R. D. Nesmith,

Dressing Millstones.

No 25,274. Patented Aug. 30, 1859.

Fig: 3.

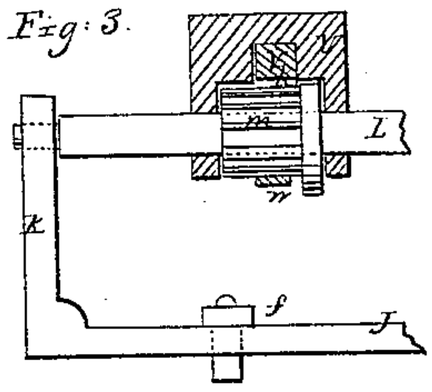


Fig: 1

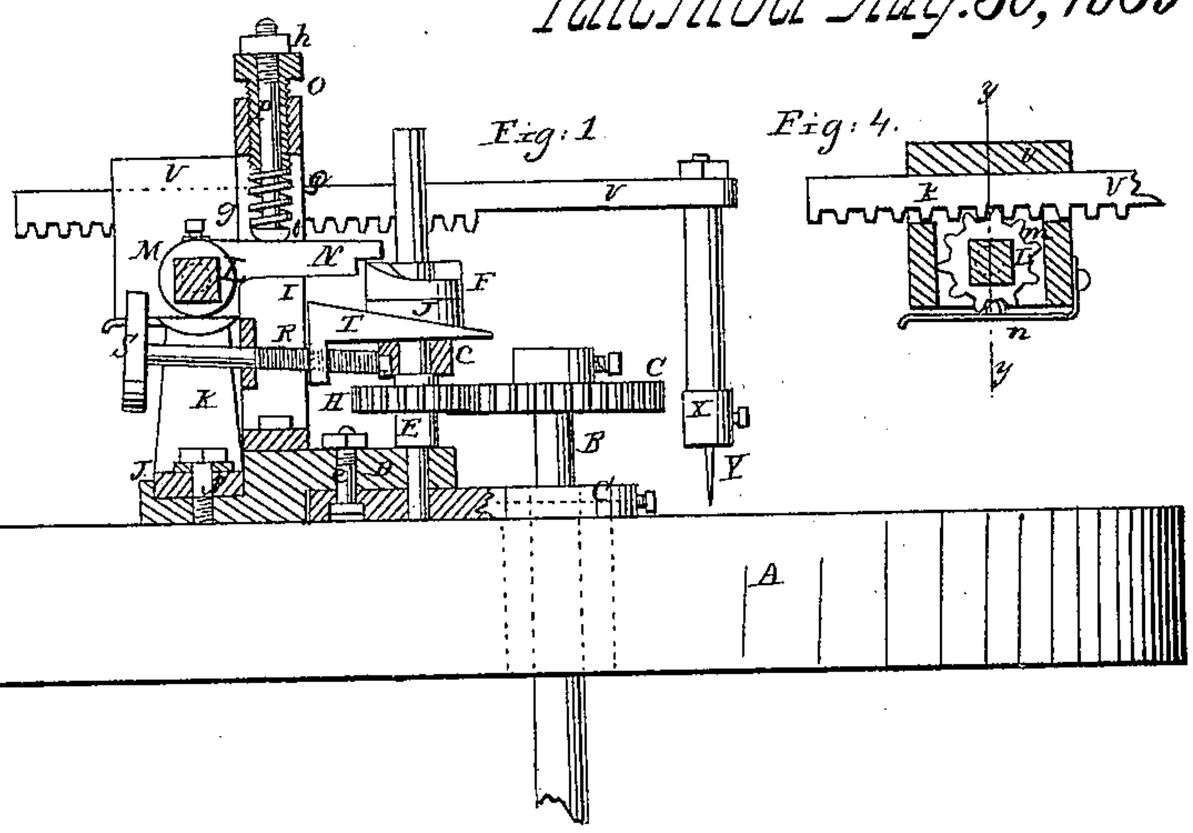


Fig: 4.

