

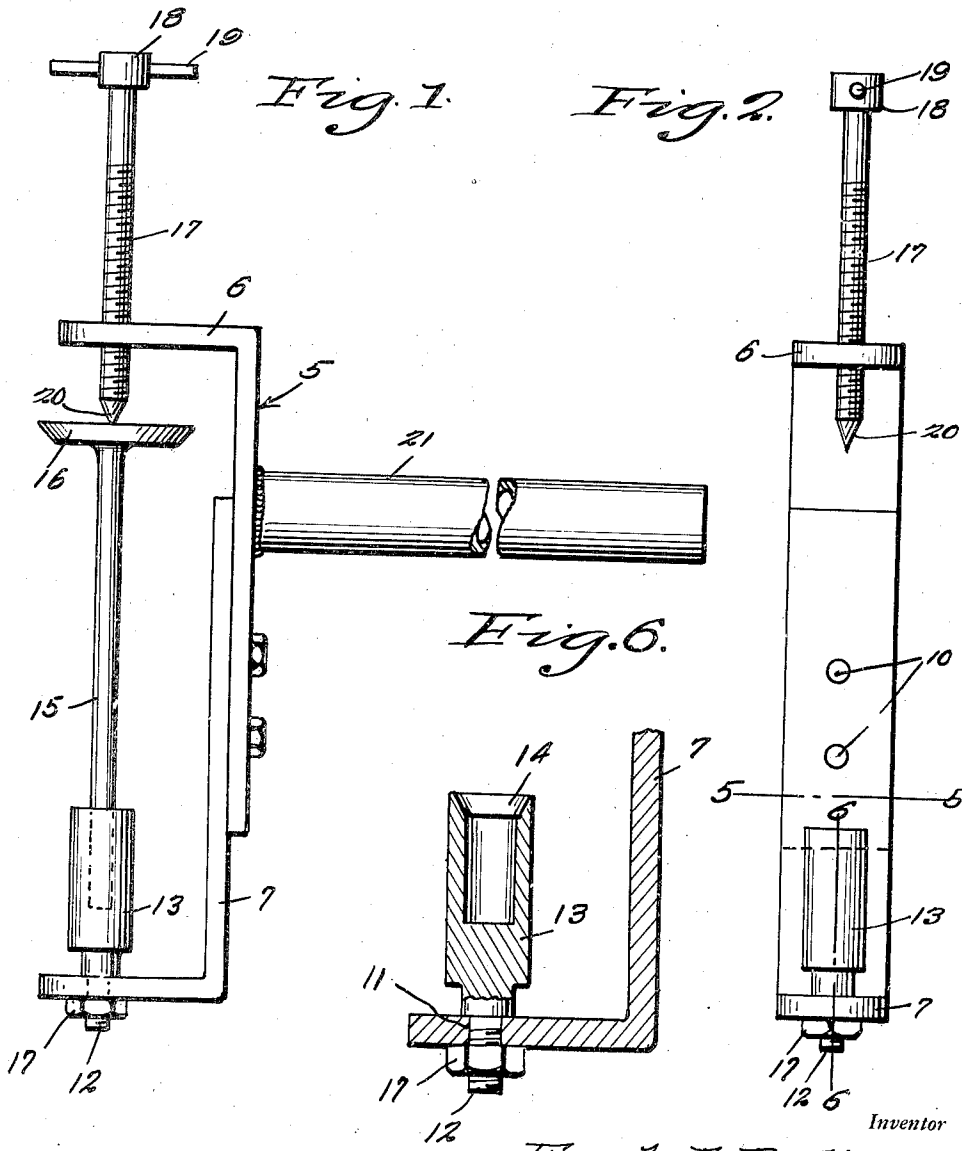
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F. D. BOOTH
VALVE HOLDER

