(No Model.)

C. A. WELLER.

DEVICE FOR TRUING GRINDSTONES.

No. 301,542. Patented July 8, 1884.

Fig. 1.

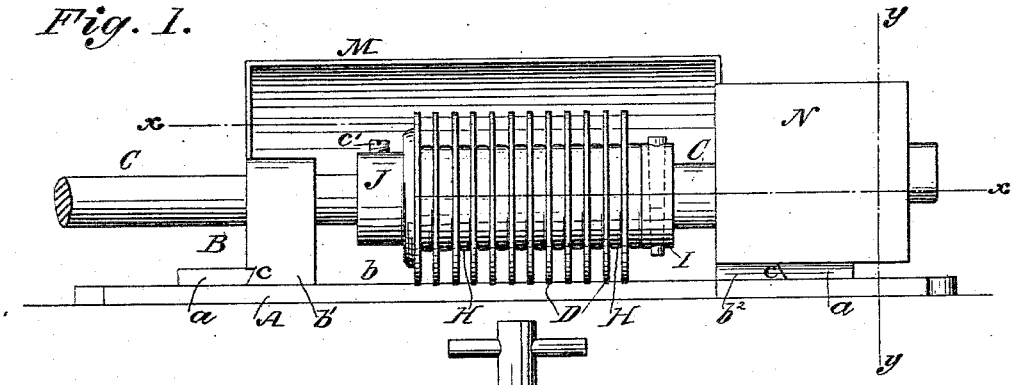


Fig. 2.

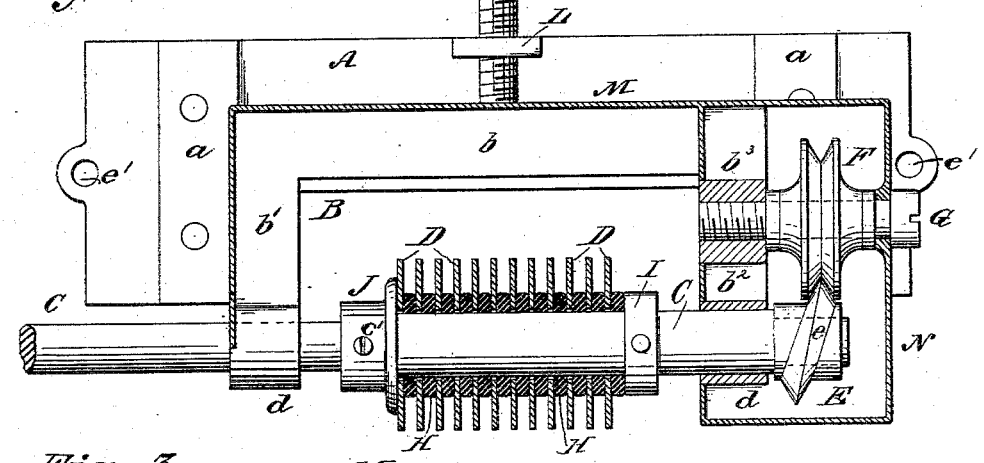
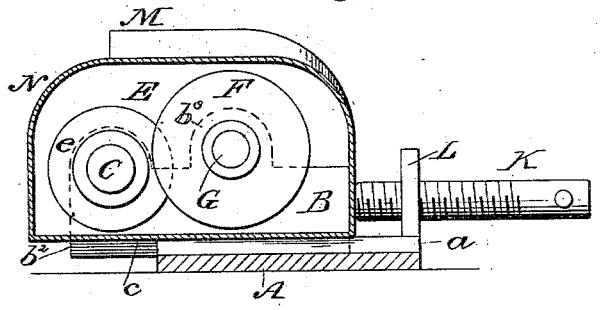


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHESTER A. WELLER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO WILLIAM L. McDOUGALL AND CAROLINE McDOUGALL, BOTH OF SAME PLACE.

DEVICE FOR TRUING GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 301,542, dated July 8, 1884.

