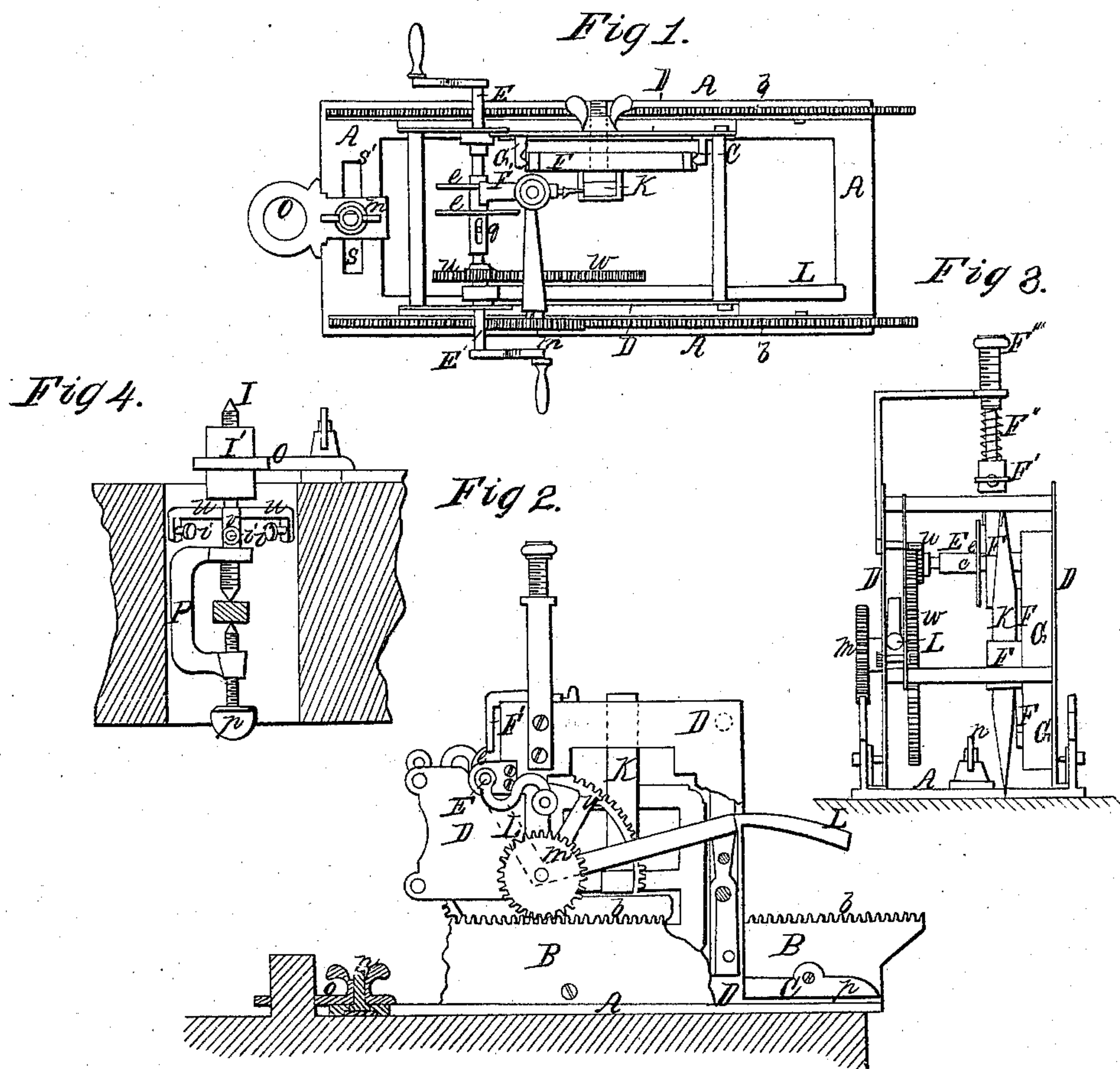


W. P. Stalcup,
Dressing Millstones.

N^o 70,373.

Patented Oct. 29, 1867.



Witnesses.

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WILLIAM P. STALCUP, OF BROOKVILLE, INDIANA, ASSIGNOR TO HIMSELF
AND JOHN P. LANCASTER, OF SAME PLACE.

Letters Patent No. 70,373, dated October 29, 1867.

IMPROVED MILL-BURR DRESSER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM P. STALCUP, of Brookville, in the county of Franklin, and State of Indiana, have invented a new and improved Mill-Burr Dresser; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a top view of my invention.

Figure 2 is a detached view of a part of my invention, showing the mechanism for throwing the travelling-wheel into and out of gear with the rack.

Figure 3 is an end elevation of the invention, and

Figure 4 is a view of the instrument by which I adjust the dresser to work the upper stone or runner exactly from its centre.

This invention is a machine for dressing millstones, or for smooth-dressing or channelling and moulding building-stones. The improvement over other machines for the purpose consists in a new arrangement of the machinery, whereby better results are obtained, and several new devices by which, when used for dressing mill-burrs, the formation of the dress is regulated and controlled so as to produce a more perfect millstone than has ever been before made.

Similar letters of reference indicate corresponding parts in the several figures.