Fig: 5.

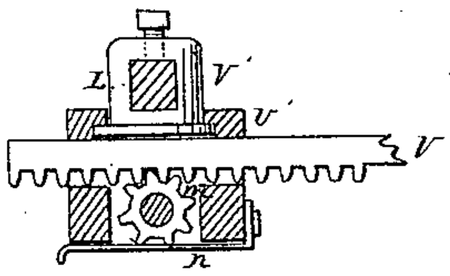


Fig: 2

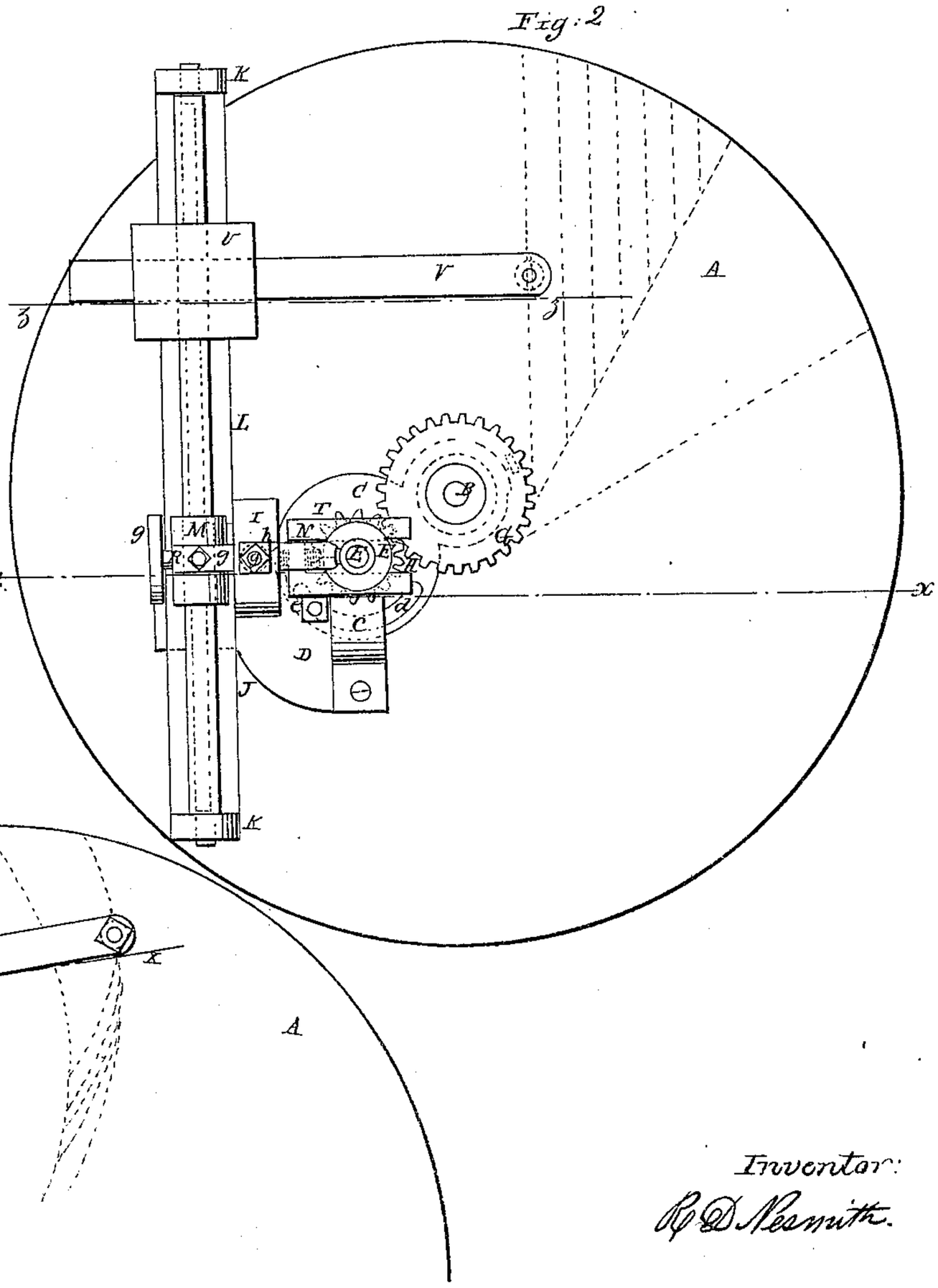
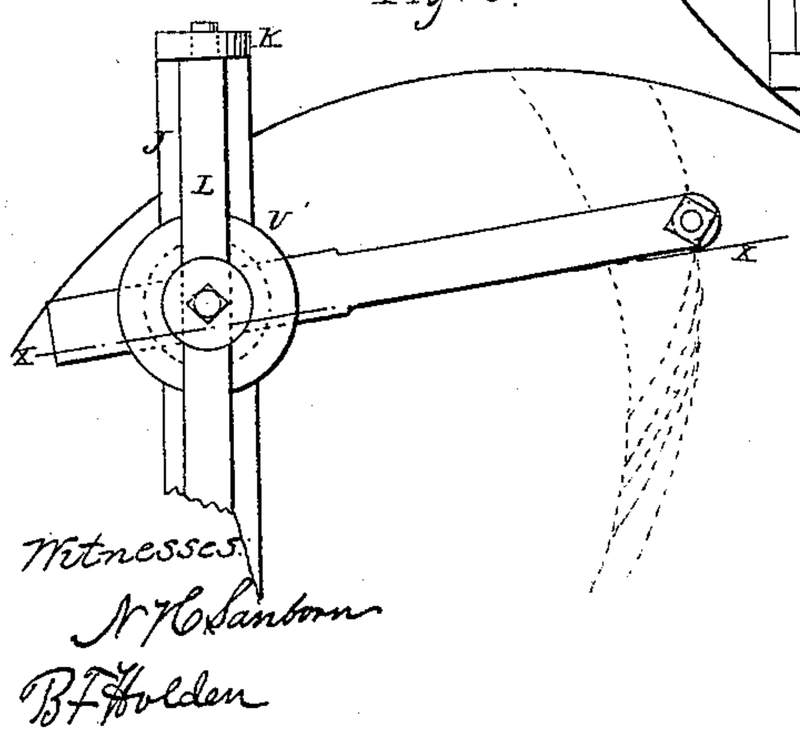


