No. 775,346. PATENTED NOV. 22, 1904.

L. J. COX.

PLOWSHARE SHARPENER.

APPLICATION FILED JUNE 9, 1904.

NO MODEL.

Fig. 2.

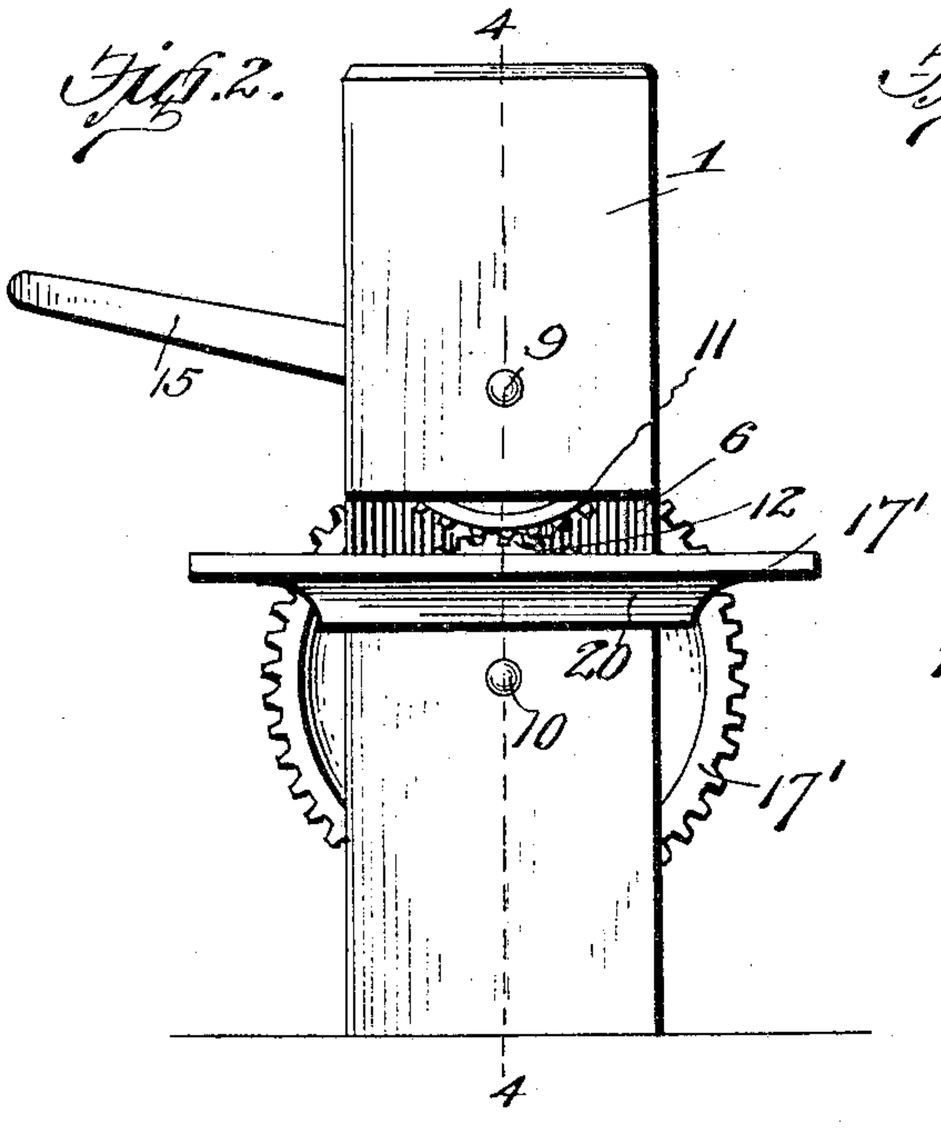


Fig. 1.

