

June 19, 1923.

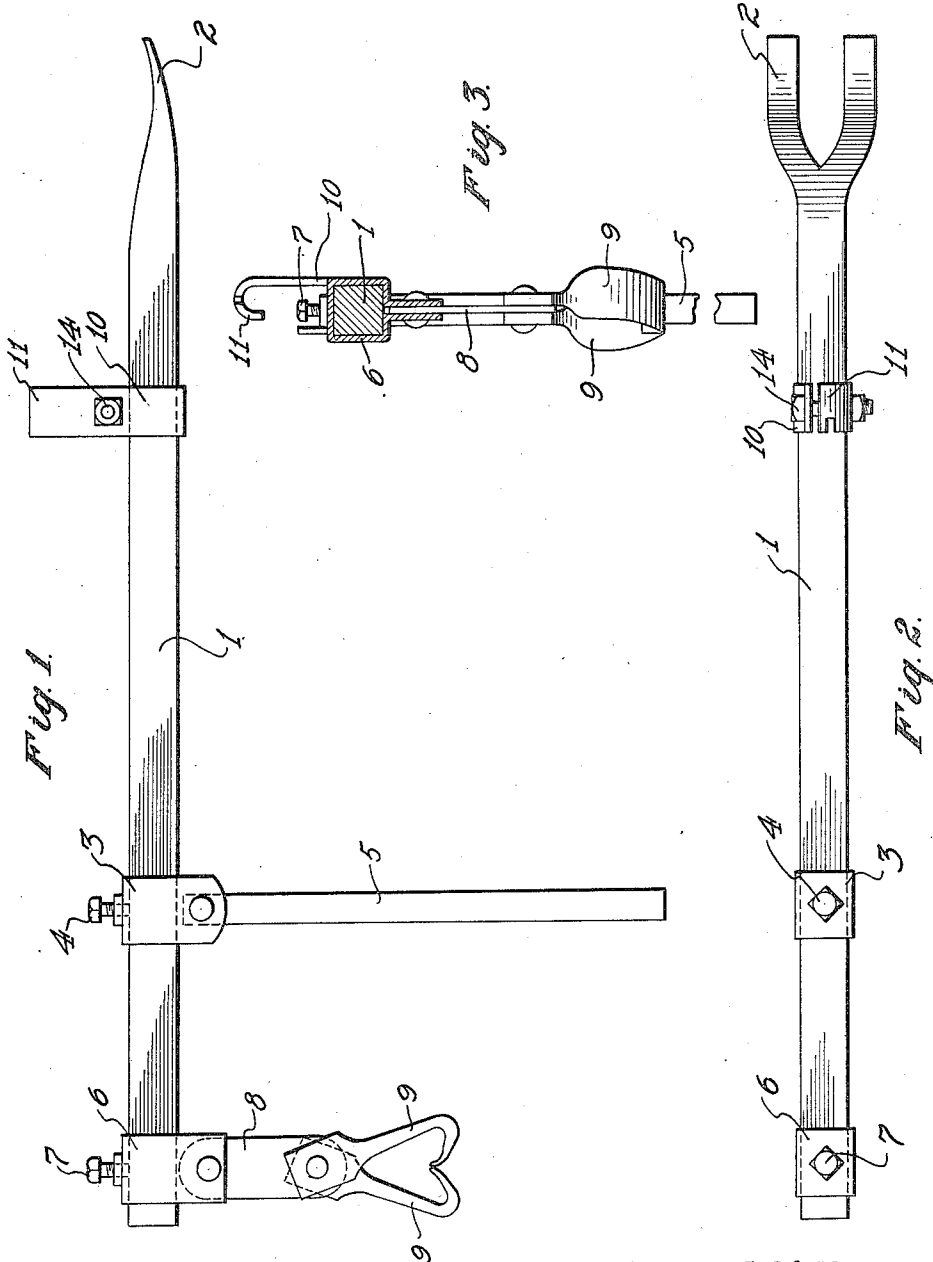
E. J. MILLER

VALVE LIFTER

Filed May 6, 1921

1,459,635

2 Sheets-Sheet 1



George L. Ljungberg
L. B. Middleton.
WITNESS:

