J. J. FAULKNER.

Dressing and Cracking Mill-Stones.

No. 132,651. Patented Oct. 29, 1872.

Fig. 1.

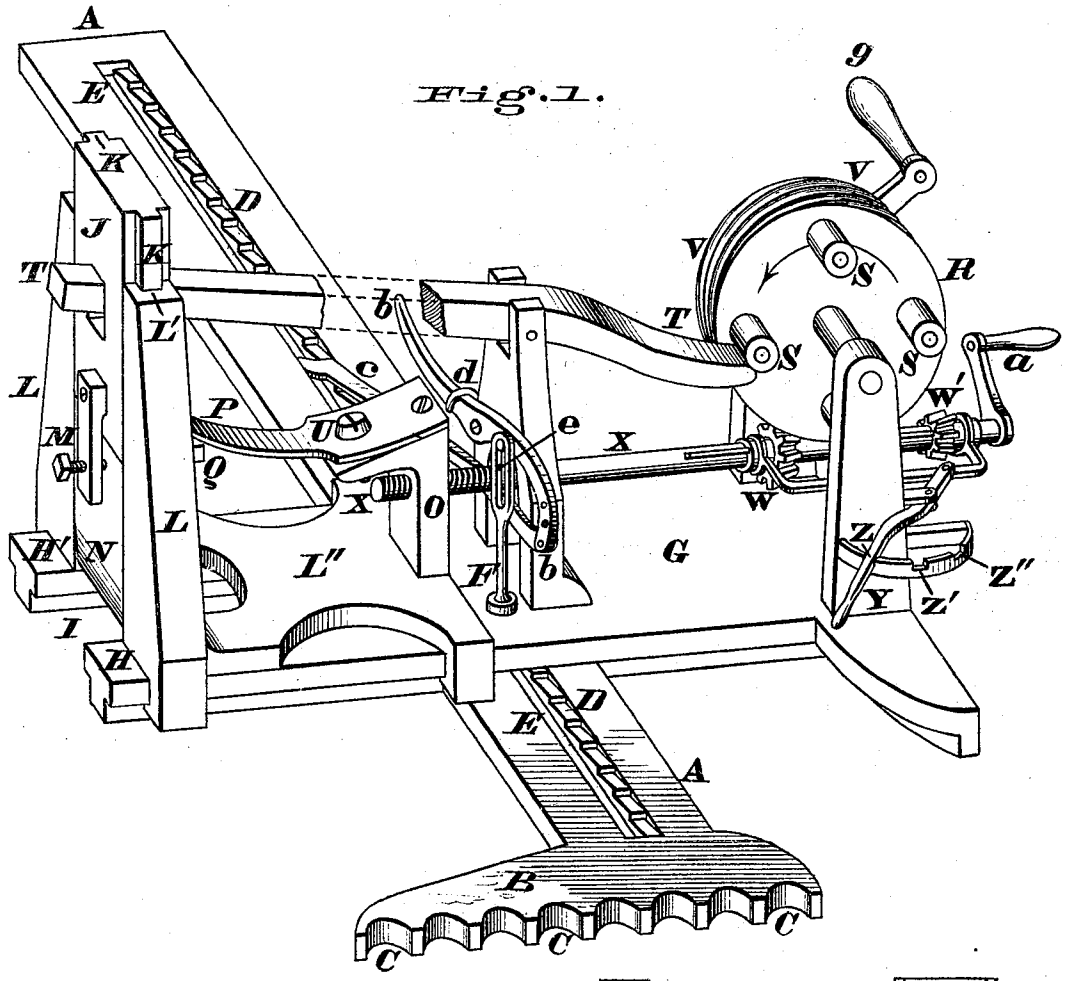


Fig. 3.

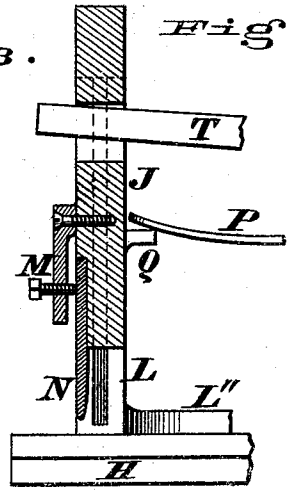


Fig. 4.

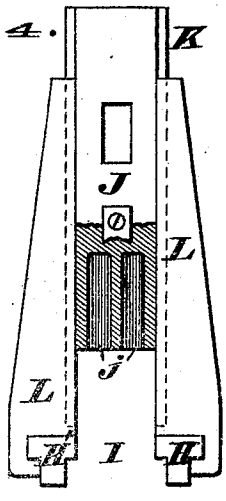
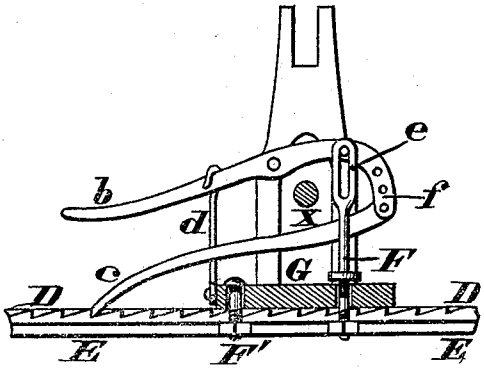


Fig. 2.