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Filed May 29, 1943

2 Sheets-Sheet 1



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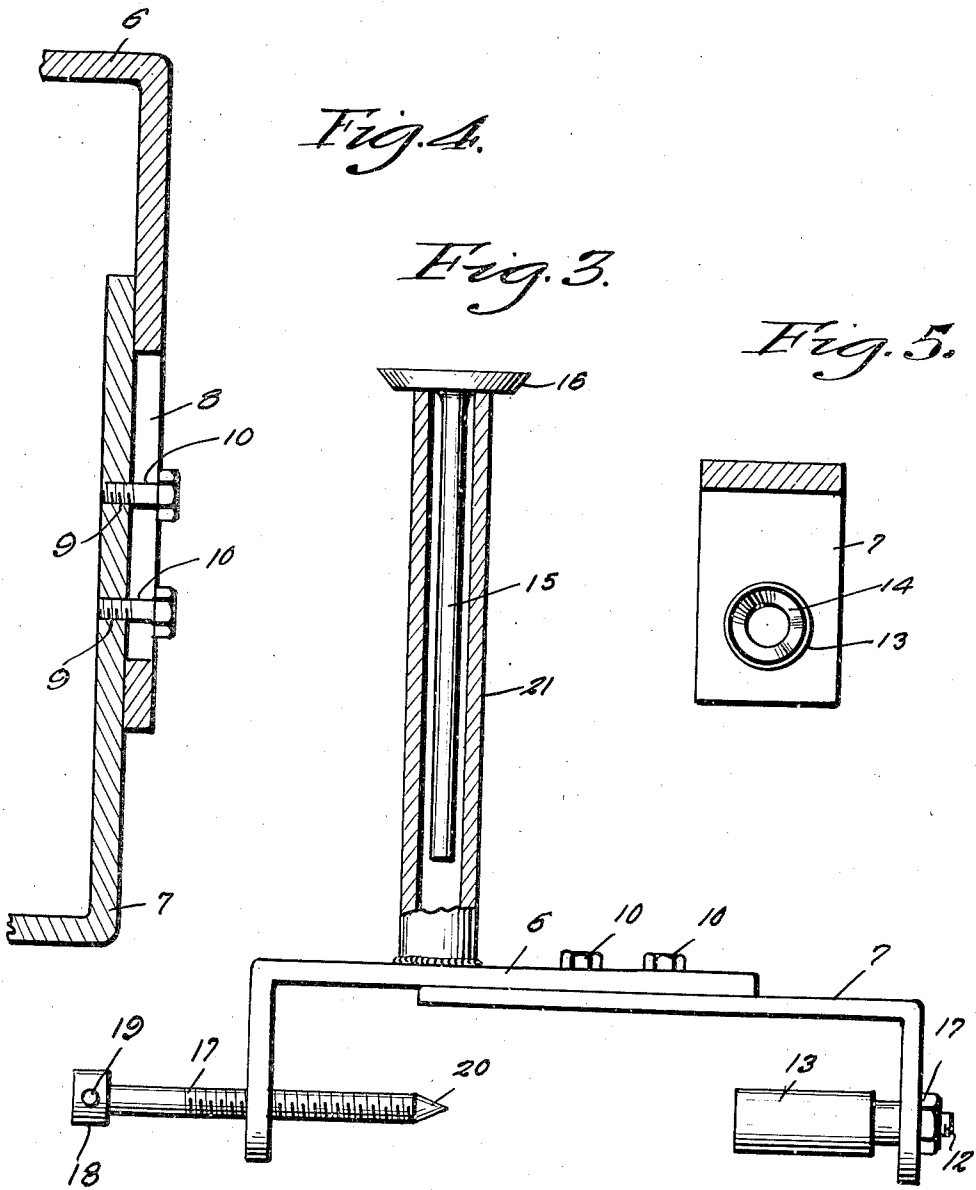
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UNITED STATES PATENT OFFICE

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VALVE HOLDER

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Application May 29, 1943, Serial No. 489,052

2 Claims. (Cl. 51-217)

This invention relates to new and useful improvements in holders, and more particularly to a holder especially adapted for holding internal combustion engine valves while they are being cleaned by rotary buffer or other cleaning mechanism.

