Feb. 9, 1943. H. L. OSEROWSKY 2,310,372

VALVE LIFTER

Filed Aug. 24, 1942

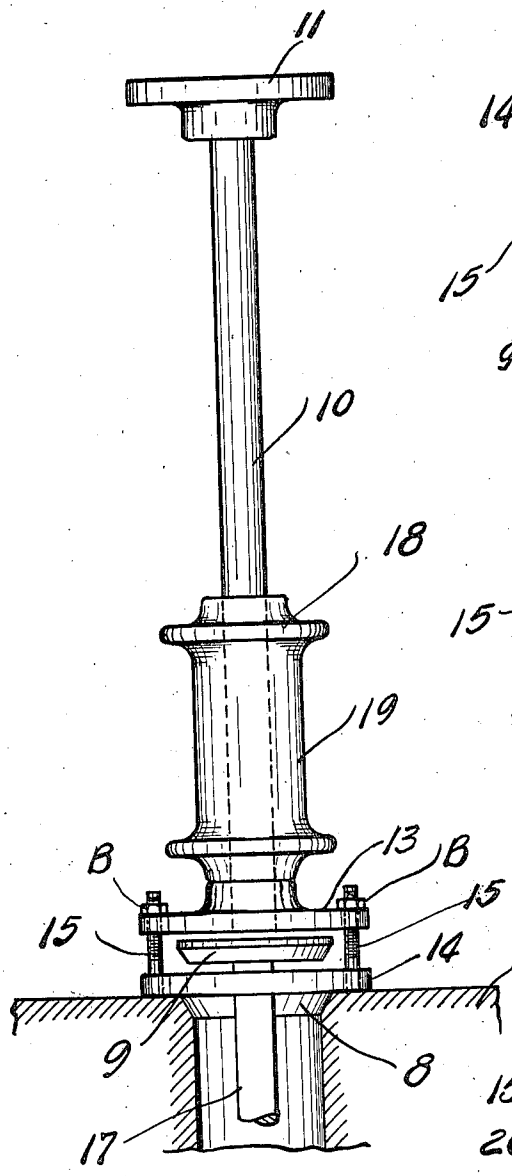


FIG. 1

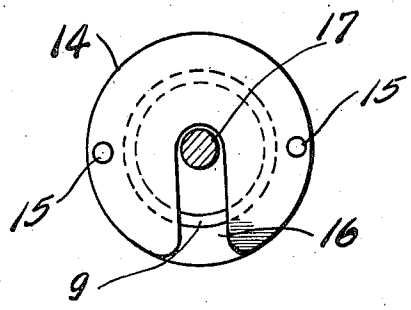


FIG. 2

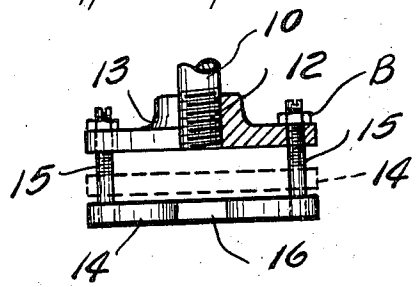


FIG. 3

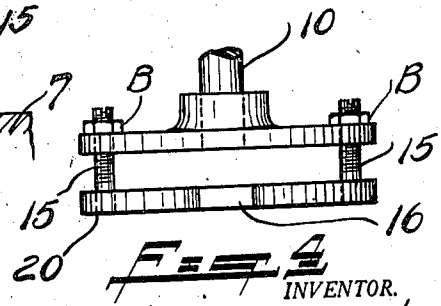


FIG. 4

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Patented Feb. 9, 1943

2,310,372

UNITED STATES PATENT OFFICE

2,310,372

VALVE LIFTER

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Application August 24, 1942, Serial No. 456,119

1 Claim. (Cl. 29—86.3)

This invention relates to valve lifters such as used for removing tight, sticky or frozen valves from engines, and more particularly to valve lifters of the impact type in which the valve is removed by impact transmitted directly in alignment with the axis of the valve.

One of the prime objects of the invention is to provide a valve lifter which can be used on any type of engine, including the conventional L-head engine, engines with overhead valves, as well as truck, tractor, and marine engines.

Another object is to design a very simple, practical, and quick-acting valve puller which can be quickly attached to the valve, and which is constructed to grip and engage the entire under face of said valve, thereby uniformly distributing the stresses of the impact shock, and avoiding bending stresses which also tend to break or chip the edges of the valve.

A further object is to design an adjustable valve lifter, the gripping members of which can be adjusted to accommodate valves of various sizes, and which can be very quickly attached and/or detached from the valve proper.

A further object still is to design a valve lifter by means of which valves can be very quickly removed, which is very simple and economical to manufacture and assemble, and which requires no auxiliary support or leverage to assist in the removing operation.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts, hereinafter more fully described, illustrated in the accompanying drawing, and more particularly pointed out in the appended claim, it being understood that changes may be made in the form, size, proportion, and minor details of construction, without departing from the spirit, or sacrificing any of the advantages of the invention.

In the drawing:

Fig. 1 is a side elevational view of my valve lifter as applied to a valve, the engine block being shown in section.

Fig. 2 is an inverted plan view of the tool.

Fig. 3 is a fragmentary edge view of the tool, the broken lines illustrating the adjustment of the lower disk.

Fig. 4 is also a fragmentary edge view illustrating the tool equipped with larger disks such as used for large valves.

Referring more particularly to the drawing, in which I have shown one embodiment of my invention, the numeral 7 indicates the motor block of a conventional engine provided with a valve seat 8 as usual and a valve 9 is mounted thereon in the conventional manner.

The valve remover comprises a vertically disposed stem member 10 having a head 11 provided on its upper end, the lower end being threaded as at 12 and engages a disk 13 which forms a part of the valve gripping means.

The gripping means also includes a disk member 14, similar to the disk 13 and adjustably secured thereto by means of circumferentially spaced bolts or studs 15 having locking nuts B provided thereon as shown, a slotted opening 16 being formed in the lower disk to accommodate the valve stem 17 when the tool is applied and/or removed.

A striker member 18 is slidably mounted on the stem 10, this is relatively heavy and has a turned barrel 19 to form a hand hold for the operator, this striker being forced upward against the head 11 to form a sharp impact or hammer blow when the tool is in use.

In operation, the disks 13 and 14 are first moved over the valve head 9 from the side into the position shown in Fig. 1 of the drawing, the studs 15 are then adjusted to suit after which the operator grasps the striker 18, forcing it upwardly against the head 11 to produce a sharp shock or hammer blow, and one or more such shocks readily frees and lifts the valve, whereupon the valve is disengaged from the tool which is then free for use on the next valve.

For removing truck or tractor valves, or other valves of larger size, the stem 10 is backed out of the disk 13 and disks of larger diameter, such as shown at 20 in Fig. 4 are employed, the studs 15 are adjusted in the same manner and the removing operation is exactly the same. The removal is quick and easy, and requires but very little effort.

From the foregoing description, it will be obvious that I have perfected a very simple, practical, and inexpensive valve removing tool for removing valves from engines.

What I claim is:

A valve lifter comprising a stem, a head on the upper end thereof, vertically spaced disks mounted on the lower end of the stem and adapted to accommodate a valve head therebetween, spaced apart, threaded studs adjustably connecting said disks, a radial slot in the lower disk, and a striker member slidably mounted on said stem, and adapted to be raised to provide sharp impact with the head when the valve lifter is operated.

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