L. READ.

MILLSTONE BALANCING DEVICE.

No. 192,454. Patented June 26, 1877.

Fig: 1.

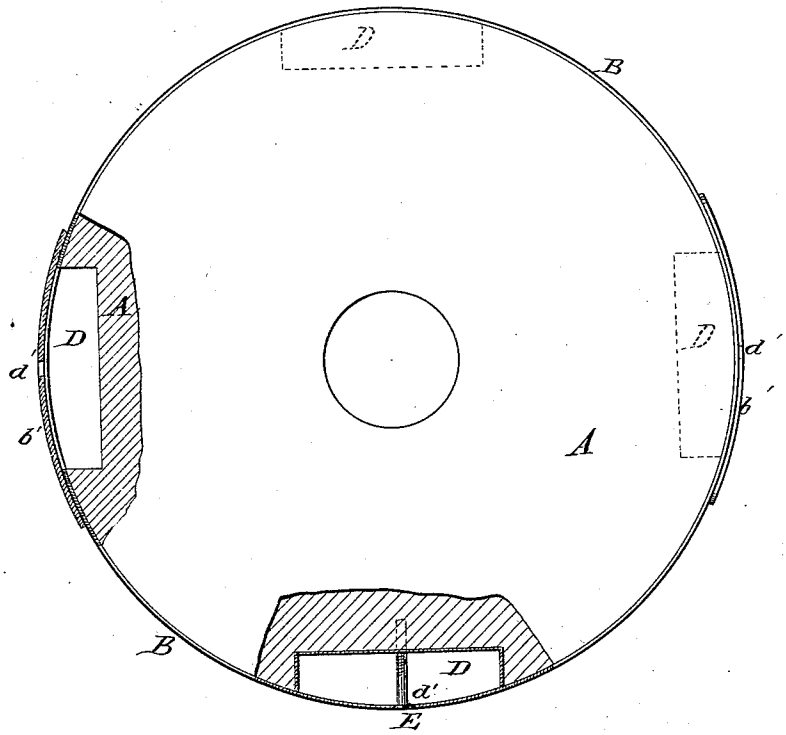
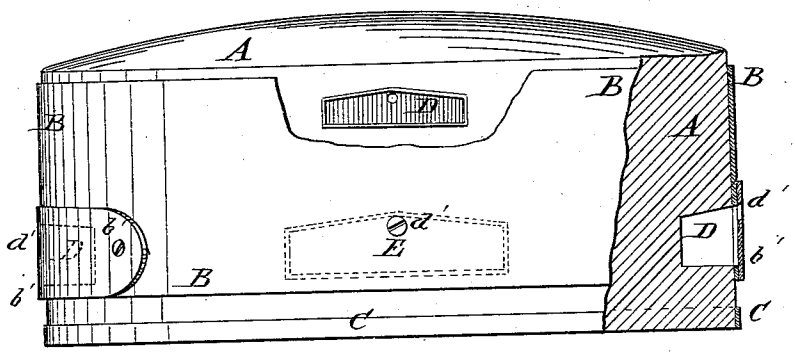



Fig: 2.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

LUTHER READ, OF HENDERSON, NEW YORK.

## IMPROVEMENT IN MILLSTONE-BALANCING DEVICES.

Specification forming part of Letters Patent No. **192,454**, dated June 26, 1877; application filed May 5, 1877.

*To all whom it may concern:*

Be it known that I, LUTHER READ, of Henderson, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Millstone-Balance, of which the following is a specification:

Figure 1 is a top, and Fig. 2 a side, view of a millstone illustrating my invention, parts being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

The object of the invention is to enable a millstone to be accurately balanced, both standing and running, in a very short time.

The invention consists in the horizontal cups formed in the middle and upper parts, either or both, of each quarter of a millstone beneath the band, and provided with a hole leading into the upper part of said cups through said band, and closed with a screw, as hereinafter fully described.

A represents a millstone which is bound with a wide upper band, B, and a narrow lower band, C, in the usual way. In the upper and lower parts of each quarter of the stone A is formed a horizontal cup, D. The lower cup D is level with or a little below the cockeye, and the upper cup is at or near the upper edge of the band B. The cups D are made with straight bottoms and ends, and with their tops inclining upward from their ends to the center, as shown in Figs. 1 and 2. The cups D I prefer to make about nine inches long, about one and a quarter inch deep, and about one and a half inch wide or high in the widest part or center.

The cups D are covered or closed by the band B, and through said band, at the top or angle of each cup D, is formed a hole, $d'$, which hole is closed with a screw, E. The holes $d'$ should be large enough for shot to pass through them. Should too many shot be put into the cups, by turning the stone A over so as to bring the angle of the top of the cups D downward, the shot will run out through the holes $d'$.

In the case of old stones the lower cups D may be formed in the stone through holes cut in the band B, which holes are afterward covered by patches $b'$, secured to the band B by screws. In this case the upper cups D may be formed by removing a part of the plaster, putting in the shot, and replacing the plaster.

The upper cups D are designed for use for balancing the stone when it is heavy on top upon one side, and heavy on the bottom upon the other side.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A millstone provided with the two alternate sets of cups D upon its peripheral surface, as described, covered and inclosed by a sheet-metal band, B, having inlet-openings $d'$, as and for the purpose specified.

LUTHER READ.

Witnesses:
G. H. BURLINGAM,
M. E. JOINER.