Hunt & Temple,

Dressing Millstones.

No. 81,639. Patented Sep. 1, 1868.

Fig 1.

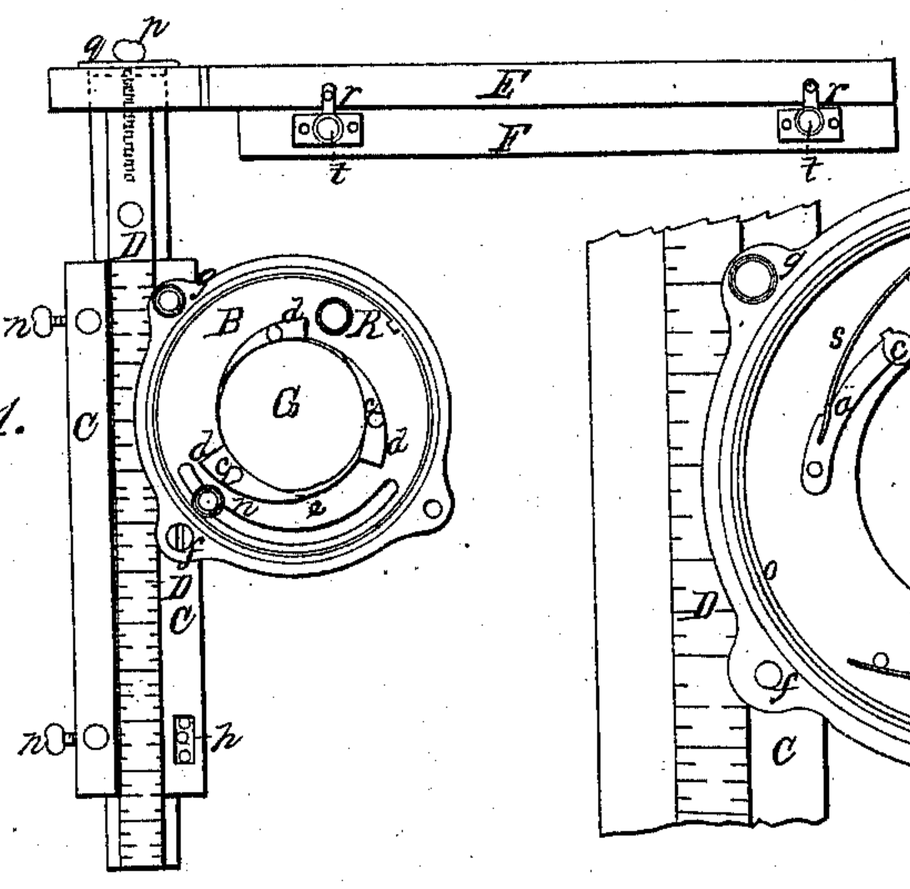


Fig 2.

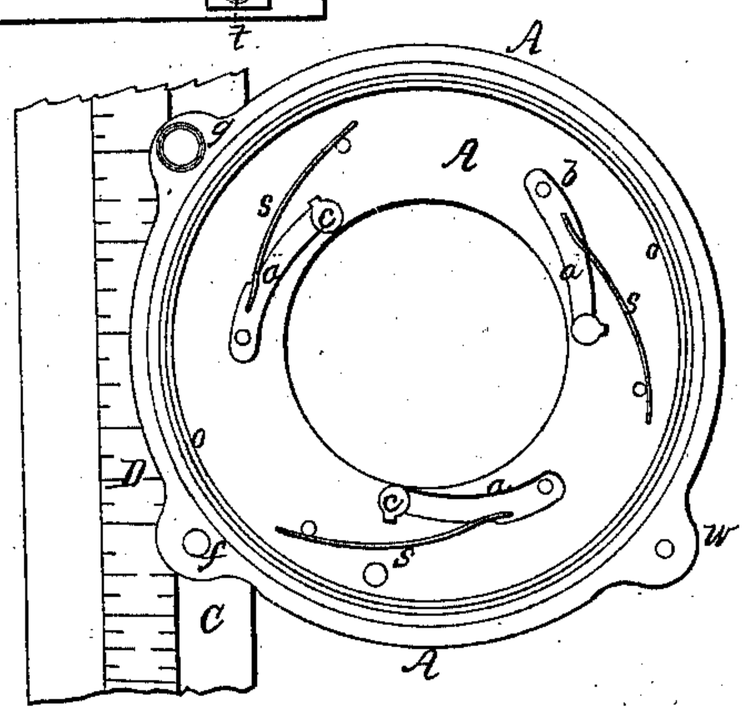


Fig 4.

