H. W. STEINSIEK.

Millstone-Dressing Machine.

No. 220,187. Patented Sept. 30, 1879.

Fig: 1.

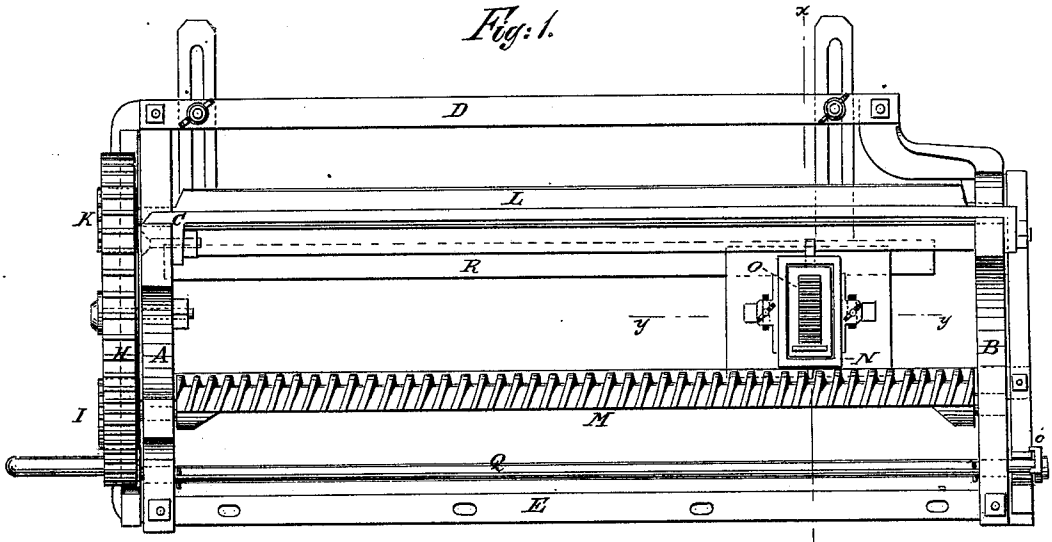


Fig: 2.

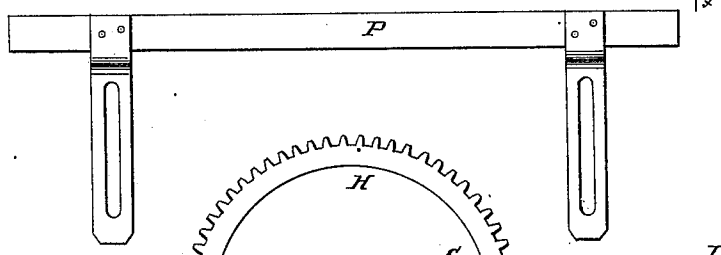


Fig: 3.

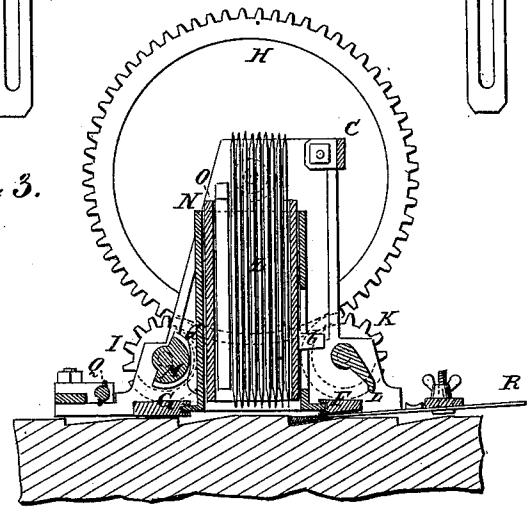


Fig: 4.

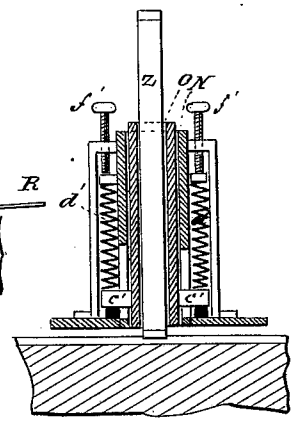
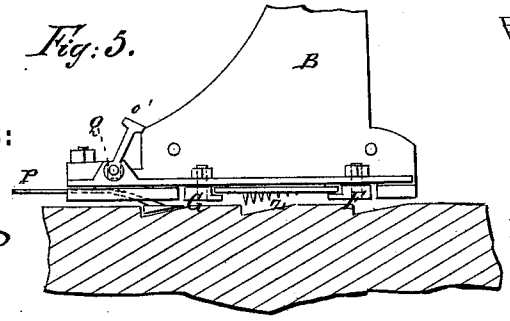


Fig: 5.



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UNITED STATES PATENT OFFICE.

HENRY W. STEINSIEK, OF JAMESTOWN, MISSOURI.

IMPROVEMENT IN MILLSTONE-DRESSING MACHINES.