In the drawings, A A represent a rectangular frame of iron, the under side of which is perfectly straight and smooth, for the purpose of enabling the operator to determine when the dress of his stone is finished, and to detect any irregularities of its surface and any soft or hard spots in its substance as he is working it. Along the sides of this frame are fastened upright plates B B, the upper edges of which are formed into a rack, *d d*. A cleat, C, fastened to the inside of these plates, and having its lower edge parallel with the upper surface of the frame A, and near to it, forms a recess or rebate, *r r*, which acts as a way or guide for the operating part of the machine to travel back and forth in, from one end of the frame to the other, when in operation. D D is the sliding frame which travels back and forth between the upright plates B B, carrying the machinery, and provided with flanges projecting outward from the bottom of its side pieces, and working in the recesses *r r*, to guide it back and forth. Extending across the horizontal sliding frame D, is a crank-shaft, E, having two cams *e e'*, which operate in opposite directions, and alternately raise and drop a vertical sliding frame F, which carries the cutting tool K. The cams are arranged upon a sleeve, *o*, by which one or the other may be made to operate the frame F, the shaft E working in either direction. G G are upright guides or ways fixed to the frame D, in which the vertical frame F slides up and down. F' is an arm extending from the frame F to the cams, against which the latter strikes to raise the frame. F'' is a spiral screw for increasing or diminishing the force of the cutting tool, and is itself regulated by the hand-screw F''', by which it may be given any degree of tension. A set-screw, operating under the frame F, may be provided to arrest the fall of the frame at any required point. The frame D thus constructed, and supporting all the working parts of the machine, as above described, is moved back and forth along the track *r r*, by means of a pinion, *u*, on the main shaft E, working a large spur-wheel, *w*, attached to a short shaft, the other end of which bears a gear-wheel, *m*, which travels in the rack *b*. The wheel *w*, its shaft, and the small wheel *m*, are all held by a lever, L, in which the shaft bears at its centre, and which enables the operator to raise the wheel *m* from the rack at pleasure. When the wheel is in gear with the rack, the rotation of the shaft E causes it to travel along the rack, sliding the frame D back and forth, and carrying the cutting tool K from the centre to the edge of the millstone and back and forth as desired. This constitutes the mechanism by which the cutting of the stone is effected.

In order to cause the dress to take the proper form, I provide a slot, *s*, extending across the end of the frame A, and a loop, O, fixed by a set-screw, *n*, at any point in the slot. This loop, in dressing the bed-stone, is fixed over or around the spindle, as shown in fig. 2. In dressing the runner the stone is inverted, and the instrument shown in fig. 4 is inserted in the eye, and fixed in the centre by means of set-screws *i i*. This instrument consists of a rod, I, provided with four bent horizontal arms V V V V, and bearing a cylindrical wooden block, I', fitted to exactly fill the loop O. The lower end of the rod I screws into and through the

upper arm of the bent piece P, (fig. 4,) and its extremity is ground to a nice point, which is accurately adjusted in the cock-eye, as shown in the drawings. The set-screw *p* is then screwed up firmly against the balance-rynd on the side opposite to that with which the rod I is in contact. This fixes the rod I and block I' exactly in the axis of the millstone, and enables the operator to dress the stone with perfect accuracy. Fig. 4 shows the instrument in position and the loop O adjusted for practical operation.

In dressing millstones great care and judgment must be exercised, and each stone dressed according to its quality and size. A stone which is of fine quality will receive a fine dress, while a coarse stone will not, but the dress must be adapted to its coarser quality. A large stone, too, must be dressed with a heavier "draught" than a small one. My invention is particularly designed to meet all these wants, and is adapted to dressing every kind of stone, of whatever size required. For instance, if the stone is small, and but little draught is needed, the loop O must be adjusted towards the ends *s'* of the slot, and when adjusted at the extremity of the slot on that side, will dress the furrows to the very edge of the eye. On the other hand, when a heavy draught is required, the loop must be adjusted towards the opposite end of the slot. It is obvious that any required draught can be given in this manner, and one kind as easily as another. The loop O may be attached so as to project outward from the frame A, as shown in fig. 1, or it may be extended in the opposite direction, the frame enclosing the eye of the stone.

In dressing building-stones, two "straight-edges" are to be adjusted to the stone, one on each side, and the frame A placed across over them, the cut of the tool K being adjusted as desired. The cutting instrument will then work the stone down until it is perfectly level between the straight-edges. By gearing or un gearing the wheel *m* and rack *b*, and properly working the instrument, it may be made to dress off stone to a flat surface, or to mortise, bevel, channel, flute, or otherwise prepare it for its intended use.

Instead of the slot *s*, a raised ledge across the end of the frame A may be employed in its place, or the end of the frame may be fashioned to act as such a ledge, and the loop O adjusted along it by means of a horizontal set-screw.

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

1. The slot *s* in the frame A, substantially as and for the purpose specified.
2. The instrument above described for adjusting the loop O accurately to the centre of the runner, when constructed and operating substantially in the manner and for the purpose required.
3. The loop O, when provided with a set-screw, and used in connection with the frame A, to regulate the draught of the dress, substantially as described.
4. The tempering arrangement, consisting of the screw-rod *F'''* and screw *F''*, when used in connection with the frame F to regulate the force of the cutting tool K, substantially as described.
5. The sleeve *o*, bearing the two cams *e e*, when used upon the working shaft of a stone-dressing machine to enable it to dress in both directions, substantially as set forth.
6. The stone-dressing machine above described, consisting of the frame A, horizontal sliding frame D, vertical sliding frame F', bearing the tool K, shaft E, bearing the sleeve *o*, two cams *e e*, rack *b*, and gear-wheels *u w m* adjusted by means of lever L, all the said parts being constructed, arranged, and combined substantially in the manner and for the purposes specified.

WILLIAM P. STALCUP.

Witnesses:

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