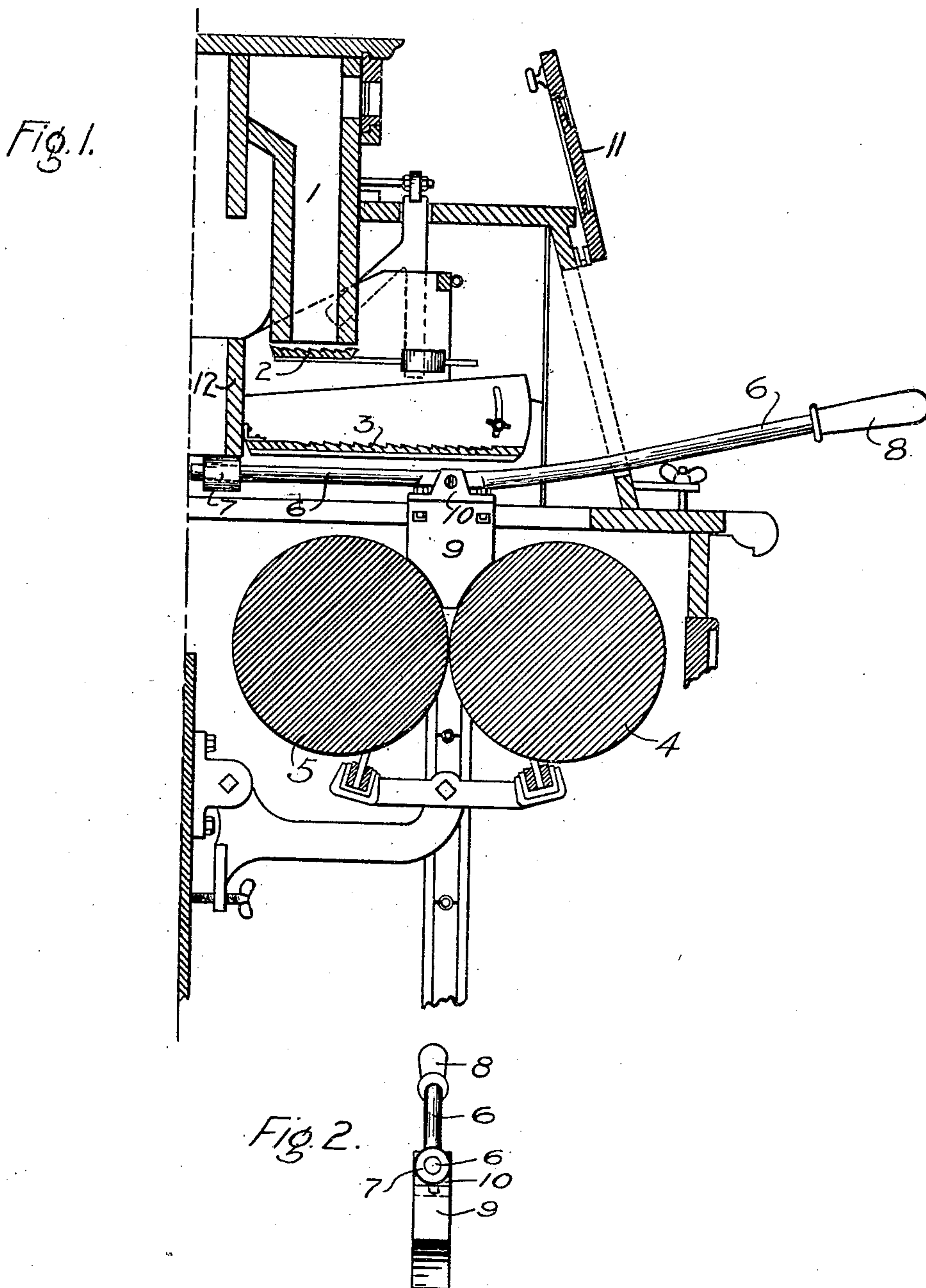


No. 810,627.

PATENTED JAN. 23, 1906.

C. DAWSON.
TRUING DEVICE FOR FLOUR MILL ROLLS.
APPLICATION FILED APR. 28, 1905.



Witnesses

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TRUING DEVICE FOR FLOUR-MILL ROLLS.

No. 810,627.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed April 28, 1905. Serial No. 257,884.

To all whom it may concern:

Be it known that I, CHARLES DAWSON, a citizen of the United States of America, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Truing Devices for Flour-Mill Rolls, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to devices for truing and scoring cylindrical rolls, and has for its object to enable the rolls to be trued without removing them from their frames and even without stopping them from performing their work. I attain this object by the device illustrated in the accompanying drawings, in which—

Figure 1 represents a section of one-half of a roller-machine for a flour-mill, showing my device in position for truing and scoring the rolls; and Fig. 2 is an end view of my device.