Specification forming part of Letters Patent No. **220,187**, dated September 30, 1879; application filed January 15, 1879.

To all whom it may concern:

Be it known that I, HENRY W. STEINSIEK, of Jamestown, in the county of Moniteau and State of Missouri, have invented a new and Improved Millstone-Dresser, of which the following is a specification.

Figure 1 is a plan of the dresser. Fig. 2 is a plan of a guiding-clamp. Fig. 3 is a vertical section through line *x x*. Fig. 4 is a vertical section on line *y y*. Fig. 5 is an end view.

Similar letters of reference indicate corresponding parts.

This invention has for its object a mechanical millstone-dresser, which for accuracy and rapidity of work shall excel those now in use.

The frame-work of the machine is preferably made of iron, and is composed of two upright end pieces, A and B, held in position by upper brace, C, lower side strips, D and E, and grooved box-slides F and G, all of which are securely fastened to the end pieces.

For the purpose of this description, that end of the machine where the driving cog-wheel H is shown will be called the "head" of the machine.

The cog-wheel H, which is pivoted on end A, engages into the two smaller cog-wheels I and K, the latter of which is keyed onto the shaft of the cam L, and the former on the shaft of the feed-screw M. The box N, which holds an inner box, O, in which are the chisels or millstone-picks Z, has a flat projecting foot-piece or flange around it, by which it is supported and guided in the grooves of the slides F and G, as shown. The box N is also furnished on one side with a slight boss or projection, *a'*, that engages in the screw-thread of feed-screw M. In the side opposite to this is a perpendicular slot, through which projects a pin, *b'*, from the box O, with which the cam L engages in its revolution.

In the perpendicular slots in the other sides of the box N the projecting lugs C' C' of box O are at liberty to move up and down—upward when the box and chisels are lifted by the cam L; downward when the cam liberates the pin *b'*. The downward movement is accelerated and made sufficiently forcible for the proper work of the chisels or picks by the action of the spiral springs *d' d'* on the lugs C' C'.

The forcible action of the springs may be regulated by adjusting-screws *f' f'*, while the rebound of the chisel-box is aided by springs of rubber or other elastic material at *g' g'*.

When the stone to be dressed has been marked as required, the machine is placed upon it, and the short clamp P is secured and adjusted under the side strip, E, by screws passing through holes in E and slots in the arms of P, so that when the straight edge of the clamp lies in a furrow, or a place marked for a furrow, on the stone, the chisels will be in parallel lines with it. The chisels must be previously arranged, so that together their points will present to the furrow a proper degree of inclination or slope, and the number of them must correspond with the desired width of the furrow. The chisel-box is then placed in position for commencing the work, and power applied to wheel H. The feed-screw M, which is a longitudinal half-section of a screw, then moves the chisel-box in the line of the furrows to be cut or dressed, and then for half a revolution its impelling action ceases, while the chisels are lifted and made to deliver a blow under the combined action of the cam L, (which, as well as the screw-feed M, extends the whole length of the machine,) and the springs *d' d'*. At a speed of about seventy-five revolutions a minute the work ordinarily progresses with sufficient rapidity.

When the chisel-box reaches the end of the machine it must be pulled back again toward the head, and the work continued.

The chisels ordinarily used are from one-sixteenth to one-eighth of an inch in thickness, and about nine inches long.

If there be left in the furrow any burrs or ridges which have been formed by the spaces between the chisel-edges, one has but to turn the eccentric-rod Q by its handle O' to move laterally a one-thirty-second of an inch the slides F and G with the chisel-box that they support, so that when movement is again given to the machine the chisels will act upon the burrs and give an equal depth to the furrow.

The long clamp, R, is secured in the same manner in which the shorter one, P, is, under the left side of the frame, and its function is to operate with the chisels in dressing the surface or land of the stone. On each arm of clamp R, near the inner extremity of the slot, is

a small boss or shoulder. If the clamp be adjusted so that these set against the slide F, and the machine be set upon a stone so that the edge of the clamp lies longitudinally in a furrow, the chisel next to it will rest directly above the edge of the furrow on the land of the stone. The work of dressing the surface is now undertaken with, preferably, one-sixteenth-inch chisels, and by the operations and adjustments before described the finest possible work is done.

The clamps, it will be noted, are designed as adjustable, measuring straight edges as guides for the work, and for the purpose of determining if the surfaces of the stones have worn unequally, for no dressing must be attempted until the surfaces are made even.

The advantages gained by the use of this apparatus are very important. By its use the work is equally, finely, and rapidly done, and much time and labor saved over the old method of hand-dressing, and, indeed, over any other method with which I am acquainted.

I am aware that millstones have been dressed by a traversing pick operated by a cam; but

What I claim is—

1. The combination of the eccentric-rod Q with the slides F and G, substantially as and for the purpose described.

2. The clamps P and R, with slotted arms, substantially as and for the purpose described.

HENRY WILLIAM STEINSIEK.

Witnesses:
C. WIENCKE,
C. SCHAAFF.