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SCREW THREADED FREEZE PLUG PULL-OUT TOOL
WITH WORK ENGAGING MEANS
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FIG. 1

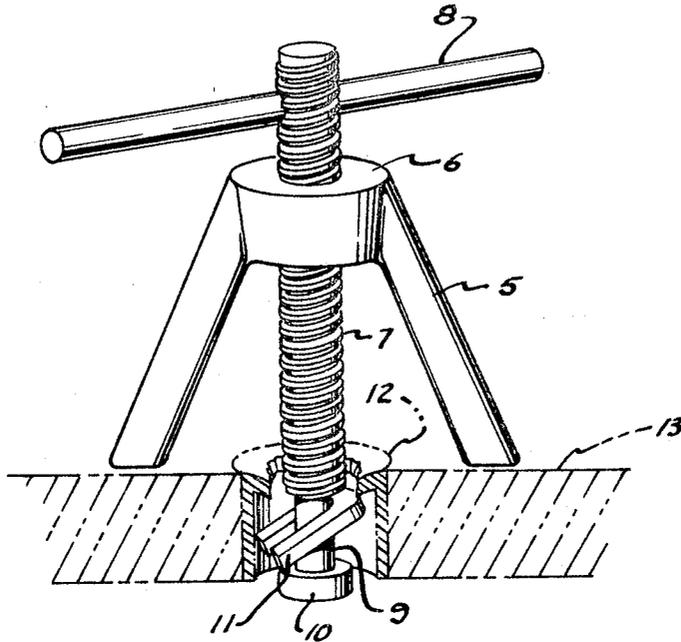
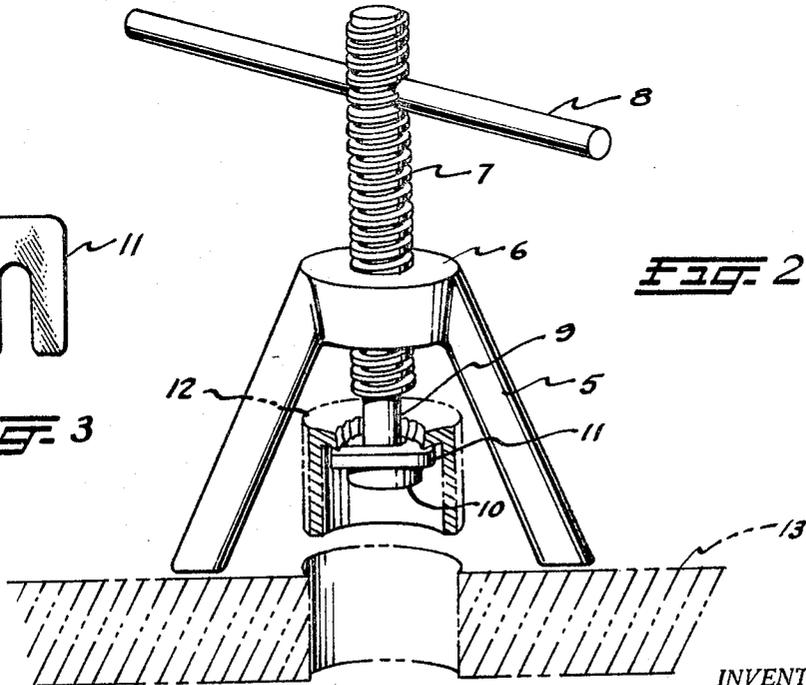


FIG. 3



FIG. 2



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SCREW THREADED FREEZE PLUG PULL-OUT TOOL WITH WORK ENGAGING MEANS

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1 Claim. (Cl. 29-259)

This invention relates to tools, and more particularly to a tool used in the garage and/or machine shop for the purpose of pulling out a freeze plug or the like from the block of any internal combustion engine.

The invention includes a V-shaped bifurcated support that will straddle any plug that is to be removed, a threaded opening extending through the apex of the support, a screw in threaded engagement with said opening, a handle secured to the outer end of said screw, a reduced cylindrical portion extending axially from the inner end of said screw, a button head secured to the end of said cylindrical portion of said screw, and a flat U-shaped holding member to fit said cylindrical portion.