Fig: 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

R. D. NESMITH, OF FRANKLIN, NEW HAMPSHIRE.

MACHINE FOR PICKING MILLSTONES.

Specification of Letters Patent No. 25,274, dated August 30, 1859.

To all whom it may concern:

Be it known that I, R. D. NESMITH, of Franklin, in the county of Merrimack and State of New Hampshire, have invented a new and Improved Machine for Picking Millstones; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1, is a vertical section of my invention, taken in the line *x*, *x*, Fig. 2. Fig. 2, is a plan or top view of ditto. Fig. 3, is a vertical section of a portion of ditto, taken in the line *y*, *y*, Fig. 4. Fig. 4, is a vertical section of a portion of ditto, taken in the line *z*, *z*, Fig. 2. Fig. 5, is a vertical section of a portion of ditto, taken in the line *x'*, *x'*, Fig. 6. Fig. 6, is a plan or top view of the portion shown in Fig. 5.

Similar letters of reference indicate corresponding parts in several figures.

This invention relates to an improved machine for picking mill stones, and of that class which are operated automatically by the rotation of the spindle of the stone, or, by the rotation of any shaft or arbor placed concentrically therewith.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a mill stone, the lower or bedstone, and B, is its spindle, or a shaft passing vertically through its center.

C, is a plate which is fitted on a collar attached to the stone or its bushing and through which the spindle or shaft B, passes. This plate C, has the bed or base D, of my invention secured to it by having the lower end of a shaft E, fitting in it, said shaft having its upper bearing in a curved arm C, attached to the base D. On the shaft E, a cam F, is placed loosely, and is allowed to slide freely up and down thereon, but is made to rotate with the shaft E, in consequence of a feather and groove, the latter being made longitudinally in the shaft and the other connected to or fitted in the eye of the cam as usual.

On the upper part of the spindle or shaft E, a toothed wheel G, is placed. This wheel gears into a pinion H, which is placed on the shaft E, just below the curved arm *c*. In the base D, a curved slot *d*, is made, said slot being a portion of a circle concentric with the shaft E, and having a bolt *e*, which passes through the base D, fitted therein, see Figs. 1 and 2.

To the base D, a vertical frame I, is attached, and in the back part of the base D, a groove is made to receive a horizontal bar J, which is slotted longitudinally and through which a screw *f*, passes into the base. By means of this attachment of the bar to the base, the former may be adjusted to the latter at any desired point within the scope of its movement. At each end of the bar J, an upright K, is attached in the upper parts of which are the bearings of a rock shaft L. On the shaft L, a socket M, is placed loosely and secured at any desired point by a set screw *g*. To this socket an arm N, is attached, said arm projecting through the frame I, and resting on the cam F. Through the upper part of the frame I, a vertical hollow screw O, passes, and in this screw a rod P, is fitted, said rod having a screw nut *h*, on its upper end and a head *i*, on its lower end between which head and the screw O, a spiral spring Q, is placed as shown clearly in Fig. 1.

Horizontally through the frame I, a screw rod P, passes, the outer end of which has a hand wheel S, on it. The inner end of this screw rod is attached to a slotted inclined plane T, which rests on the curved arm *c*, and underneath a hub or boss *j*, on shaft F, the cam F, resting on the hub or boss *j*.

On the rock shaft L, a sliding head U, is placed, and in this sliding head a bar V, is placed. This bar V, is allowed to slide freely in the head U, and it has a rack *k*, at its under side into which a pinion *m*, gears, said pinion being on shaft L, and within the head U. Into the pinion *m*, a spring pawl *n*, catches, said spring pawl being attached to the head U. To the front end of the bar V, a pick arbor X, is attached, the pick Y, being secured in its lower end.

The operation is as follows:—The spindle or shaft B, is rotated by any convenient application of power and the shaft E, is rotated from B, by the gearing G, H. The cam F, raises the arm N, and consequently the bar V, and pick Y, which forced down to its work by the spring Q, the latter being compressed by the raising of the arm N. The pick Y, is made to cut from the eye to the periphery of the stone by shoving the

head U, along on the rock shaft L, and the furrows are made parallel by shoving the bar V, forward and backward through the head U. The tangential position of the furrows are obtained by adjusting the base D, on the plate C, so as to bring the rock shaft L, parallel with the furrow to be cut. The force of the blow to be given the pick may be regulated as desired by adjusting the cam F, higher or lower on the shaft E, through the medium of the inclined plane T, actuated by the screw rod R, and by adjusting the screw O, the spring Q may be so placed relatively with the arm N, that its lower end will not be in contact with the arm when the pick strikes the stone, the spring being retained between the head *i*, of the rod P, and the lower end of the hollow screw O. By this arrangement the spring is prevented from reacting on the machine.

The bar J, may be adjusted so as to extend either side of the base D, and the device readily adapted to stones of varying sizes.

In case stones with curved furrows are to be dressed or picked a head U′, attached to the rock bar L by a swivel connection V,′ may be used, see Figs. 5 and 6. By this arrangement the pick bar V, may be turned to give the furrows the desired curvature, see Fig. 6.

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

The spring Q, upon rod P, provided with head I, for limiting the extent of its action upon the picks, as arranged with the inclined plane T, and cam F, and the operating parts with which they are connected in the manner and for the purpose specified.

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