

March 20, 1928.

1,663,420

F. W. STOLL
GRINDING TOOL
Filed Aug. 6, 1926

Fig. 1.

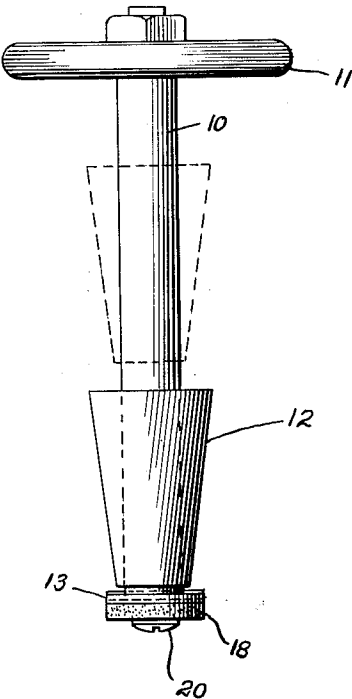


Fig. 2.

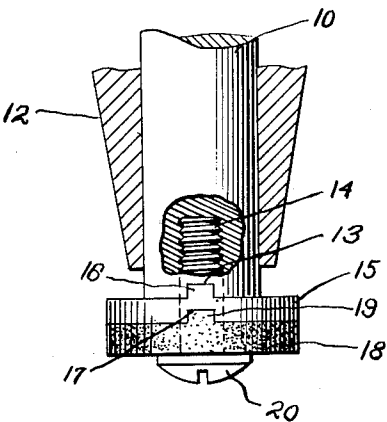
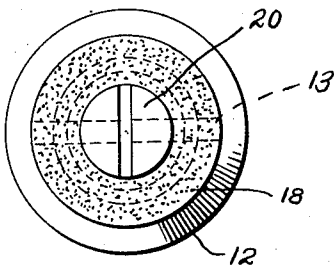


Fig. 3.



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UNITED STATES PATENT OFFICE.

FRED W. STOLL, OF CLEVELAND, OHIO.

GRINDING TOOL.

Application filed August 6, 1926. Serial No. 127,652.

This invention relates to grinders for preparing valve seats for properly seating valves thereon and which contemplates as an object a rotatable member carrying a guide member thereon for centering the same during the operation thereof.

Another object of the invention comprehends a grinding member keyed to a cushion member carried by the rotatable member and correspondingly associated therewith.

With the above and other objects in view, the invention further consists of the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawing, and pointed out in the appended claim.

In the drawing:

Figure 1 is an elevation of the invention.

Figure 2 is a fragmentary end elevation illustrating the relative association of the cushion member and grinding member with the rotatable member.

Figure 3 is a bottom plan view.

Referring to the drawing in detail, wherein like characters of reference denote corresponding parts, the reference character 10 indicates a spindle carrying a hand wheel 11 upon one end thereof, a tapered guide sleeve 12 is slidably mounted upon the spindle. The remaining end of the spindle is provided with a transversely disposed key way 13 and a threaded socket portion 14, the purpose of which will be presently apparent. A cushion disk 15 is provided with a transversely disposed upwardly raised key 16 upon the upper side thereof adapted for insertion within the key way 13. The underside of said disk is provided with a key way slot 17 disposed immediately beneath the key 16 in order that the thickness and strength of the disk will be uniform throughout. A grinding disk or wheel 18, formed of a suitable abrasive substance or faced with a suitable abrasive, forms a key 19 upon the upper side thereof adapted for reception within the key way slot 17 to prevent independent circumferential or rotary movement of the grinding disk upon the spindle. A retaining element 20 is inserted centrally of the cushion member 15 and grinding member 18 to position and secure the shank thereof within the socket 14 of the spindle 10. Said retaining element is provided with a kerf within the head thereof to facilitate adjustment to the grinding

member and to permit the same to be removed or replaced when necessary.

The invention is primarily applicable for use upon a well known type of valve, the globe valve, which is largely used in most piping systems for water, air and steam. The particular type of valve, not shown, is first dismantled, that is, the bonnet, spindle and valve are removed as a unit. The spindle 10, of applicant's, is then inserted within the casting of the valve, the guide sleeve 12 centers the spindle within the opening from which the bonnet was removed whereby the grinding member 18 may be evenly seated upon the valve seat within the casting. Successive oscillations or rotations of the hand wheel 11 will impart like movement to the spindle 10 and grinding member 18 whereby the valve seat may be evenly ground to render the valve in its entirety, leak proof.

The cushion disk 15 is adapted to seat the grinding disk 18 thereon to prevent the latter from breaking and to hold the same against independent rotary movement.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having thus described my invention, what is claimed is:

A grinding tool comprising a spindle, a hand wheel carried upon one end thereof, a tapered guide sleeve slidably mounted upon said spindle to guide the same upon its work, the remote end of the spindle being provided with a key way extended transversely thereof and communicating at an intermediate point in its length with a threaded socket portion, a cushion member provided with a key upon one side fitted within a key way and a key way slot within its opposite side, a grinding element provided with a key upon one side received within the key-way slot of the cushion member, and a fastening element passed through the grinding element, and disk and threaded within the socket to hold the grinding element against independent rotary movement upon the spindle and to prevent breakage upon the member.

In testimony whereof I affix my signature.

FRED W. STOLL.