April 29, 1924. 1,491,790

C. S. CUSHMAN

POLISHING DEVICE

Filed May 21, 1923

Fig. 1.

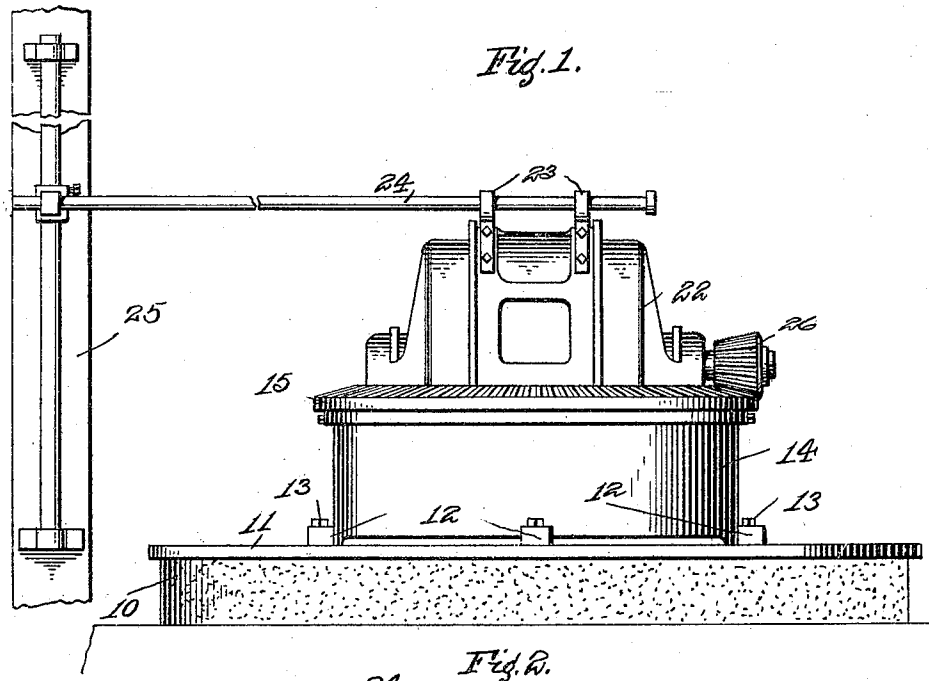



Fig. 2.

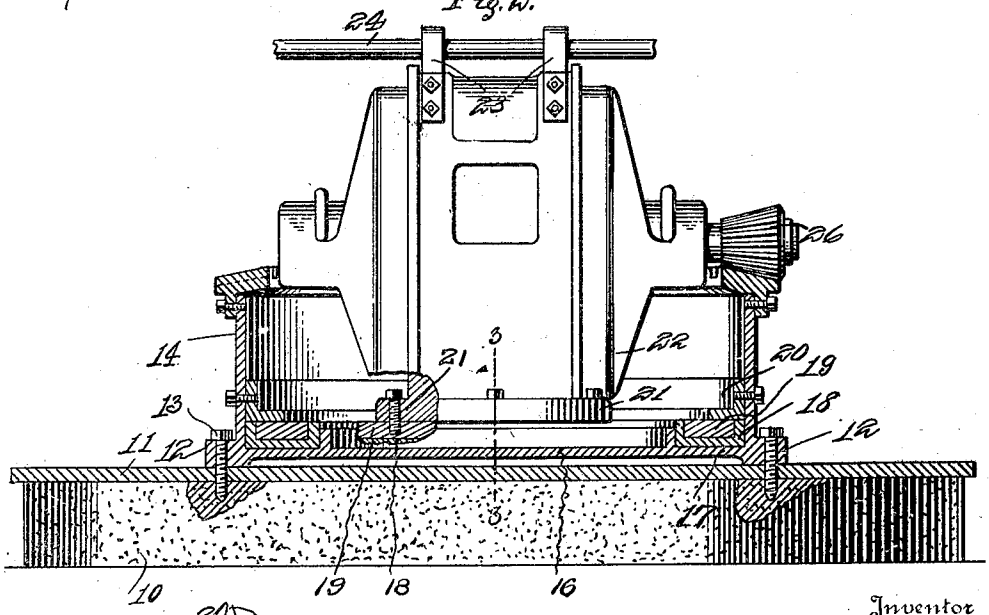
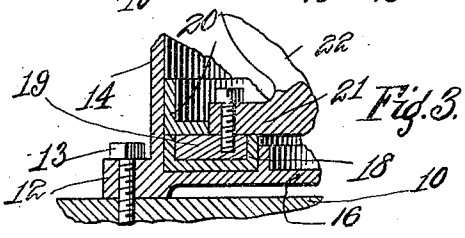



Fig. 3.