The principal object of the present invention is to provide a device for holding a valve conveniently while the same is being cleaned by mechanical or manual means, in a manner whereby it will be unnecessary that the cleaning element engage the hand or hands of the workman.

Another important object of the invention is to provide a valve holder which can be utilized in holding a valve in various positions to permit complete cleaning thereof.

Other objects and advantages of the invention will become apparent to the reader of the following description.

In the drawings:

Figure 1 represents a side elevational view of the holder shown holding a valve.

Figure 2 is a front elevational view of the holder without a valve.

Figure 3 is a side elevational view showing a different position of the holder with the handle thereof intact to show one manner of holding a valve.

Figure 4 is a vertical sectional view through the frame of the holder.

Figure 5 is a cross-section on line 5-5 of Figure 2.

Figure 6 is a section on line 6-6 of Figure 2.

Referring to the drawings wherein like numerals designate like parts, it can be seen that the holder includes a frame 5 made up of a pair of interlapping L-shaped sections 6, 7, the long leg portions of which overlap, one leg having a slot 8 therein, while the other has threaded openings 9 therein to accommodate machine screws 10 disposed through slot 8.

The section 7 has an opening 11 in the short leg thereof for receiving the threaded shank 12 of an upstanding socket structure 13, the upper interior of the structure 13 being beveled as at 14 to facilitate the insertion of the stem 15 of a poppet valve unit 16. A nut 17 is provided on the shank 12 to adjustably hold the socket structure 13 in the position shown in Figures 1, 2 and 6.

The short leg of the other section 6 has a threaded opening therethrough for receiving a threaded shaft 17 having a head 18 and a hand rod 19 disposed therethrough. The lower end of

the shaft 17 is pointed as at 20 to bear into the usual center recess in the top of the valve element 16.

The section 6 has a tubular handle 21 projecting therefrom, and preferably welded to the section 6. The outer end of the handle 21 is open as is apparent in Figure 3.

When the side portions of the valve element and stem are to be cleaned, the valve unit can be placed in the holder in the position shown in Figure 1, with the free end of the stem 15 disposed in the socket structure 13 while the head of the valve is engaged by the clamp screw 17. The device can now be held against a rotary buffer or other cleaning mechanism.

The top surface of the valve element can be cleaned by disposing the stem of the valve unit into the handle 21 as shown in Figure 3, thus exposing the entire top surface of the valve element.

While the foregoing specification sets forth the invention in specific terms, it is to be understood that numerous changes in the shape, size, and materials may be resorted to without departing from the spirit and scope of the invention as claimed hereinafter.

Having described the invention, what is claimed as new is:

1. A hand tool for holding an internal combustion engine poppet valve and presenting it to a cleaning element, comprising a U-frame having a relatively long intermediate portion and relatively short upper and lower end legs, a handle rigid with and projecting from said intermediate portion in a direction opposite to that in which the legs project, said legs being spaced apart for a distance greater than the length of the valve, a socket fixed to and projecting upwardly from the lower leg and adapted to receive the free end portion of the stem of the valve, and a clamping screw threaded through the upper leg and having a pointed lower end arranged to bear into the center recess of the head of the valve.

2. A hand tool for holding an internal combustion engine poppet valve and presenting it to a cleaning element, comprising a U-frame having a relatively long intermediate portion and relatively short upper and lower end legs, a handle rigid with and projecting from said intermediate portion in a direction opposite to that in which the legs project, said legs being spaced apart for a distance greater than the length of the valve, a socket fixed to and projecting upwardly from the lower leg and adapted

to receive the free end portion of the stem of the valve, and a clamping screw threaded through the upper leg and having a pointed lower end arranged to bear into the center recess of the head of the valve, said U-frame comprising a pair of similar L-shaped strap metal members having longer arms overlapped at their adjacent ends,

and means connecting said overlapped ends for relative longitudinal sliding adjustment to vary the length of said intermediate portion and enable the tool to accommodate valves having stems of different lengths.

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