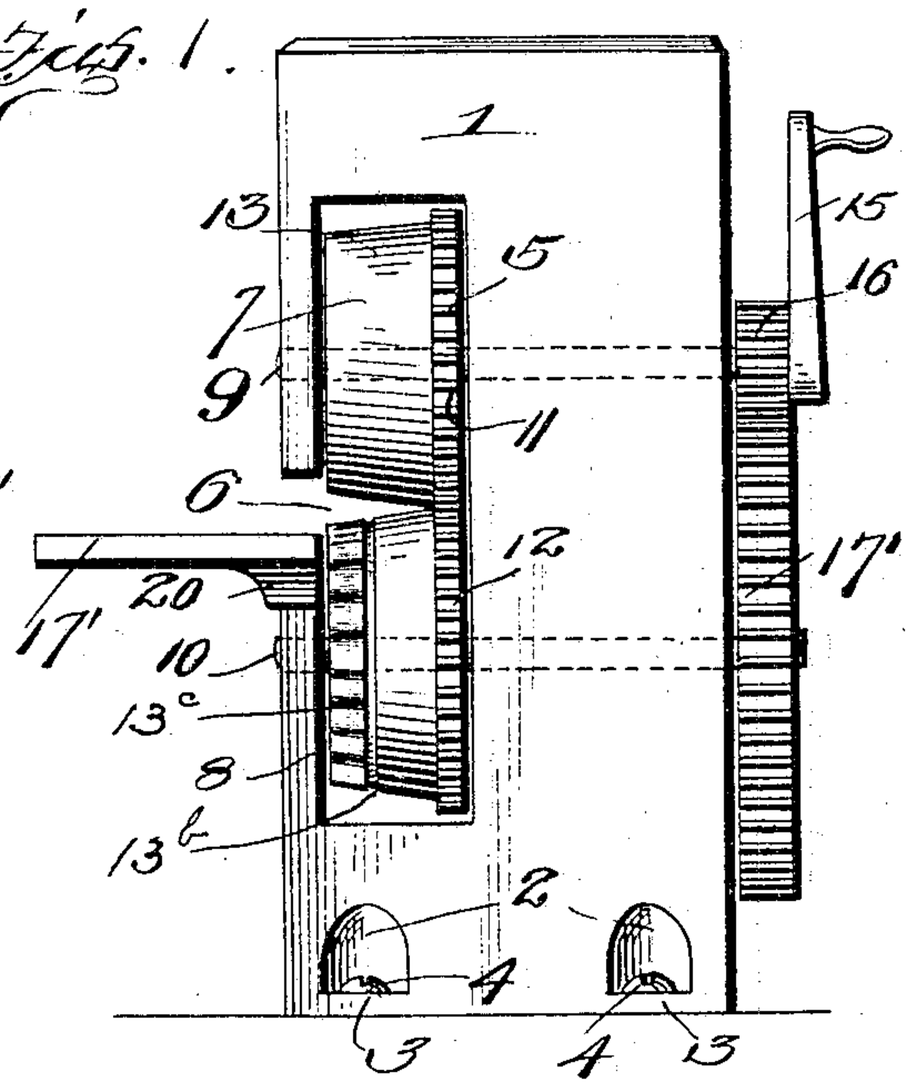


Fig. 3.

