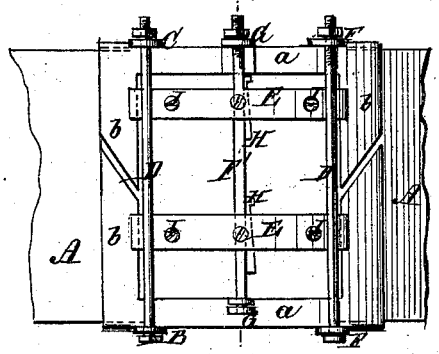


Fig: 2.

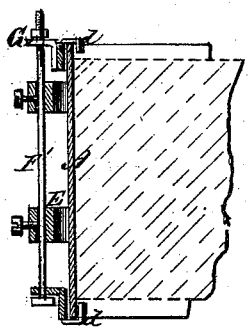
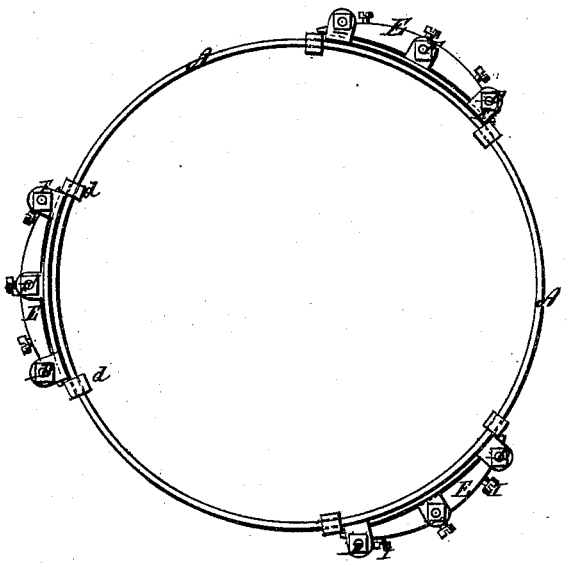


Fig: 3



Witnesses:

C. Raetig.

L. J. Mabee

Inventor:

J. Walsh

Per Munn & Co

Attorneys.

United States Patent Office.

JOHN WALSH, OF GALENA, ILLINOIS.

Letters Patent No. 111,282, dated January 24, 1871.

IMPROVEMENT IN MILLSTONE BALANCES.

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, JOHN WALSH, of Galena, in the county of Jo Daviess and State of Illinois, have invented a new and improved Millstone Balance; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in balancing apparatus for millstones, and consists in a frame, made in two parts, having lugs for attachment to the upper and lower edges of the hoop of the millstone, and clamping-bolts connecting them together and clamping them on the hoop, on which frames is arranged a pair of weights, to be adjusted to or from the plane of the point of suspension of the stone. Three of these frames are to be attached to the hoop and adjusted, all as hereinafter specified.

Figure 1 is a side elevation of a part of the hoop of a millstone and one of the weighted frames;

Figure 2 is a section of the same on the line *x x* of fig. 1; and

Figure 3 is a top view of the hoop with three of the balancing frames applied to it.

Similar letters of reference indicate corresponding parts.

A represents the band of the millstone;

B, one of the parts of the said frame; and

C, the other, which part consists of a horizontal bar, *a*, and two vertical bars, *b*, of sheet metal, the horizontal ones being to extend along the band A between the vertical ones, and the latter to engage the edges of the band by lugs or hooks *d*, and extend toward those of the other part of the frame, nearly meeting in the center of the said band, for being supported on the band, while the two parts are clamped by the bolts D passing through ears F, and screwing the lugs *d* against the edges of band A.

E represents the weights, consisting of crescent-shaped (solid or hollow) bars, which are mounted on the rod F', suspended vertically from the bars *a* of the frames by ears G projecting from them, said weights being capable of adjustment up and down on the said rod, and provided with keys H, or it may be set-screws, for holding them. They are also provided with set-screws I near the ends, for screwing against the hoop A, to hold them rigidly and prevent rattling.

The frames are attached to the hoop at about equidistant positions around the stone and then adjusted to or from each other until the stone is balanced while standing; then the stone is set in motion to ascertain if it balances while running, which may not be the case, owing to the centrifugal force of the weights if too high or too low relatively to the said horizontal plane of the point on which the stone is hung, but which is remedied by adjusting the weights up or down on the rods F' above or below the horizontal plane, as may be required, as will be shown by the test of running the stone, which will run too high on the side on which the weights may be too low, and *vice versa*.

If the weights are made hollow they are to be filled with heavy material, of which more or less may be used, as required.

Having thus described my invention,

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

A balance-frame for millstones, formed in two parts, B C, and provided with retaining hooks *d* clamped together on and combined with the band, as and for the purpose described.

Witnesses: JOHN WALSH.

M. M. MILLER,

JAMES FLOYD.