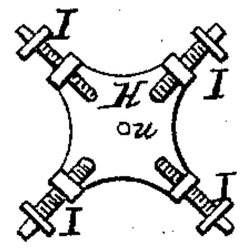
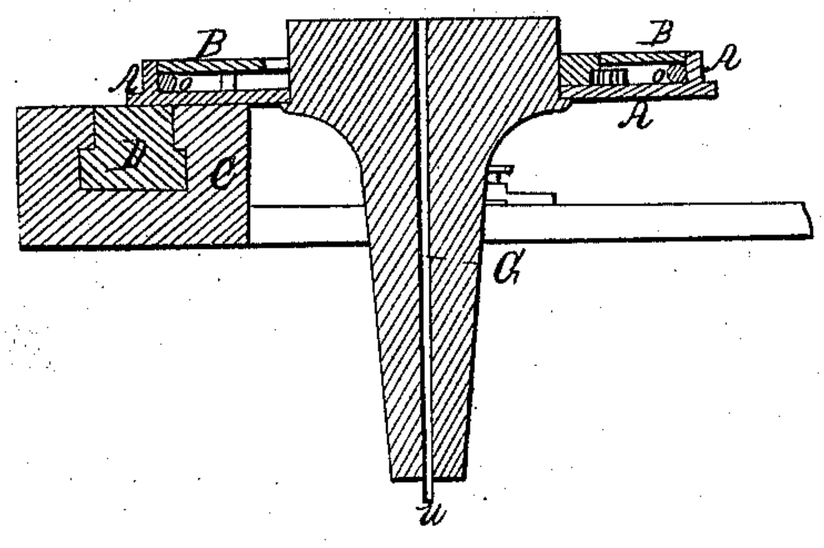


Fig 3.



Witnesses.

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JOHN C. HUNT AND JOSEPH TEMPLE, OF TERRE HAUTE, INDIANA.

Letters Patent No. 81,639, *dated September* 1, 1868.

IMPROVEMENT IN TOOLS FOR LAYING OFF FURROWS FOR MILLSTONE-DRESSING.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, JOHN C. HUNT and JOSEPH TEMPLE, of Terre Haute, in the county of Vigo, and State of Indiana, have invented a new and useful Improved Tool for Laying Off the Furrows for Millstone-Dressing; and we do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

Our said invention consists in a novel device, comprising a sliding-scale, and an arm arranged upon the same, in such a manner that when the tool is properly centred or arranged with respect to the millstone-centre or eye, the arm aforesaid will indicate the position for the furrow, which is marked out upon the face of the stone, when the tool may be rotated to bring the said furrow-gauge or arm to the place where the next furrow is to be laid off, the sliding of said arm permitting the furrows to be laid off with any desired draught, while the furrow-gauge itself may be made of any desired width or shape, or it may be made expansible laterally, to lay off furrows of different widths. Said tool may also be constructed or arranged so as to be used to lay off the furrows either to the right hand or left, as hereinafter more fully explained.

Our invention further consists in combining with said slide and arm an adjustable clasp or clamp, whereby said tool may be centred upon spindles of different sizes, or secured to a block or support for said tool, resting in a suitable centring-step, to be arranged in the eye of the stone to be dressed.

To enable those skilled in the art to understand how to construct and use our said invention, we will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a plan or top view of our invention.

Figure 2 is an enlarged detached view of the centring-device, with the top plate removed.

Figure 3 is a vertical section, taken centrally at the line *x* in fig. 1; and

Figure 4 represents a device to be adjusted in the eye of the stone, to support the tool in the proper position over the stone.

Similar letters of reference in the several figures denote the same parts of our invention.

A represents an annular metallic plate, provided at its circumference with a short vertical rim, as shown.

To said plate A are pivoted a suitable number of arms, *a*, provided at their movable ends with vertical nibs or posts, marked *c*, the pivots securing said arms to the plate being indicated by *b*, and to said arms are secured springs *s*, which tend to keep said nibs *c* back from the central opening in the plate A, except when forced inward, as hereinafter described.

In the angle formed by the exterior vertical rim of said plate is placed a wire or its equivalent, marked *o*, upon which a second plate, B, rests, within said rim, and above the arms *a*, the nibs *c*, however, projecting up through the opening in said plate B, whose inner edge is provided with a series of cams or eccentrics, *d*, as shown.

The plate B is held in place by means of a lip, *l*, projecting over its edge, and also by a set-screw, *m*, which passes through a curved slot, *e*, which permits said plate B to be turned or rotated in either direction, by means of a knob, *k*, or in any other suitable manner.

