J. H. BURKE AND O. A. WILMING.

CHUCK.

APPLICATION FILED JAN. 28, 1920.

1,402,144. Patented Jan. 3, 1922.

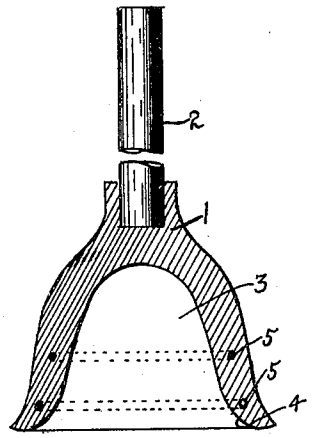


FIGURE 1

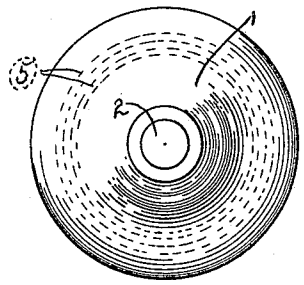


FIGURE 2

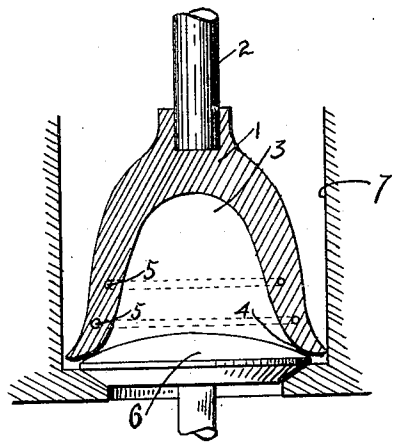


FIGURE 3

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JOHN H. BURKE, OF SAN JOSE, AND OTTO A. WILMING, OF SAN LUIS OBISPO, CALIFORNIA.

CHUCK.

1,402,144. Specification of Letters Patent. Patented Jan. 3, 1922.

Application filed January 28, 1920. Serial No. 354,667.

To all whom it may concern:

Be it known that we, JOHN H. BURKE and OTTO A. WILMING, citizens of the United States, and residents, respectively, of San Jose, in the county of Santa Clara and State of California, and San Luis Obispo, in the county of San Luis Obispo and State of California, have invented certain new and useful Improvements in Chucks, of which the following is a specification.

Our invention relates to a chuck rendered operative by the formation of a vacuum therein.

It is the object of our invention to provide a chuck of the character indicated that is peculiarly adapted for use in restricted space and that will be highly efficient in its practical application, especially when used as a holder for grinding tappet valves and the like.

In the drawing:—

Figure 1 is a vertical transverse section through our improved chuck.

Figure 2 is a plan view of the same.

Figure 3 is a vertical transverse section through our improved chuck operatively positioned with relation to a valve.

Referring more particularly to the drawing, 1 indicates a body portion of elastic material such as vulcanized rubber formed as an inverted cup and secured to a suitable handle 2 as shown. The cup portion 3 may be of any suitable depth but is provided with a rounding shoulder as at 4 for the purpose hereinafter described. At 5 are shown rings of inelastic material imbedded in the walls of cup portion 3, spaced apart as shown and the outer one positioned adjacent the curved shoulder 4.

Since the purpose for which this chuck was designed is particularly for holding valves for grinding and for removing valves from positions not otherwise easily reached, its peculiar adaptation for such work will be particularly described.

The interior of the chuck is first well coated with oil in order to prevent the access of air to cup portion 3 after the same has been expelled by pressing the device down tightly upon the valve 6, the curved shoulder 4 conforming easily and accurately with the surface of the valve so as to secure the full effect of the oil placed thereon to prevent the access of air to the cup portion 3.

This smooth close action of shoulder 4 is still further accentuated by rings 5, the latter being inelastic and therefore causing all of the force applied to the device in affixing the same to be exerted downwardly in securing a practically perfect vacuum rather than a spreading of the device as would otherwise be the case.

It may now be seen that with a device of this kind valves enclosed in narrow spaces as by walls 7 may be readily manipulated, rings 5 serving to prevent the walls of the cup portion 3 from spreading out and contacting with the walls 7.

One of the particular uses of this chuck is to hold a valve while grinding the same upon its seat, and with the construction set forth it is possible to easily grind valves in almost any position in which they may be found.

It is understood of course that we do not wish to be confined to the specific embodiment of our invention herein disclosed, but to include all changes in form and construction that may be made within the scope of the appended claim.

We claim:—

A chuck comprising an elastic vacuum cup, a handle therefor and a ring of inelastic material imbedded in the wall of said cup adjacent the open end thereof whereby the open end of the cup will be held against spreading.

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