Nov. 25, 1924. 1,516,712

W. W. COCHRAN

VALVE LIFTER

Filed Jan. 5, 1924

Fig. 1.

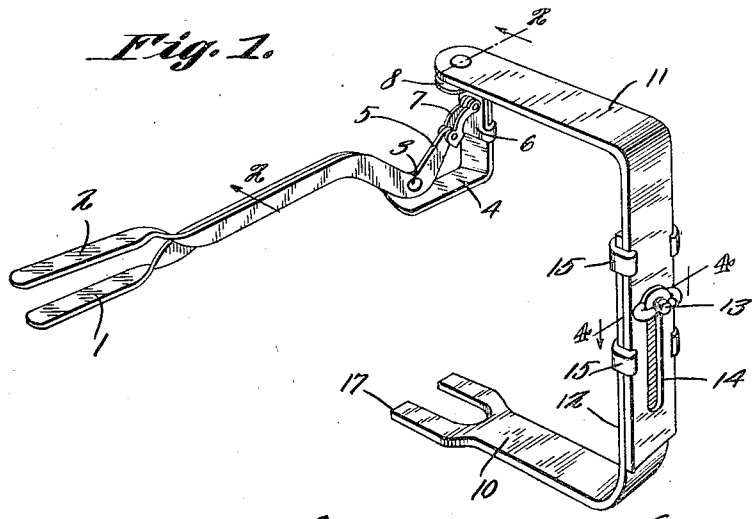



Fig. 2.

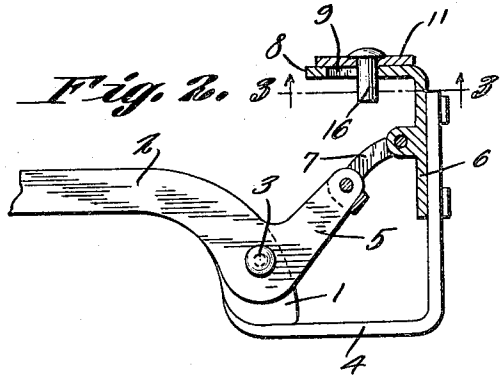



Fig. 3.

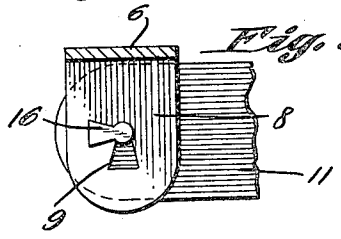
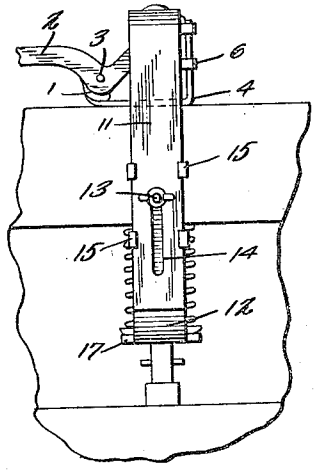



Fig. 5.



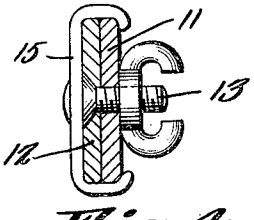




Fig. 4.

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WITNESS:

Patented Nov. 25, 1924. 1,516,712

# UNITED STATES PATENT OFFICE.

WALTER WARNER COCHRAN, OF COLTON, NEW YORK.

## VALVE LIFTER.

Application filed January 5, 1924. Serial No. 684,621.

*To all whom it may concern:*

Be it known that I, WALTER W. COCHRAN, a citizen of the United States, residing at Colton, in the county of Saint Lawrence and State of New York, have invented new and useful Improvements in Valve Lifters, of which the following is a specification.

This invention relates to a valve lifting tool, the general object of the invention being to provide means for lifting the springs of valves and to hold them in lifted position while the pins or keys are being extracted.

Another object of the invention is to make the spring engaging member adjustable so that it can be used on different sizes of motors and on both the valve in the head type and the valve in the body type.

A still further object of the invention is to provide a pair of handle members which are pivotally connected together, one member having a guideway thereon to receive a slide and the other having means for connecting the slide therewith.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a perspective view of the device.

Figure 2 is a section on line 2—2 of Figure 1.

Figures 3 and 4 are detail views.

Figure 5 is a view showing how the invention is used.

In these views, 1 and 2 indicate a pair of handle members which are pivoted together by the pin 3. The member 1 is provided with an angle part 4 and the member 2 is provided with a nose 5. A slide 6 engages the outer part of the angle member 4 and a curved link 7 connects this slide with the nose so that when the handle members are forced together the slide is moved toward the extremity of the member 4 and the parts are so arranged that the slide will be locked in this position until the handles are forced apart. The slide carries a right-angle extension 8 which is provided with a keyhole-shaped slot 9. A valve spring engaging member 10 composed of two angle parts 11 and 12 is adjustably connected together by the bolt 13 passing through a hole in one part and a slot 14 in the other part, the members being provided with the guiding lugs 15 so that one member is slidably connected with the other member. The member 12 is provided with a key 16 at its outer extremity for engaging the keyhole slot in the slide so that the spring engaging member is rotatably and removably connected with the slide. The outer extremity of the part 11 is provided with the fork 17 for engaging the valve stem in the usual manner. As will be seen, the valve spring engaging member is adjustably connected with the slide so that it can be adjusted to a suitable position to be placed on the valve stem under the spring. The inner part of the member 4 is seated upon the valve head and then the handles are pressed together to raise the slide and the spring engaging member so as to lift the spring off its seat. The parts will remain in this position so that the key or pin can be pulled from the valve stem. When the device is used on an overhead valve motor, the engine head is set edgewise and then the handles are spread apart and placed in horizontal position. The member 10 straddles the head with the fork engaging the stem and the member 4 against the head. Then the handles are pressed toward each other so as to close the spring and leave the pin or key exposed so that it can be readily removed with the fingers.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the

combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a pair of handle members pivotally connected together, an angle extension on one member, a nose on the other member, a slide on the outer part of the extension, a link connecting the slide with the nose and a valve spring engaging member rotatably connected with the slide.

In testimony whereof I affix my signature.

WALTER WARNER COCHRAN.