The predominate purpose of this invention is to provide a pull-out tool that will make it possible for a person to quickly pull out a freeze plug or similar device from the block of any internal combustion engine.

Another object of this invention is to provide a pull-out tool of the character herein described that has but four parts.

Another object of this invention is to provide a pull-out tool that can be used for pulling out a disk or plug from any piece of material.

Another object of this invention is to provide a pull-out tool that can be used by anyone regardless of their lack of experience in handling hand tools and the like.

Still another object of this invention is to provide a pull-out tool that can be used either on the work placed on the work bench of the shop or directly on an already assembled internal combustion engine or piece of machinery.

Still another object of this invention is to provide a pull-out tool that can be carried in any mechanic's tool box or in the tool box of any automotive vehicle and the like by reason of its compactness.

Other objects will be apparent from the accompanying specification and from the drawings wherein:

FIGURE 1 is a pictorial view of this invention in position to remove a freeze plug from the block of an internal combustion engine. The plug and portion of the block is shown in cross-section.

FIGURE 2 is a pictorial view of this invention after it has removed the freeze plug from the block of an internal combustion engine. The plug portion of the block is shown in cross-section.

FIGURE 3 is a top view of the U-shaped holding member of this invention.

Looking first at FIGURE 1 of the drawing, it will be seen that this invention consists of an inverted V-shaped support 5 that is provided with a horizontally disposed apex 6 in the center of which is located a vertically disposed tapped opening in which is screwed the large screw 7 that has a horizontally disposed handle 8 extending therethrough. The lower end of the aforesaid screw 7 is provided with an integrally formed shaft 9 which is of a smaller diameter than that of the aforesaid screw 7. The lowermost end of the shaft 9 terminates in a button head 10.

A flat U-shaped holding member 11 is located on the aforesaid integrally formed shaft 9.

The way in which this unique invention is used is quite clear from a study of the first two figures of the drawing where it is seen that one first must drill or other-

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wise make an opening in the part 12 to forceably remove it from the member 13 which in this instant is a freeze plug in the block of an internal combustion engine. The drilled opening must be of a diameter that will permit the aforesaid shaft 9 of the pull-out tool and the U-shaped holding member 11 to slip down through the same when the U-shaped holding member is cocked at a greater angle than that shown in FIGURE 1 of the drawing. Once the U-shaped holding member 11 has been placed through the drilled opening in the part 12 it will fall down into the horizontal position shown in FIGURE 2 of the drawing. Once this happens all one has to do is turn the screw 7 by its horizontally disposed handle 8 until the screw has rotated upward, thereby pulling the part 12 out of the member 13.

It is, of course, necessary for one firmly to hold the inverted V-shaped support 5 in place with one's hand in order to prevent it from slipping out of position and thereby make it hard if not impossible for the aforesaid screw 7 to rotate and thus give the necessary upward pull on the aforesaid U-shaped holding member 11 when this device is being used.

While a specific form of device has been shown and described it is obvious that various modifications may be made therein and it is not intended to limit the invention otherwise than is indicated by the scope of the appended claim.

What I now claim as new and desire to protect by Letters Patent is:

A plug pull-out tool, for removing a plug from an engine block, with said plug having a hole drilled therein for receiving an end of said tool, said tool comprising means to engage side walls of said hole, a V-shaped support to straddle the plug to be removed, said V-shaped support having a threaded opening extending through the apex thereof and bisecting the V, a screw in threaded engagement with said opening, a handle secured to the end of the screw extending outward from the apex of the V-shaped support, a reduced cylindrical portion extending axially from the end of said screw within the V-shape support, said means to engage the side walls of said hole, comprising a flat U-shaped member positionable on said reduced cylindrical portion in an inclined manner, a button head of substantially the same diameter as said screw secured to the outer end of said reduced cylindrical portion, adapted to retain said U-shaped member on said reduced portion, whereby the reduced cylindrical portion with the U-shaped member in an inclined position can be inserted in the hole of said plug, upon rotation of said screw said U-shaped member assumes a position at right angle to said cylindrical portion, and upon continuing rotating said screw will force the U-shaped member to bear against the walls of the hole and thereby remove the plug from the engine block.

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