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3,322,007

SPARK PLUG TOOL

Filed Oct. 21, 1965

FIG. 1

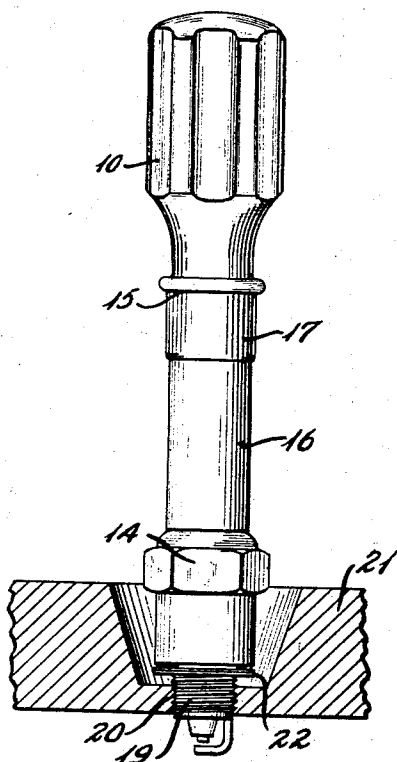


FIG. 2

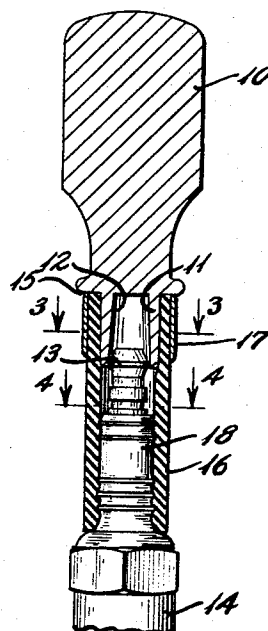


FIG. 3

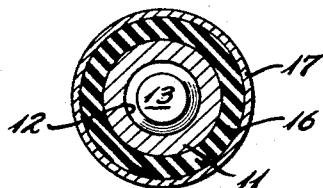
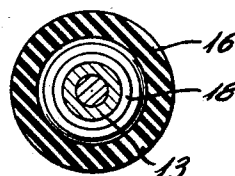


FIG. 4



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SPARK PLUG TOOL
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1 Claim. (Cl. 81—125)

This invention relates to a spark plug tool for use in installing and removing spark plugs used in internal combustion engines of automobiles and the like when they are at a temperature above that which is comfortable to handle, it being an object of the invention to provide a simple and inexpensive tool by which the spark plugs may be easily and quickly removed and replaced without burning the hands after they have been loosened in the process of removal and before they are tightened in the process of replacement.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing in which:

FIG. 1 is a side elevation illustrating one application of the invention;

FIG. 2, a vertical section thereof;

FIG. 3, an enlarged section on the line 3—3 of FIG. 2; and

FIG. 4, an enlarged section on the line 4—4 of FIG. 2.

As illustrated in the accompanying drawing the invention comprises a screw driver type handle 10 of a configuration to be readily gripped in order to rotate the same to finally disconnect in removal and initially reconnect in replacement. Attached to the handle is a reduced extension sleeve 11 the interior or bore 12 of which is of a size to receive the top end terminal 13 of a spark plug 14 so that when the top end terminal 13 of the plug is inserted in the extension sleeve 11 the spark plug will be guided into alignment with the handle 10.

The tubular extension sleeve 11 has a shoulder 15 at its inner end and a flexible rubber-like tube 16 which has one end forced over the extension sleeve 11 against the shoulder 15 and is secured in place in any desired manner as by a clamp 17. The tube 16 is of a size to snugly receive the upper reduced end portion or porcelain top 18 of the spark plug 14 and grip the same so that when the tube is rotated by means of the handle after the spark plug has been loosened and before it is tightened in place, the final removal and initial application of the same can be accomplished. Thus, when a spark plug is to be inserted, the tool can be applied to such spark plug and the latter readily inserted and rotated so that the external threads 19 of the spark plug will engage the threads 20 of the cylinder head 21. Continued turning of the handle 10 will cause the spark plug 14 to approach its final setting position to com-

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press the gasket 22 to prevent leakage. Thereafter the tool is removed and the spark plug can be given a final additional rotation by a conventional spark plug wrench to secure it firmly in place with the gasket 22 compressed.

In removing the spark plug the conventional sprocket type wrench will be used to loosen the spark plug until it rotates freely, after which the tool of the invention will be applied and the remaining unthreading of the plug can be accomplished and the plug lifted out while the tool is in place.

It will be apparent that the spark plug tool of the present invention is not used exclusively to insert and remove spark plugs but merely to perform the rotation that would ordinarily be performed by the fingers of the hand with the final tightening or initial loosening accomplished by a conventional spark plug wrench.

It will be obvious to one skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawings and described in the specification, but only as indicated in the accompanying claim.

What is claimed is:

A tool for assisting in the removal and installation of spark plugs comprising an operating handle, a reduced sleeve extending axially from one end of said handle and providing a shoulder, said sleeve having an internal bore of a size to receive the upper terminal of a spark plug, a flexible tube permanently mounted at one end of said sleeve adjacent to said shoulder and disposed generally in axial alignment with said handle and forming an extension thereof, the inner surface of said tube being of a size to releasably engage the upper portion of the spark plug, and said tube providing the sole support for the spark plug, whereby said flexible tube is applied to the upper portion of a spark plug to rotate the same by manipulation of said handle.

References Cited

UNITED STATES PATENTS

2,701,491	2/1955	Ross	81—125 X
2,752,811	7/1956	Wenche	81—125
2,832,245	4/1958	Burrows	81—125
2,857,794	10/1958	Red	81—64
3,057,647	10/1962	Wood	

FOREIGN PATENTS

1,194,107	5/1959	France.
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