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A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JAMES J. FAULKNER, OF McMINNVILLE, TENNESSEE.

IMPROVEMENT IN MACHINES FOR DRESSING AND CRACKING MILLSTONES.

Specification forming part of Letters Patent No. 132,651, dated October 29, 1872.

To all whom it may concern:

Be it known that I, JAMES J. FAULKNER, of McMinnville, Warren county, Tennessee, have invented a new and useful Machine for Dressing and Cracking Millstones, of which the following is a specification:

My invention relates to an automatic device or implement whereby the necessary grooves and furrows in the grinding-face of a millstone are enabled to be made with the greatest accuracy and rapidity by a comparatively unskillful person.

Figure 1 is a perspective view of an implement embodying my invention. Fig. 2 is a transverse section of the same, to show the hand-shifting mechanism. Fig. 3 is longitudinal section of the pick-bar and its accessories. Fig. 4 is an end elevation of the same, a portion of said bar being broken away.

A is my quarter-staff or straight-edge, having a head, B, with a series of notches or indentations, C, to fit and rest against a stud or spindle fixed in the center of the stone to be dressed. The said staff is armed along its top with a ratchet, D, parallel with its length, and said staff has also parallel with its length a groove or slot, E, to receive two pins or bolts, F F′, which serve to attach to said staff, and hold at right angles thereto a bed-plate, G, the attachment being also such that said plate can be slid or shifted longitudinally of the said staff. One end of the bed-plate consists of two T-formed guides, H H′, having an opening, I, between them, and which support in the vertical position and guide to its proper path the guide or housing L of my pick-bar J, whose tongues K occupy grooves L′ in said housing. In the lower end of the bar J are one or more sockets, *j*, for as many picks, not shown. The bar J has in front a screw-vise, M, by which when desired to attach a "cracking"-chisel, N. From the rear of the housing-bed L″ rises a post, O, to which is screwed or otherwise firmly fastened a stout spring, P, whose free extremity resting upon a stud, Q, that projects from the rear of the pick-bar, causes a rapid descending stroke of said bar after the same has been elevated and tripped by the action of the trip-wheel R, whose tabs or rollers S by depressing the heel of a lever, T, whose other extremity enters an aperture in the pick-bar, operate to elevate and then release said bar by a succession of rapid strokes. U is a temper-screw, by which the tension of spring P is regulated. After each stroke of the pick-bar, it is with its housing shifted backward the desired distance by the action of the following mechanism: The periphery V of the trip-wheel takes the form of a worm-wheel, which operates through a pinion, W or W′, to rotate a shaft, X, which forward extremity being tapped into the port O, causes by its said rotation a retrograde movement or shift of the said housing, so that at the next stroke the pick or chisel shall strike the face of the stone in a new spot. The pinions W W′ being of unequal diameter, a greater or less shift can be obtained by bringing one or other in mesh with the worm-wheel, and to enable such adjustment the pinions are made capable of being slid along their said shaft by means of a lever, Y, which, being secured in one or other of three notches, Z Z′ Z″, holds one or other pinion in mesh or both of them out of mesh with the worm-wheel, in which latter adjustment the shifting may be effected optionally by means of a winch, *a*, at the end of the pinion-shaft. The lateral shifting of the above picking mechanism to a new line parallel with the first is effected by a lever, *b*, that operates a pawl, *c*, which engages in the ratchet D. This having been effected the picking mechanism is held to the new lateral adjustment or parallel by hook *d* and a bridle, *e*, which bridle also serves to limit and control the stroke of the said lever and its attached pawl. The pawl may be made to operate with a greater or less stroke by being shifted to one or another of a series of orifices, *f*, in the lever. *g* is a winch or handle, by which the trip-wheel is operated. When one quarter has been dressed, the quarter-staff with its described attachments is shifted to the next quarter by an angular sweep of the implement about its bearing-notch as a center. In beginning the dress, such notch is selected for the center as will correspond with the tangent circle to which the quarters are desired to be set.

I claim as new and of my invention—

1. The notched, ratcheted, and slotted quarter-staff A B C D E, retaining devices F or F′, adjustable bed-plate G H H′ I, reciprocating pick-bar J K K′, housing L, movable bed-plate

L″ O, spring P, operating-wheel R S V, lever T, screw-threaded shaft X, and one or more pinions, W W′, constructed and arranged to operate in the manner and for the purpose stated.

2. In combination with the described quarter-staff, I claim the lever *b*, pawl *c*, hook *d*, and shackle *e* F, wherewith the bed-plate G is adjusted longitudinally of and locked in position upon said quarter-staff, for the object designated.

3. The shifting-lever Y and notched bar Z Z′ Z″, when used in connection with the operating-wheel R V, slidable and unequal pinions W W′, and adjusting-screw X, for the purpose stated.

In testimony of which invention I hereunto set my hand.

JAMES J. FAULKNER.

Attest:

GEO. H. KNIGHT,

E. T. FAULKNER.