Thus, it will readily be seen, by turning said plate B in one direction, the cam-edges press the nibs *c* inwards, to clasp the spindle of the stone; and when turned in the opposite direction, said pressure is removed from the nibs *c*, and they are thrown back by the action of the springs *s*, as before mentioned; and so the clasp or centring-device is adapted to spindles of different sizes, as before stated, and may readily be applied thereto, and be removed therefrom, when desired.

The said plate A is secured to the slide-holder C, as shown, by a screw or bolt, *f*, and a set or removable screw, *g*.

The slide D is spaced in inches and parts of an inch, so that it may be moved accurately any desired distance, in regulating the distance of one furrow on the stone from the other.

The slide D is held firmly and securely in place, when adjusted, by means of the set-screws *n*. A tenon

upon the end of the slide D enters a mortise in the end of an arm, E, arranged at an angle thereto, and is properly secured thereto by a screw, *p*, passing through a plate, *q*, into the end of D, as indicated in fig. 1.

The arm E, aforesaid, being the furrow-marker or indicator, may be provided with a second movable bar, F, arranged upon slides or bars *r*, which pass through suitable recesses beneath plates upon the bar F, and are pressed upon by set-screws *t t*, as shown, so that said bar may be adjusted at pleasure, at different distances from the bar E, either parallel therewith, or obliquely with respect thereto, either end being nearer to the bar E, as may be preferred.

The said bar E, and also the bar F, may be curved, or made in any other form, according to the desired form or proportion of the furrow, or the width thereof.

In fig. 4 is shown a convenient device, to be arranged in the eye of the stone, and so secured that the hole *v*, in the plate H, will be exactly at the centre of the stone, which adjustment is readily effected by turning the screws I.

To adjust the machine or tool for use, a block, G, provided with a central pin, *u*, at its lower end, is firmly secured in the centring-clamp A B, and its foot placed in the hole *v* in H, after said plate H has been centrally secured in the eye of the stone, as aforesaid, the length of said centre-block or support being such that the holder C, slide D, and furrow-marker E F, lie just above and near to the surface of the stone to be operated upon.

Instead of the device seen in fig. 4, for supporting the block G and the tool, any other suitable centre support may be used; and when the spindle has been secured to the stone, and the stone is to be dressed over, the tool may be secured upon the spindle without the need of any support other than the spindle.

To operate with our invention, it is properly arranged upon the stone to be dressed, and the circumference of the stone marked or spaced off according to the number of furrows desired, and the bar F adjusted with respect to the bar E, so as to give the required width and form to the furrow. The arm or furrow-marker is then moved out away from the centre far enough to give the required draught to the furrow, when the form and position of the marker E F are marked upon the stone, which leaves the shape, width, and area of the furrow to be cut.

The tool is then turned around to the space or line assigned for the next furrow, and the operation is repeated, and so on, until the furrows are all marked out.

By this tool it will be seen that the furrows are all laid off in exact uniformity, both as to size, form, distance apart, and amount of shaft, with very little trouble, and in much less time than can be done in the ordinary manner, while, at the same time, any one, however little experience they may have had, can readily and successfully use the tool.

By loosening the screws *t* the bar F may be removed, and the slides or bars *r* be turned to the opposite side of the bar E, so that the adjustable bar F may be arranged on the inside or outside, as preferred.

By taking out the screw *g* and swinging the centring-device A around until the perforated lug *w* is brought over the hole *h* in the slide-holder C, and securing the same in said position, and taking off the furrow-indicator and running same to the left of the slide C, and then changing ends with said holder C, the tool may be used to lay off the furrow to the left hand of the centre of the bar instead of to the right, as shown.

Having described the construction and operation of our invention, we will now specify what we claim, and desire to secure by Letters Patent.

1. We claim the combination of the graduated slide D and furrow-marking arm E with a suitable holder, C, which may be secured to the stone centrally so as to revolve freely as desired, substantially in the manner and for the purposes set forth.

2. We claim the combination of the adjustable bar F with the arm E, slide D, and holder C, substantially in the manner and for the purposes described.

3. We claim, in combination with the arm E, slide D, and holder C, the annular plate A and cam-plate B, with the arms *a* and nibs *c*, all arranged to operate substantially as and for the purposes set forth.

4. We claim the combination of the plate A, the plate B provided with eccentric recesses *d*, the arms *a*, nibs *c*, and springs *s*, arranged in the manner and operating as specified.

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JOSEPH TEMPLE.

Witnesses:
SIDNEY TEMPLE,
WM. J. POST.