(No Model.)

H. B. ROBISCHUNG.

MACHINE FOR DRESSING AND PECKING GRINDSTONES.

No. 548,272. Patented Oct. 22, 1895.

Fig. 1.

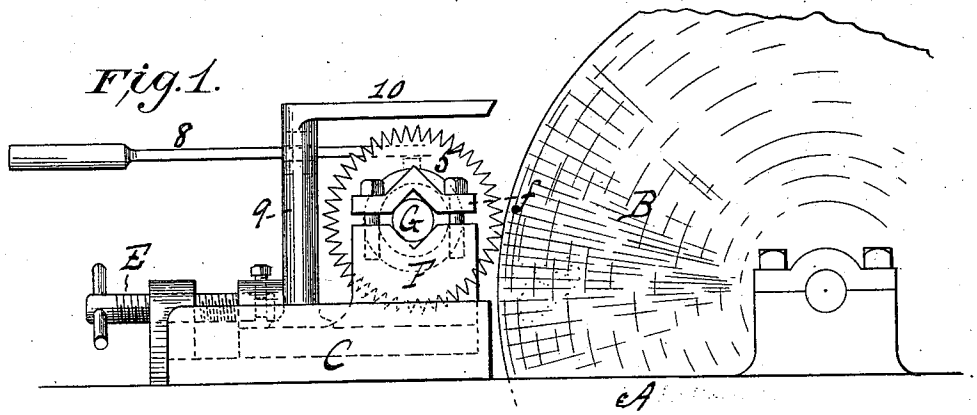


Fig. 6

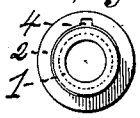


Fig. 5.

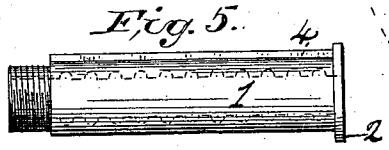


Fig. 2.

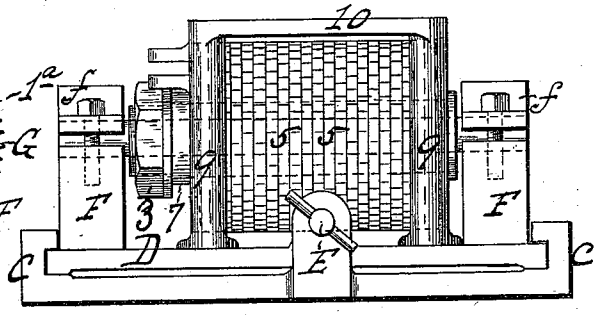


Fig. 4

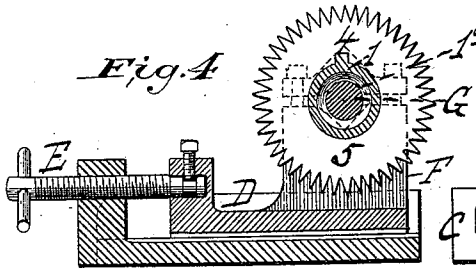


Fig. 7.

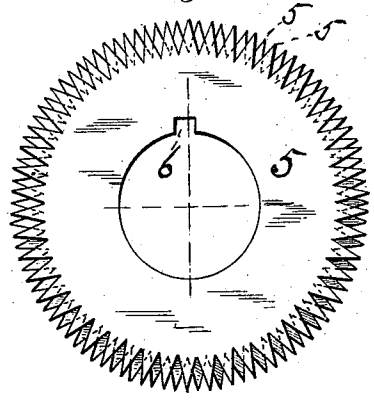
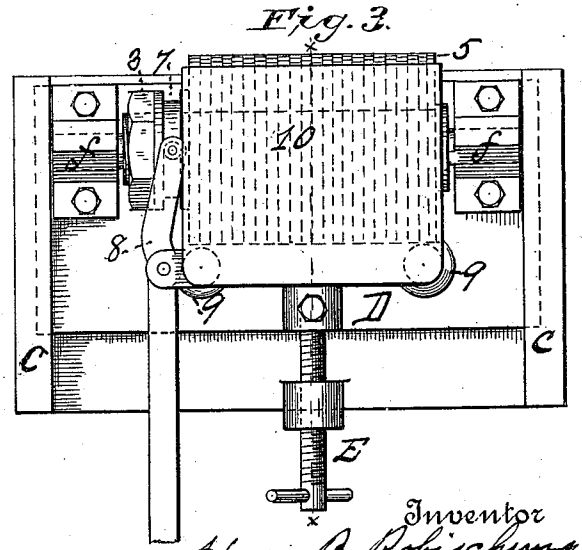


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO EDWARD B. LEIGH, OF CHICAGO, ILLINOIS.

MACHINE FOR DRESSING AND PECKING GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 548,272, dated October 22, 1895.

Application filed April 1, 1895. Serial No. 544,045. (No model.)

To all whom it may concern.

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Machines for Dressing and Pecking Grindstones; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a machine embodying my invention shown as mounted on the frame of a grindstone and in position for dressing the stone. Fig. 2 is a detached end view of the machine, looking toward the grindstone, grindstone omitted. Fig. 3 is a top or plan view of the machine. Fig. 4 is a central vertical section, the tool-rest omitted. Fig. 5 is a side view, and Fig. 6 an end view, of the disk-sleeve; and Fig. 7 is an enlarged detail view of two of the disks, showing the teeth alternating or in position for pecking.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of a simple and efficient machine for dressing and pecking the face or periphery of a revolving stone.

