G. C. BROWN.

VALVE GRINDING TOOL.

APPLICATION FILED FEB. 20, 1917.

1,263,202. Patented Apr. 16, 1918.

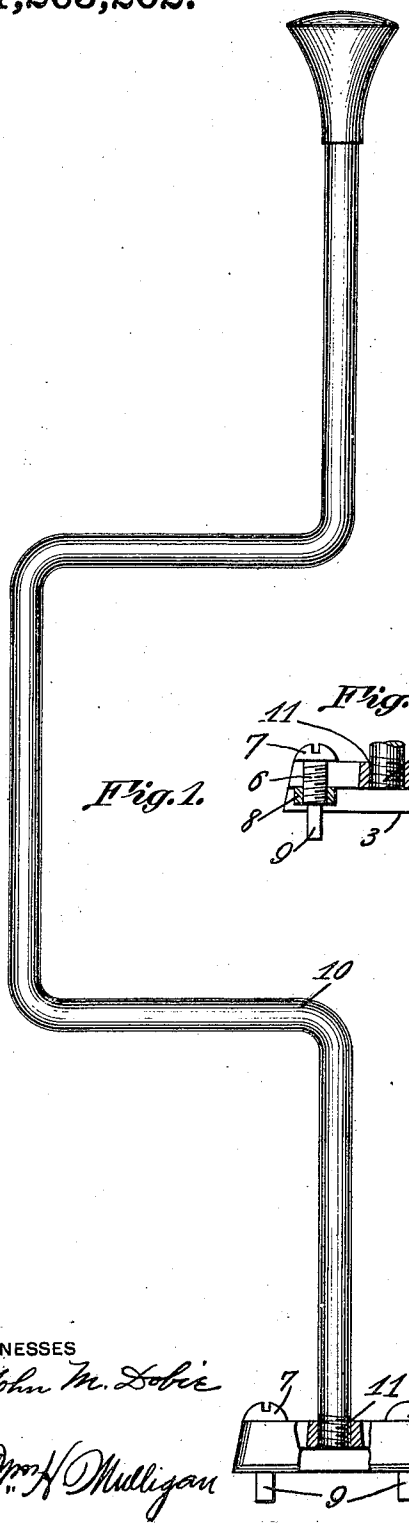


Fig. 1.

Fig. 2.

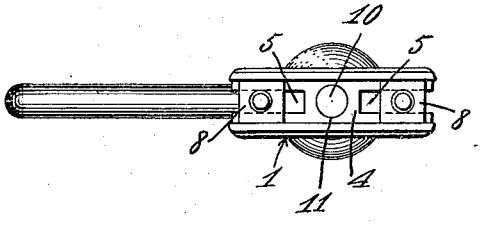
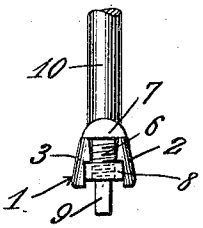


Fig. 4.

Fig. 3.



George C. Brown, INVENTOR

WITNESSES

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VALVE-GRINDING TOOL.

1,263,202. Specification of Letters Patent. Patented Apr. 16, 1918.

Application filed February 20, 1917. Serial No. 149,870.

To all whom it may concern:

Be it known that I, GEORGE C. BROWN, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, have invented certain new and useful Improvements in Valve-Grinding Tools, of which the following is a specification.

This invention relates to valve grinding tools and the primary object of the invention is to provide an improved tool for engaging the ordinary circular disk-valve whereby the latter may have imparted to it the necessary oscillations for properly grinding its seating surfaces.

Another object of the invention is to provide a tool of this character engageable with the diametrically opposite openings commonly found in disk-valves and including means for adjusting the tool whereby valves of different sizes may be accommodated.

Another object of the invention is to provide a tool having valve engaging elements that are associated with the adjusting means whereby a single element provides both the valve engaging member and the adjusting means.

A further object of this invention is the provision of a valve grinding tool which consists of comparatively few parts and is simple in construction, but durable and well adapted to withstand the rough usage to which devices of this character are ordinarily subjected.

For a full description of the invention and the advantages and merits thereof, reference is to be had to the following description and the accompanying drawings, wherein is illustrated the preferred form of my invention, in which;

Figure 1 is an elevation of the tool showing the same employed in connection with a suitable turning member.

Fig. 2 is a bottom plan view.

Fig. 3 is an end view.

Fig. 4 is a vertical longitudinal section.

Referring to the drawing, wherein is illustrated the preferred form of my invention, and in which like numerals of reference indicate corresponding parts throughout the several views, the body 1 of the tool consists of an elongated piece of suitable material having its sides 2 and 3 disposed at an angle and provided on its bottom with a longitudinal channel 4 extending the entire length and open at each end of the body portion. The side walls of the channel 4 are perfectly straight. Extending inwardly from each end of the body portion is a slot 5 and these slots also communicate with the channel 4 and their side walls are disposed at the opposite angle to that of the side walls 2 and 3 as clearly shown by Fig. 3 of the drawing.

Vertically disposed in each of the slots 5 is a fastening screw 6 the head 7 of which rests upon the top surface of the body portion at each side of its corresponding slot. The head of the screw is provided with a suitable kerf whereby the screw may be turned for tightening and loosening the same. A square nut 8 is arranged in the channel 4 at each end thereof and each nut receives one of the screws 6, the screw threaded shank of the screw being extended through the screw threaded opening in the nut. Each screw 6, however, is provided with an extension 9 which is reduced in diameter to a size smaller than the screw threaded portion of the screw for providing the valve engaging elements that will be received in the openings commonly found in the ordinary valve disk.

It will be noted that the longitudinal adjustment, provided by the slots 5, permits the screws to be moved longitudinally whereby adjustment of the members 9 may be obtained for fitting any desired size or type of valve.

A suitable turning tool 10 has one end screw threadedly engaged with a screw threaded opening in the center of the body portion and this tool is constructed to impart the necessary oscillatory movement used during the grinding process.

From the foregoing it will be observed that a very simple and durable valve grinding tool has been provided, the details of which embody the preferred form. I desire it to be understood however, that slight changes in the minor details of construction may be made without departing from the spirit of the invention or the scope of the claims hereunto appended.

I claim:

1. A tool of the class described comprising a turning tool having one end screw-threaded, a body portion provided with a central screw-threaded opening adapted for attachment to the said screw-threaded end of the tool, the said body portions having a longitudinal recess formed in its bottom surface, and slots extending inwardly from the

ends of the body portion and communicating with the said recesses, a pair of screws mounted in the slots and longitudinally adjustable therein, the said recesses having nuts mounted for sliding movement and engageable with the said screws, the latter being provided with valve-engaging portions projecting beyond the said recess and adapted for longitudinal adjustment with the said screws when the latter are loosened.

2. A tool of the character described comprising a turning tool having one end screw-threaded, a body portion provided with a longitudinal recess formed in its bottom sides and having slots extending inwardly from the ends of the body portion and communicating with the said recesses, screws arranged in longitudinally spaced relation, one of said screws being extended through slots and adapted to be moved into close proximity to the said end of the turning tool, the said slots communicating with the end of the body portion to permit removal of the said screws from the slots, nuts arranged in the said recess and engageable with the extended ends of the said screw, the latter having screw heads mounted on the top of the body portion to facilitate manipulation and adjustment of the said screw, and valve-engaging elements extending beyond the said nut and carried by the said screws.

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

GEORGE C. BROWN.

Witnesses:
H. F. PELHAM,
RUSSELL E. WARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."