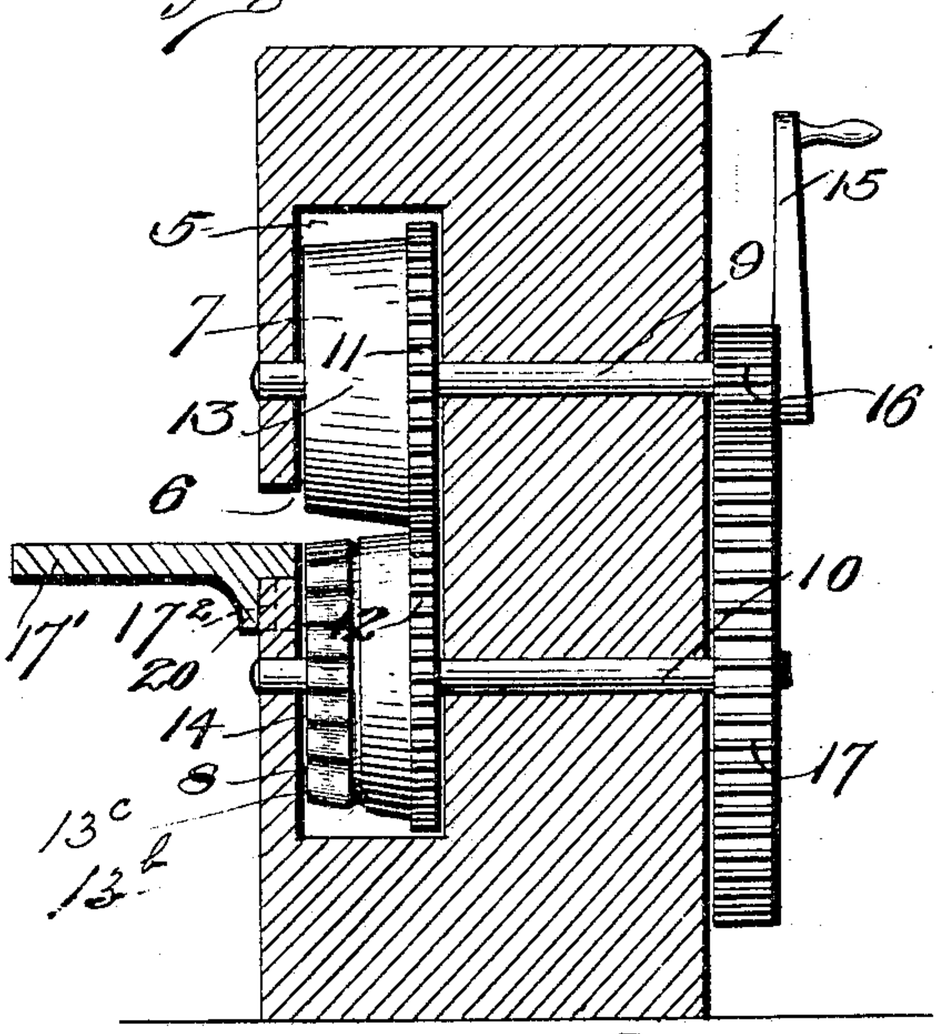


Fig. 4.

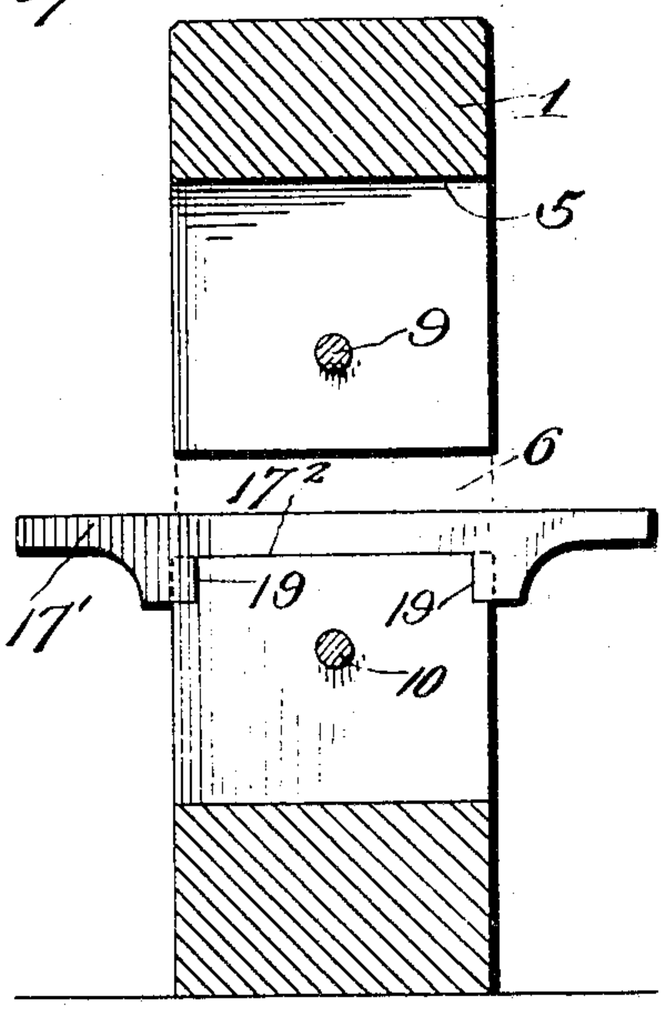
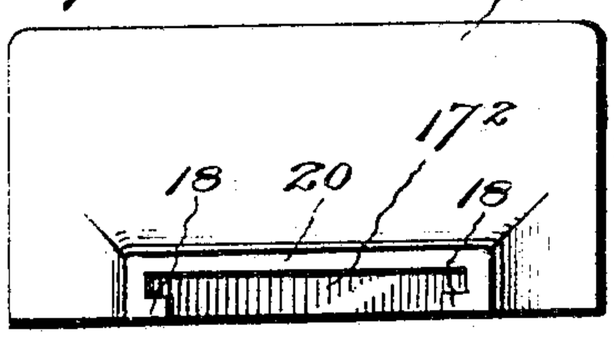


Fig. 5.



Witnesses.
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By
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No. 775,346. Patented November 22, 1904.

UNITED STATES PATENT OFFICE.

LEVI J. COX, OF HAVILAND, KANSAS.

PLOWSHARE-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 775,346, dated November 22, 1904.

Application filed June 9, 1904. Serial No. 211,828. (No model.)

To all whom it may concern:

Be it known that I, LEVI J. COX, a citizen of the United States, residing at Haviland, in the county of Kiowa and State of Kansas, have invented certain new and useful Improvements in Plowshare-Sharpeners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a machine for sharpening plowshares.