As is well understood, in the use of grindstones for grinding tools, especially if the stone is of unequal hardness or the tools to be ground vary in size and shape, the operative face of the stone becomes uneven and irregular and requires frequent dressing or truing and equally if not more frequent pecking or sharpening. These several operations are commonly performed by separate and distinct hand-tools or sometimes by distinct machines which are applied to and removed from the stone as each separate operation is required to be performed.

The objects of my present invention are, first, the production of a simple and efficient convertible dresser and pick, and, second, its construction in such form as will permit, if desired, of its practically-permanent attachment to the grindstone where it is required and can be utilized without loss of time, interruption of the use of the stone, or hampering the workman.

To this end the main feature of my invention embraces the combination of a series of serrated revoluble disks and means for causing the serrations to register and to alternate for either dressing or pecking the stone, as may be required.

A secondary feature of the invention embraces the means by which the same is accomplished—that is to say, the combination, with a splined sleeve, of a series of annular serrated disks, each having a spline-notch on one side of the diametric line of the disk, which intersects the tooth on the periphery of the disk, whereby the reversing of alternate disks will stagger the cutting-teeth.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

Upon a suitable frame A is journaled a grindstone B, which may be rotated in any known manner and from which the power is taken for operating the dressing and pecking tool. Either formed on or attached to said frame A, in line with and opposite the periphery of the stone B, are suitable ways C, in which moves to and from the periphery of the stone B a slide or bed-plate D, which may be advanced and withdrawn by the usual feed-screw E or any equivalent mechanism. Erected on and at the forward end of slide or bed-plate D are pedestals F F, in which is detachably secured by clamps *f f* or otherwise a shaft G, on which rotates a sleeve 1. This sleeve 1 is somewhat less in length than the distance between the pedestals F F, so as to be capable of an endwise movement on the shaft G as well as rotation thereon, and is provided on its interior with a series of annular grooves 1^a (see Fig. 4, also dotted lines, Fig. 5) to retain a lubricant. The sleeve 1 has a fixed collar 2 at one end and is threaded at the other for the reception of a threaded collar or nut 3, while a longitudinal spline 4 extends the length of the sleeve.

5 5 indicate a series of annular disks having serrated peripheries, said disks being of equal diameter and having a uniform number of teeth, whereby said disks may be so arranged on the sleeve 1 that their teeth may

register with each other or may be staggered, dodged, or alternated, according to the work to be done. I prefer to accomplish this by the arrangement or location of a slot, a perforation, or a spline-notch 6, which I place a little to one side of a line drawn from the center of the disk to the point of a tooth, (see Fig. 7,) thereafter securing the disks to move together with the teeth arranged in line or staggered, as desired, by means of a rod, a key, or a spline 4, as the case may be.

7 indicates a loose sliding collar provided with a grooved periphery for the reception of a pin on one arm of a shipping-lever 8, which pin may be provided with an antifriction-roller, if desired.

Erected on the slide or movable bed-plate D, in rear of pedestals F F, are other and taller pedestals 9 9, to which is attached the table 10, the whole constituting a tool-rest which extends toward the grindstone and over the serrated disks 5 5, so as to house the same, and thus enable both sides of the stone to be used without removing the dresser.

The construction of the several parts of the machine being of the general character hereinbefore specified, the ways C will be attached to the frame of the grindstone. The slide or bed-plate D, carrying the tool-rest and pedestals F F, will be arranged in the ways C and connected with feed-screw E. The serrated disks 5 5 will be arranged with the spline-notches registering and the peripheral teeth in line, and then slipped on the sleeve 1, together with the loose grooved collar 7, and the whole secured by the threaded collar or nut 3. The shaft G will then be passed through the sleeve 1 and secured at its ends in pedestals F F, the pin of the shipping-lever 8 resting in the groove of collar 7, and the machine so set up will act effectively as a dresser when the serrated disks 5 5 are brought in operative contact with the grindstone A, from which they receive their motion. During the operation of the tool as a dresser it may be caused to vibrate or travel back and forth transversely of the periphery of the stone by vibrating the shipping-lever 8.

To convert the device into a pick for sharpening the stone, all that is required is to loosen the clamps *f f*, remove the shaft G, with sleeve 1 and disks, from the machine, remove the nut 3, and reverse every second serrated disk, which will stagger the teeth of the disks, tighten up nut 3, replace shaft G, and again clamp the shaft to pillars F F, all of which will require but little time and will not materially interrupt the use of the grindstone.

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

1. In a dressing and pecking machine, the combination with a series of serrated revoluble disks, of means for locking said serrations in either register or stagger form, substantially as and for the purposes specified.

2. In a convertible dressing and pecking machine, the combination with a series of uniformly serrated disks each of which has a slot located to one side of a radial line drawn from the point of a tooth, of a key for locking the disks together, substantially as and for the purposes specified.

3. In a dressing and pecking machine, the combination with a series of serrated annular disks each of which has a spline notch located to one side of a radial line drawn from the point of a tooth, of a sleeve having a longitudinal spline with which the spline notches of the serrated disks engage, substantially as and for the purposes specified.

4. In a dressing and pecking machine, the combination with a series of serrated annular disks each having a spline notch located to one side of a radial line drawn from the point of a tooth, of a splined sleeve, means for detachably securing the disks on said sleeve, and a shaft on which said sleeve is loosely mounted, substantially as and for the purposes specified.

5. In a convertible dressing and pecking machine, the combination with a series of uniformly serrated disks each of which has a slot located to one side of a radial line drawn from the point of a tooth, of a sleeve on which said disks are detachably mounted, and means for keying or locking the disks together and to the sleeve; substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 29th day of March, 1895.

HENRY B. ROBISCHUNG.

Witnesses:
E. T. WALKER,
E. B. LEIGH.