

W. A. GUSTINE.

Improvement in Mill-Stone Drivers.

No. 126,143.

Patented April 30, 1872.

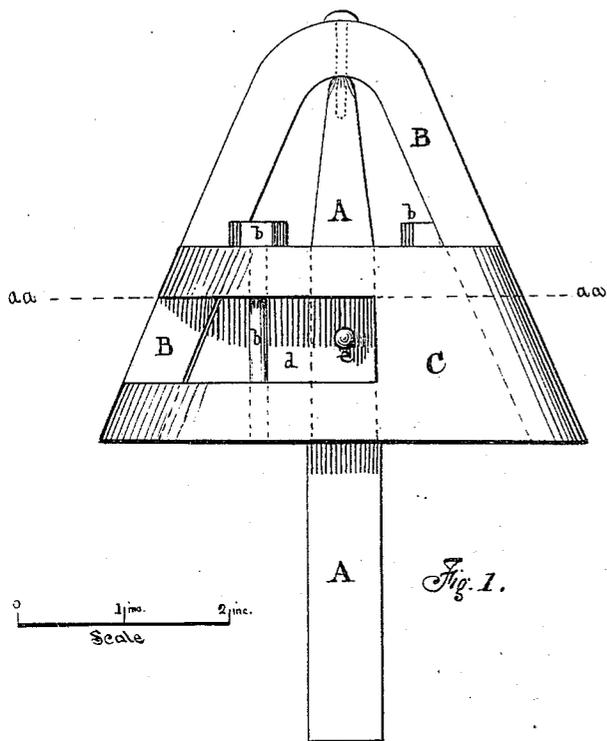


Fig. 1.

0 1^{mo}. 2^{inc.}
Scale

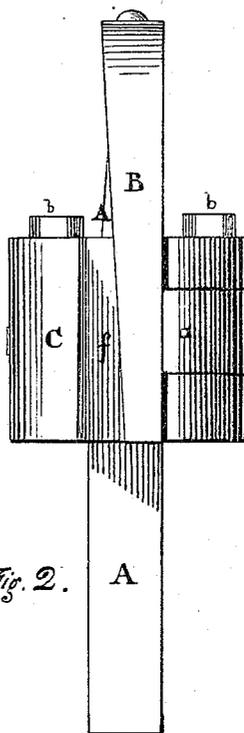
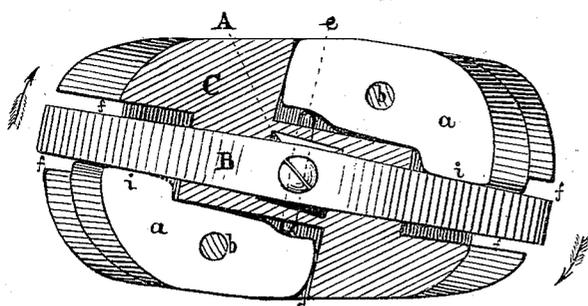


Fig. 2.



Horizontal sec. thro' aa - aa. Fig. 1

Fig. 3.

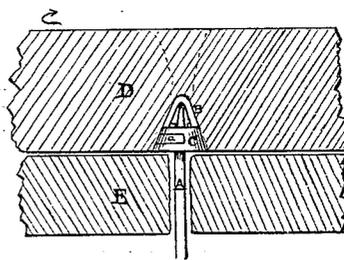


Fig. 4.

Witnesses
Henry W. Wells
James M. Moore.

Walter A. Gustine
by Edmund Thurston
his attorney at law.

UNITED STATES PATENT OFFICE.

WALTER A. GUSTINE, OF IPAVA, ILLINOIS.

IMPROVEMENT IN MILLSTONE-DRIVERS.

Specification forming part of Letters Patent No. 126,143, dated April 30, 1872.

To all whom it may concern:

Be it known that I, WALTER A. GUSTINE, of Ipava, in the county of Fulton and in the State of Illinois, have invented an Improvement in Self-Tramming Drivers for Millstone-Spindles; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a longitudinal elevation, one of the levers *a* being removed to show its recess, &c.; Fig. 2, an end view of the same; Fig. 3, a horizontal section of the same along the line *a a a a*, Fig. 1; Fig. 4, a smaller elevation of spindle, driver, and bail in position in the stones, with a vertical section of the latter.

This invention consists in providing the ordinary "driver" of a millstone-spindle, (which engages with the "bail" of the upper or revolving stone,) with two small levers diagonally opposed to each other, and pivoted in a recess at opposite extremities of the driver. The outer ends of each lever are brought to bear respectively against the vertical arms of the bail, and in no case has the driver a bearing on the bail excepting by the medium of said levers. The pin *e*, which secures the driver to the spindle, is loose in its socket, and projects a little distance beyond the bottom of the recess *d* in which the levers are respectively pivoted; and the pressure imparted by the spindle and driver to the bail in revolving, causes the latter to press against the levers, which are simultaneously acted upon by said intermediate pin, which acts as an equalizer, by the pressure of inner ends of the levers, and the consequent maintenance of an equidistant space between points of contact of the levers and said bail.

A represents the spindle; *B*, the "bail;" *C*, the "driver," of the ordinary construction, (except as to the levers *a a*, hereafter described,) having recesses *f* at either end, which receive each an arm of the bail. The levers *a a* are

stout short levers, extending from near the spindle *A* to the outer surface and extremities of the driver, and set in recesses at diagonally-opposite corners or ends of the same. These recesses *d d* are square mortises, and each of them open into one of the recesses *f* which receives the bail. The levers have each a projecting head or cushion, *i*, which passes beyond the vertical side of the bail-recess *f*, so as to abut against the arm of the said bail, and to prevent either arm from coming into contact with any part of the driver *C*, (excepting, as above said, the heads of the levers.) The levers are respectively pivoted in their respective recesses by a vertical pin, *b*; and the inner end of each which abuts against the pin *e* is slightly hollowed.

The operation of this improvement is as follows: In starting (the machinery of the mill and) the spindle *A*, the head *i* of one of the levers *a* of the driver *C* is brought against that part of the vertical arm of the bail *B* which is thus opposite to it. The inner end of said lever is thus caused to press the pin *e* against the inner end of the opposite lever, which immediately brings the head *i* of the latter lever against the opposite side of the opposite arm, the two levers combining simultaneously to clasp the bail at opposite sides, and rotate the stone with a perfectly-horizontal rotation without libration or oscillation.

What I claim as my invention is—

In combination with the bail *B*, spindle *A*, and driver *C* of a millstone and its pin *e*, the clutch-levers *a a*, placed at diagonally-opposite extremes of the "driver," and interacting one upon the other by the medium of the said pin *e*, substantially as and for the purposes described.

In testimony that I claim the foregoing self-tramming driver for mill-spindles I have hereunto set my hand this 4th day of March, 1872.

WALTER A. GUSTINE.

Witnesses:

JAMES M. MORSE,
HENRY W. WELLS.