The object of the invention is to provide a machine of this character whereby the operation of sharpening the shares of plows may be conveniently, efficiently, and expeditiously performed.

In the accompanying drawings, Figure 1 is a front elevation of a sharpening-machine embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse section on a line through the axes of the rolls. Fig. 4 is a front to rear section on the line 4 4 of Fig. 1 looking toward the fixed table, and Fig. 5 is a bottom plan view of the table.

Referring now more particularly to the drawings, 1 represents the frame of the machine, which is shown in the present instance in the form of a casting provided at its base with notches or recesses 2, forming flanges 3 for the passage of bolts or screws 4 to secure said frame to the floor or a suitable support.

Formed in the frame, on one side of the center line thereof, is a vertical slot 5, opening through the same at the front and rear thereof, and in the adjacent side of the frame is a horizontal slot 6, which communicates with said slot 5. The slot 5 forms a receiving space or chamber in which are disposed sharpening-rolls 7 and 8, mounted, respectively, upon shafts 9 and 10, suitably journaled to rotate in the frame 1. The inner portions of the peripheries of these rolls are provided with spur-gear teeth 11 and 12, by which the rolls are geared together to rotate in unison at a uniform rate of speed. The remaining portion of the face or periphery 13 of the roll 7 is smooth-surfaced to its outer end, while the face or periphery 14 of the roll 8 has an inner smooth portion 14^a, an annular central groove or crease 14^b, and an outer corrugated or roughened surface 14^c. In order to reduce the opposite sides of the share down to a proper inclination and tapered to the point thereof, the said faces 13 and 14 are tapered outwardly from the gear-teeth 11 and 12, thus forming a receiving-space between them for the admission of the share which gradually increases in width toward the slot 6.

The shaft 9, carrying the roll 7, is provided at its outer end with an actuating crank-handle 15 and with a pinion 16, which meshes with a gear 17 upon the outer end of the shaft 10, carrying the roll 8, by which motion may be communicated to the said two shafts in unison. The purpose of the gear-teeth 11 and 12 on the two rolls 7 and 8 is to provide a meshing connection between the same which will adapt them to maintain a certain relation and at the same time prevent any tilting tendency or strain upon the shafts which might result from the use of the exterior actuating-gearing alone.

The upper edge of the side wall of the frame 1, below the slot 6, supports a feed-table 17′, upon which the share is supported while it is being sharpened. This table is so mounted that it may be conveniently detached whenever required, and for this purpose it is provided in its under side with a recess 17^2 to receive the upper edge of said base portion of the side wall and is provided at the opposite ends of said recesses with lugs 18 to interlock with recesses 19 in the side wall and at the outer side of said recess 17^2 is further formed or provided with a shoulder 20 to abut against the outer surface of the wall and support the table against strain in a horizontal or substantially horizontal position.

In the operation of the machine the share to be sharpened is first uniformly heated and then rested upon the table 17′ with its point directed toward the space between the rolls 7 and 8. Motion is then imparted to the rolls through the actuating-gearing and the share is forced between the faces 7 and 8 of the rolls and fed up gradually to press or roll the share to an edge to taper and sharpen it to the desired degree. By this means a plowshare may be conveniently, efficiently, and quickly

sharpened at a minimum expenditure of time and labor and cost of material.

The corrugated or roughened face 13[c] of the roll 8 bites into the heated metal of the plowshare, and thus serves as a feed-wheel, while the groove 13[b] back of the roughened face 13[c] prevents the share from sliding outward from between the rolls owing to the fact that the metal is pressed down into the groove or crease 13[b], thus preventing the share from withdrawal from between the rolls.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

1. In a machine for sharpening plowshares, the combination of a supporting-frame, tapered sharpening-rolls mounted in said frame, one of said rolls having a roughened or corrugated portion to serve as a feed-roll, and means for simultaneously revolving both rolls, substantially as described.

2. In a machine for sharpening plowshares, the combination of a supporting-frame, tapered sharpening-rolls mounted in said frame, a table projecting outward from the outer edge of the lower roll, said lower roll having its outer portion roughened to serve as means for feeding the share and provided with a crease or groove between the roughened portion and the smooth portion of said roll, and means for simultaneously revolving the rolls, substantially as described.

3. A machine of the character described having tapered pressing-rolls, one of said rolls being provided with means for feeding the share between the rolls and means for preventing the share from sliding from between the rolls, and means for revolving both rolls simultaneously.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEVI J. COX.

Witnesses:
BARD E. MATTHEWS,
GEO. KELLY.