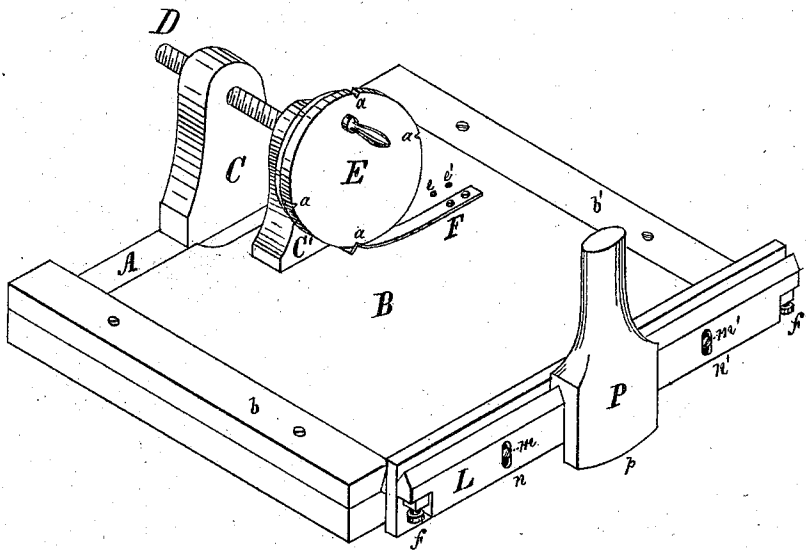


L. RANDOLPH.
Millstone-Dressing Machines.

No. 141,949.

Patented August 19, 1873.



WITNESSES

Wm. H. Wilbur
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INVENTOR

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UNITED STATES PATENT OFFICE.

LEWIS RANDOLPH, OF JERSEYVILLE, ILLINOIS.

IMPROVEMENT IN MILLSTONE-DRESSING MACHINES.

Specification forming part of Letters Patent No. 141,949, dated August 19, 1873; application filed April 14, 1873.

To all whom it may concern:

Be it known that I, LEWIS RANDOLPH, of Jerseyville, in the county of Jersey and State of Illinois, have invented a new and Improved Millstone-Dressing Machine; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

This invention relates to an improvement in that class of machines designed for dressing and facing millstones by the aid of the diamond; and relates to certain peculiarities in construction, whereby the cost of manufacture is much less than heretofore. The invention consists in a simple, yet efficient, means of raising or depressing the guide-bar upon which the diamond is made to travel, in order that the latter may cut deeper as it approaches the eye of the stone.

In the drawing, A represents a bed-plate, of cast-iron, faced perfectly true on its under side, the upper side of which is provided with slides *b b'* for the reception of a rectangular plate or frame, B, which moves longitudinally in the slides *b b'*. C is a standard, cast upon or bolted to the bed-plate A. C' is a similar standard on the sliding plate B. D is a screw, threaded into the standard C, and is supported at the other end by the standard C'. E is a gage-wheel, one-half of the face of which is turned down a little smaller than the other, constituting in reality two faces, each having upon it a series of equidistant notches, *a a a*, &c., shaped for the reception of the vibrating end of the spring F secured to the plate B. *e e'* represent threaded holes, provided for the reception of the small screws by which the spring F is held in position. The use of these threaded holes will appear hereinafter. L represents a guide-bar, provided with slots *n n'* for the reception of screws *m m'*, by which the said guide-bar is secured to the flange on the side of the plate B. *f f'* are set-screws for the adjustment of the bar L horizontally. P is an iron block, shaped so as to slide upon the V-shaped upper edge of the guide-bar L; and to give to it, while traveling along its path, vertical stability, it is so shaped as to bear against the up-

per edge of the flange to which the guide-bar is secured, and also against the outer face of the guide-bar, which may, if so preferred, be broad enough to reach nearly down to the face of the stone. The block P is provided at its lower extremity, near the point *p*, with a carbon point, firmly secured in the ordinary or any other suitable manner, the upper part of the block being shaped so as to form a handle.

The operation of the machine is as follows: The bed-plate A being placed upon the face of the stone, and the guide-bar set to range laterally with the dress-lines, and horizontally so as to give the required depth of cut, the operator grasps the handle of the sliding block firmly in the hand, and propels it forward from the skirt of the stone to the eye. On reaching the end of the stroke, the block P is slightly lifted and brought back to its former position. The wheel E is now turned until the spring F slips into the next notch, by which operation the carbon point is advanced into position for the next cut, this result being accomplished by the revolution of the screw attached to the wheel F, which, pressing against the standard C, moves forward the plate B, and consequently, also, the sliding bar P, the width of the spaces between the cuts thus depending upon the pitch of the screw and the number of notches on the face of the gage-wheel. By the movement of the sliding bar P its carbon point is drawn across the stone and a proper groove is cut.

It is a fact well known to all practical millers that the face of the stone wears away faster at the skirt than at the eye, in consequence of the speed of the rubbing-surfaces increasing as the distance from the center. This makes the stone what millers call "high in the eye." To meet this difficulty is the object in making the guide-bar L adjustable horizontally. The effect of this arrangement will be easily understood by considering that the cross-section of the cut made by the carbon point is V-shaped, and consequently the deeper the cuts the narrower the spaces between them on the stone's face, and, therefore, the less surface to wear down. In using the machine, that end of the guide-bar nearest the eye of the stone

is depressed to any required nicety by the set-screws *f f'*. No fixed inclination of the guide-bar would answer, as millstones are frequently more or less open or porous near the eye than at the skirt; hence the necessity for the adjustment herein described.

By this means it will be readily seen that a good dress can be given to the stones, and at the same time uniformity of wear secured.

When it is necessary to increase the feed, the spring *F* is removed to the smaller face of the gage-wheel *E*, the screws being inserted in the holes *e e'*, already referred to.

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

The guide-bar *L*, so constructed as to be adjustable horizontally, substantially as and for the purpose described.

This specification signed and witnessed this 5th day of April, 1873.

LEWIS RANDOLPH.

Witnesses:

ALFRED RUE,

HENRY NEVINS.