Inventor

Charles S. Cushman.

By Horace C. Saunders

Attorney

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# UNITED STATES PATENT OFFICE.

CHARLES S. CUSHMAN, OF BARRE, VERMONT.

## POLISHING DEVICE.

Application filed May 21, 1923. Serial No. 640,443.

*To all whom it may concern:*

Be it known that I, CHARLES S. CUSHMAN, a citizen of the United States, residing at Barre, in the county of Washington, State of Vermont, have invented certain new and useful Improvements in Polishing Devices; and I do hereby 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 new and useful improvements in polishing devices, and especially to devices for polishing marble, granite, and the like stone.

One object of the present invention is to provide a polishing device which obviates the use of the ordinary complicated system of driving belts, whereby the device may be more easily handled, and the cost of operation, as well as the time expended, will be reduced to a minimum.

Another object is to provide a device of this character wherein the polishing stone or wheel is mounted with respect to the driving motor, in such a way as to produce ease of rotation, as well as steadiness and alinement.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is an elevation of the polishing device forming the subject-matter of this application.

Figure 2 is a vertical sectional view through the device, the motor being in elevation.

Figure 3 is a sectional detail on the line 3—3 of Figure 2.

Referring particularly to the accompanying drawing, 10 represents the polishing wheel, on the upper face of which is secured the plate 11. Disposed above this plate 11, and having the feet 12 which are secured to the plate by means of the bolts 13, is a cylindrical casing 14. To the upper edge of the casing 14 there is secured a ring gear 15. In the bottom wall of the casing 14 there is formed a comparatively large recess 16, and bounded by the vertical circular flange 17, said flange being spaced inwardly from the wall of the casing. This flange 17, in cooperation with the wall of the casing, and the bottom wall thereof, forms a channel within which is disposed a channeled bearing 18 of Babbitt metal. Disposed within this bearing is a flat metal ring 19, the upper face of which is disposed slightly above the upper edge of the flange 17. Disposed within the casing, and secured to the circumscribing wall thereof, is an angle ring 20 the horizontal wing of which engages on the upper face of the ring, adjacent the periphery thereof, to retain the ring within the channel of the bearing. Disposed within the casing 14, and having the attaching lugs 21 secured to the upper face of the ring 19, is an electric motor 22. The upper portion of the casing of the motor is provided with the brackets 23 in which is disposed the rod 24, said rod being adjustably supported on the stand 25 for vertical and lateral movement.

On the shaft 24, of the motor 22 there is fixed a gear 26 which meshes with the ring gear 15.

In the operation of the device, the motor being set in motion, its gear 26 will drive the ring gear 15, causing the casing 14 to rotate, while the flat ring 19, together with the motor casing, remains stationary, such action causing the polishing wheel to be turned to produce a polish on the face of the stone. The rod 24, by reason of its connection with the motor casing and the stand, hold the motor from rotating with the casing 14. The angle ring 20 effectively holds the ring 19 in place within the babbitted bearing.

By this construction all complications of belts and pulleys are obviated.

What is claimed is:

A polishing device including a rotatable casing having an internal upwardly extending flange in its bottom wall cooperating with the wall of the casing to form a circular channel, a channeled ring seated within

the channel and rising slightly above the flange, a flat ring seated within the channel of the first ring, a motor casing secured on the flat ring, a flanged ring carried by the wall of the rotatable casing and engaging in retaining relation on both of said rings, means on the rotatable casing for attachment of a polishing element, and driving connections between the motor and the rotatable casing.

In testimony whereof, I affix my signature, in the presence of two witnesses.

CHARLES S. CUSHMAN.

Witnesses:

A. G. PARK,

JAMES SMART.