Similar numerals of reference refer to similar parts in both the views.

In modern flour-mill practice the stock is fed between a pair of smooth rolls rotating in opposite directions and at different speeds. These rolls are parallel and are pressed together with considerable force, and in order to grind uniformly along their entire length they must be accurate cylinders. The importance of keeping these cylinders in perfect shape is coming to be more and more realized, especially as the output in perfect flour is much greater while the rolls are perfect than when they become slightly worn.

With my device I can touch up any rolls which are beginning to show wear and correct the fault before it becomes of any importance. This can be done without shutting down the machine and even without shutting off the supply of stock, except at the point on the rolls where my device is applied. In this way I keep the rolls always doing their best work, and therefore at their highest efficiency, and save the cost of extra rolls and of repair and freightage on worn rolls.

Rolls that have a polished surface do not cut the stock sufficiently, but crush it too much, and it has been long recognized that a scratched surface produces a much better flour. In the old millstones this scratching the surface was easily obtained; but with modern steel rolls it is exceedingly expensive to score the surface by machinery. With my device I can score the surface of the rolls with a few minutes' work, and therefore I can pro-

duce a more granular flour, which will absorb more water and produce a better yield of flour from the wheat.

In the drawings, 1 represents the hopper. 2 is the feed-gate, which controls the flow of stock on the shoe-board 3, from which it falls on the roll 4 and is ground between the rolls 4 and 5.

The truing device consists of a handle-bar 6, having a roller 7 at one end, a handle 8 at the other end, and a grinding-piece 9 pivotally secured to the handle-bar 6 in such position as to come between the rolls 4 and 5, as shown in Fig. 1. The grinding-piece 9 is cast in a solid block and is secured to the handle-bar 6 through the metal casting 10, to which it is secured by bolts. The casting 10 is provided with a central boss with a slot therethrough, in which the flattened part of the handle-bar 6 is loosely secured by a bolt or rivet. The grinding-piece 9 is preferably made of carborundum and is made quite narrow, as shown in Fig. 2, and has its grinding-face curved to correspond with the curves of the rolls 4 and 5.

My device is used in the following manner: When it is noticed that a roll has a coating of oil and dirt or is becoming worn, the shoe-board 3 is elevated to the position shown in the drawings and the handle-bar 6 is inserted through the opened door 11, so that the roller 7 comes under the board 12 of the air and dust vent. Then I hold a piece of board on the shoe-board 3 and over the point where I wish to work the grinder, thus shutting off the supply of stock at that part of the roll. I then press down on the handle 8 and at the same time keep it moving from side to side. In this way I am able to control the amount of grinding done by the pressure of the hand on the bar 6 and by the amount of lateral motion I give to the grinder 9. If the rolls are run without any stock being fed between them, they quickly become heated at such points that are not quite true, and since they rotate at different speeds black rings are formed at the point of contact. By applying my grinder at once to such points I am able to reduce the fault until the rolls become perfectly cylindrical again. By substituting different abrasive materials for the grinding-piece 9 I can obtain either a smooth polished surface or a scratched roll and I can make these scratches spiral by moving the device from end to end of the roll.

I have described my device as applied to a roller-machine of a flour-mill; but it is evi-

dent that it can be applied to a large variety of machines.

Having now described my invention, what I claim is—

- 5 1. In a truing device for cylindrical rolls, the combination of an abrasive body formed to engage a roll, a handle-bar, a pivoted connection between said handle-bar and said abrasive body.
- 10 2. In a truing device for cylindrical rolls, the combination of an abrasive body adapted to engage a roll, a bar having a handle at one end and engaging the machine at the other end to form a fulcrum, and a pivoted connection between said bar and said abrasive body.
- 15 3. In a truing device for cylindrical rolls, the combination of an abrasive body adapted to engage a roll, a bar having a handle at one end, a roller mounted on the other end of said bar to form a movable fulcrum by engaging
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the machine, and pivoted connections between said bar and said abrasive body.

4. In a truing device for cylindrical rolls, the combination of an abrasive body adapted to engage a pair of rolls at the same time, a 25 bar having a handle at one end, a roller mounted on the other end of said bar and adapted to engage the machine to form a fulcrum whereby pressure may be communicated to said abrasive body, and a pivoted connection between said bar and said abrasive body 30 whereby the pressure thereon is equally applied to both the rolls.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES DAWSON.

Witnesses:

CARL F. HELM,
ELLIS LEWIS GARRETSON.