Application filed October 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHESTER A. WELLER, of the city, county, and State of New York, have invented a new and Improved Device for Truing Grindstones, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of my invention. Fig. 2 is a sectional plan view of the device, taken on the line *x x* of Fig. 1; and Fig. 3 is a sectional elevation taken on the line *y y* of Fig. 1.

The invention will first be described in connection with the drawings, and then pointed out in the claim.

A represents the main bed-plate of the device. Upon this plate A is held, by the undercut cleats *a a*, the sliding frame B, which is composed of the main bar *b* and the side bars, *b' b²*, which latter are dovetailed at *c c* to receive the undercut edges of the cleats *a a*, as shown clearly in Fig. 1.

C is the main shaft of the device. This shaft is journaled in the bearings *d d*, formed at the outer ends of the side bars, *b' b²*, of the sliding frame B, and on this shaft C are placed the cutting-plates D, and this shaft C is adapted to be reciprocated longitudinally in the bearings *d d*, for giving the necessary sidewise movement to the cutting-plates D, to cause them to rapidly cut the stone.

Various means for reciprocating the shaft C might be employed; but I prefer to use the spirally-ribbed collar E, secured to one end of the shaft C, the rib *e* of which collar runs in contact with the grooved wheel F, journaled upon the bolt G, screwed into a screw-tap made through the enlargement *b³*, formed upon the upper side of the side bar *b²* of the sliding frame B. The cutting-plates D are disks of steel or chilled cast-iron, and they are placed loosely upon the shaft C, with the soft-rubber washers H H placed between them. The plates and washers are held in place upon the shaft C by means of the strong collar I, fixed to the shaft, and the sliding washer or plate J, held to the shaft C by the set-screws *c'* or otherwise. In practice the plate J will be clamped against the series of plates D and washers H with force only to compress the washers sufficiently to cause them to hold the plates D in an upright position when the device is not in action.

K is the screw for adjusting the sliding frame B and all of its attachments, which screw works through the upwardly-projecting plate L, formed upon the bed-plate A, and impinges at its inner end against or is swiveled in the main bar *b* of the frame B; and M N represent housings—the former for covering the plates D D, the latter for covering the ribbed collar E and wheel F.

In use the bottom plate, A, will be secured by screws passing through holes *e' e'*, or otherwise, upon a board, which will be secured to the frame of the grindstone in any convenient manner, the frame B being drawn back by or against screw K, so that the plates D will just clear the periphery of the grindstone. The stone will now be revolved and the screw K gradually turned until the plates D come in contact with the stone, which will cause the plates D and the shaft C to be revolved. In revolving, the shaft C, through rib *e* and grooved wheel F, will at the same time be longitudinally reciprocated, which will move the plates D sidewise back and forth across the periphery of the stone, which will cause the plates D to cut away the surface of the stone and remove all unevenness. The plates D in their sidewise movement are not rigid; but, owing to the elasticity of the washers H, they yield laterally with each reciprocation, which greatly augments their cutting action. As the stone is cut away by the plates D, the screw K will be gradually turned, bringing the plates up to the stone until the periphery of the stone is made perfectly true. In some cases the shaft C will be provided with a pulley or crank and given a positive motion, and instead of using the rubber washers H other flexible washers might be employed.

Constructed in the manner described the device is very cheap, and very effective and durable.

I am aware that it is not new to dress grindstones by traversing rotary cutters across their faces; but

What I do claim as new and of my invention is—

The combination of the rigid bed A, carrying nut-plate L and screw K, the frame B, sliding in ways of said bed, and carrying the housings M N, the screw-bolt G, carrying grooved wheel F, and journaled in said housings, and the shaft C, journaled in said housings, having the spiral end rib, *e*, fitting the groove of wheel F, and provided with cutter-disks D, having intermediate elastic spacers, all substantially as shown and described.

CHESTER A. WELLER.

Witnesses:
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