Edgar J. Miller. INVENTOR
BY *Victor J. Evans* ATTORNEY

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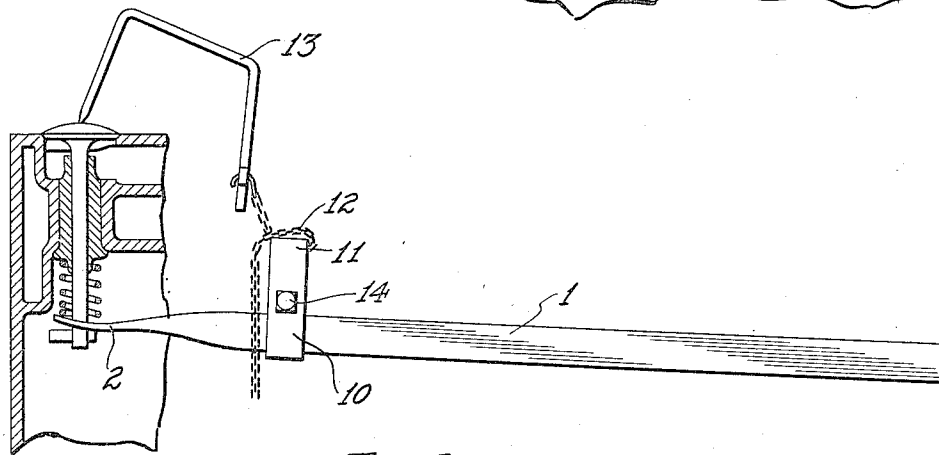
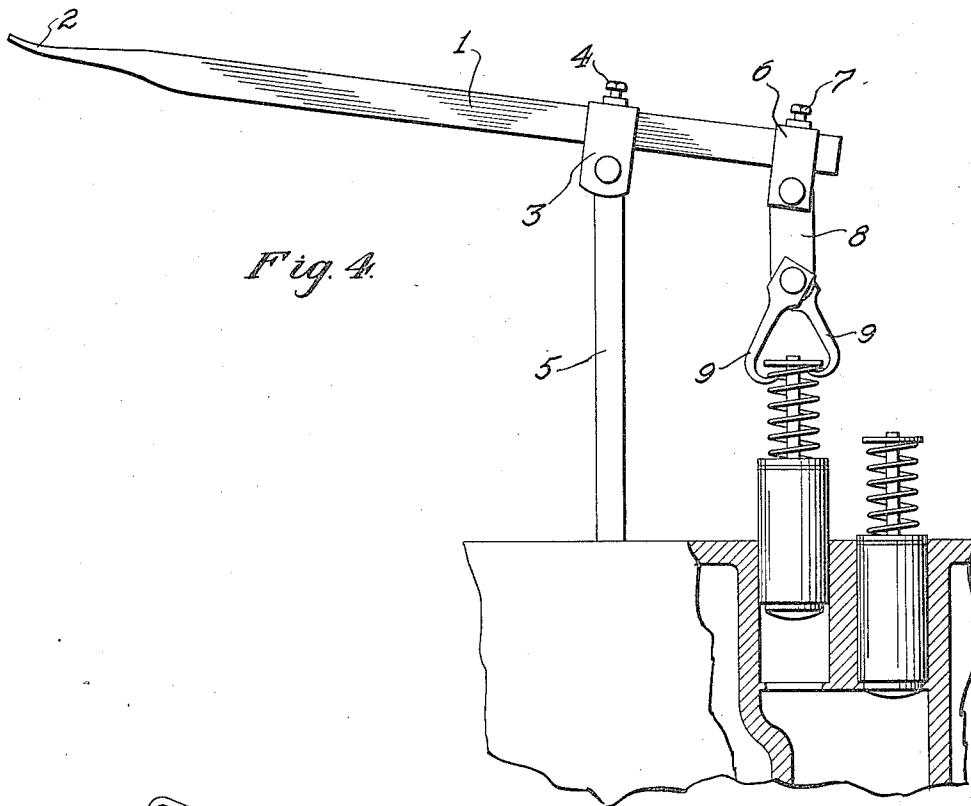
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UNITED STATES PATENT OFFICE.

EDGAR J. MILLER, OF ST. JOSEPH, MISSOURI.

VALVE LIFTER.

Application filed May 6, 1921. Serial No. 467,256.

To all whom it may concern:

Be it known that I, EDGAR J. MILLER, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented new and useful Improvements in Valve Lifters, of which the following is a specification.

This invention relates to improvements in tools for facilitating the removal of valves of internal combustion motors, the principal object of the invention being to provide a lever which is pivotally mounted upon a supporting post so that the lever can be rocked on said post and provided with valve engaging means whereby the spring of the valve can be depressed in order to permit the removal of the valve from its supporting parts.

Another object of the invention is to provide hook and chain means on the lever which are adapted to engage the under portion of a bench or the like so that the lever can be made to push downwardly upon the spring.

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 side view of my improved tool.

Figure 2 is a top view.

Figure 3 is an end view partly in section.

Figures 4 and 5 are views showing how the tool is used.

In these views 1 indicates a bar having one end forked, as at 2. A sleeve 3 is slidably mounted on the bar and is held in adjusted position by a set screw 4. A post 5 is pivotally connected to said sleeve so that the bar can be rocked on the post. A second sleeve 6 is held in adjusted position on the bar by means of the set screw 7 and this sleeve has pivoted thereto the bracket 8 which carries the hook members 9, these members being pivotally secured to the bracket. A third sleeve 10 is arranged on the bar, adjacent the hooked end thereof, and this sleeve has a looped part 11 which

receives a chain 12, the chain having secured thereto a hook member 13. 14 is a bolt to loosen sleeve 10 to adjust sleeve on bar.

When a cage valve is to be removed from a motor the post 5 is placed in upright position upon a part of the engine and the hooks 9 placed in engagement with the upper part of the spring of the valve, as shown in Figure 4. Then by depressing the forked end of the lever the spring and valve and cage is raised from the motor.

If the valve is to be removed from motors with valves in the block, hook 13 is engaged with the top of the block or the like and the fork 2 is placed upon the washer at the bottom of the spring, as shown in Figure 5. Then by pressing the opposite end of the lever to raise the forked end thereof the spring will be compressed so that the pin at the end of the valve stem can be removed to permit the valve parts to be separated.

In some cases it is necessary to use the forked end of the lever instead of the hooks 9 to remove the valves and it will be seen that with the post and the hook chained to the lever, said lever can be supported so that it can be rocked in either direction. Thus my tool can be used to remove valves from all types of cars.

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 valve lifter of the character described comprising a bar, a sleeve adjustably secured around the bar, a post pivotally connected to said sleeve to permit the rocking of the bar, a second sleeve adjustably secured around the post in advance of the first mentioned sleeve, a bracket pivotally secured to the last mentioned sleeve, and a pair of hook members carried by the bracket and being operatively associated with each other as and for the purpose specified.

In testimony whereof I affix my signature.

EDGAR J. MILLER.