

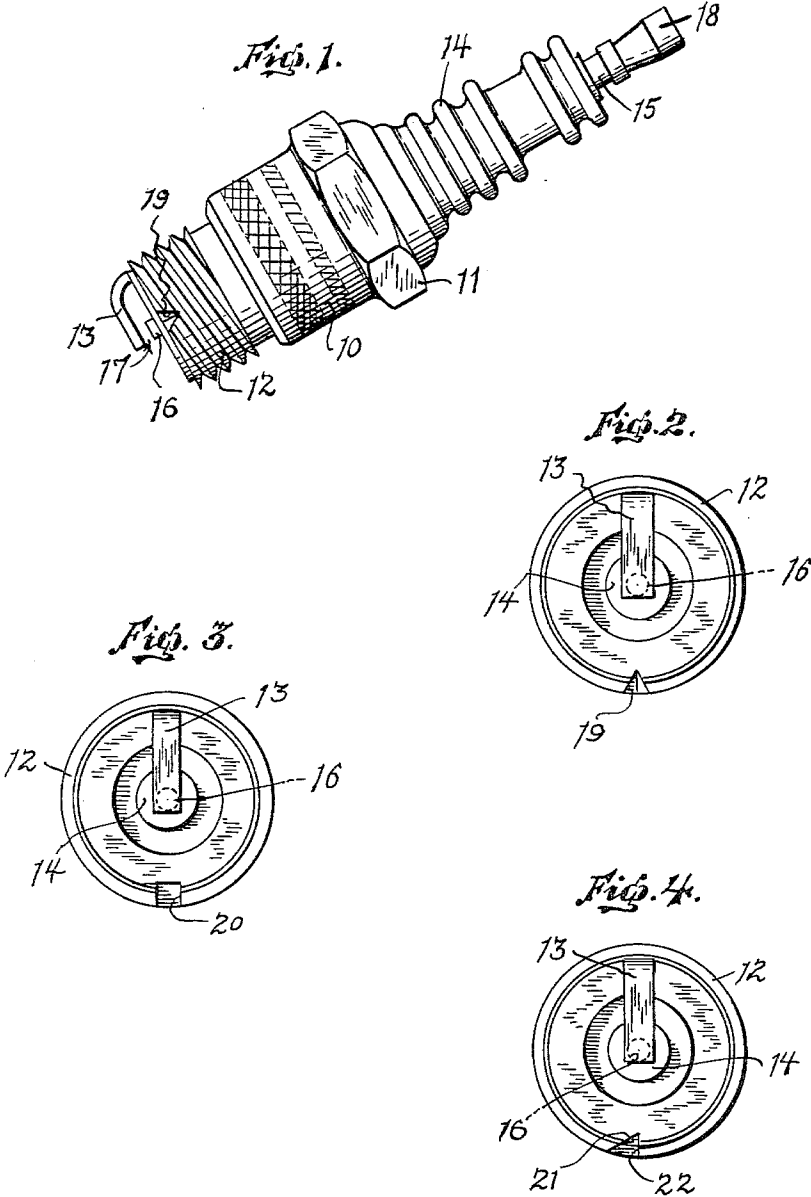
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SPARK PLUG WITH THREAD CLEANING NOTCH

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SPARK PLUG WITH THREAD CLEANING NOTCH

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My present invention relates to spark plugs and more particularly to an improvement in the mounting threads of the cylinder head engaging ends thereof.

An object of my invention is to provide a conventional spark plug with mounting threads having an interruption in the outermost thread that will serve to wipe carbon deposits and foreign matter from the internal threads of a cylinder head as a plug is being inserted and/or removed from the cylinder head.

A further object of the invention is to provide a novel form of thread interrupting notch at the threaded outer end of the spark plug that will facilitate mounting and removal thereof without interference by carbon deposits in the plug accommodating opening.

Other objects and advantages will be in part evident to those skilled in the art and in part pointed out herein-after in connection with the accompanying drawing, wherein there is shown by way of illustration and not of limitation a preferred embodiment of the invention.

In the drawing, wherein like numerals refer to like parts throughout the several views:

FIGURE 1 is a side view of a conventional spark plug, modified in accordance with my invention,

FIGURE 2 is an end view of the spark plug of FIGURE 1 showing another form,

FIGURE 3 is a similar end view of the spark plug of FIGURE 1 showing a further modification, and

FIGURE 4 is a similar end view showing another form.

In the construction of internal combustion engines the spark plug is an extremely important item, and since the spark producing end thereof is subject to extreme heat and the accumulation of carbon deposits, a replacement thereof is a periodic requirement. In some instances the plugs have to be changed completely and in other situations there only remains to be made a proper adjustment in the spacing between the spark producing electrodes. This operation requires some considerable care, for it is important that the mounting threads of the spark plug and the threaded opening in the cylinder head be protected against damage and unnecessary wear due to carbon deposits which accumulate not only upon the plug itself but also in the unoccupied portion of the threaded plug accommodating opening of the cylinder head. When the spark plug is new the sealing gasket provided therewith requires very little compression for a good seal, but as the plug is removed and reinserted the sealing gaskets become more compressed and as a result the threaded end of the spark plug will become extended further and further into the cylinder head. In this further extension the end threads of the spark plug will encounter deposited carbon that will damage the leading thread of the spark plug and often give the operator the erroneous impression that the plug has been tightly seated upon its sealing gasket. It is therefore the primary object of my invention to provide a novel mutilation of the leading thread or threads of a spark plug which will operate to dislodge any accumulation of carbon which may be en-

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countered as the plug is being finally threaded into the cylinder head.

In FIGURE 1 of the drawing there is shown a spark plug of conventional form having a main body portion 10 with a hexagonal wrench accommodating portion 11 and a threaded cylinder engaging end 12 with an overhanging arcing electrode 13. Mounted within and extending through the body portion 10, by an insulating sleeve 14 of porcelain, there is a central conductor 15 which provides a contact 16 at its inner end that is spaced inwardly from the overhanging electrode 13 to provide a spark gap 17. At its outer end the conductor 15 has a conductor clip accommodating portion 18 which is connected to the ignition system of the engine through a grounded circuit leading back to the body portion 10 of the spark plug.

Upon inspection of FIGURES 1 and 2 of the drawing it will be noted that I have provided the threaded end 12 of a spark plug with a notch 19 that is extended through to the depth of the first complete or full thread at the outer end thereof. This notch 19 is of V cross-section and its sides are inclined at corresponding angles at each side of the center thereof. In FIGURE 2 the notch 19 is shown as displaced 90° from the location of the notch 19 in FIGURE 1. It will be understood that the location of this notch 19 will be determined by the point about the circumference of the plug at which the first full thread appears.

In FIGURE 3 of the drawing I have shown the end thread of the spark plug as provided with a rectangular and angularly extending notch 20 with the sides thereof in spaced parallel relation and tangent to the circumference of the plug.

In FIGURE 4 I have shown the threaded end 12 of the spark plug as having a triangular notch 21 with one of its sides, designated by the numeral 22, disposed in a radial plane with respect to the axis of the spark plug.

While I have, for the sake of clearness and in order to disclose my invention so that the same can be readily understood, described and illustrated specific forms and arrangements, I desire to have it understood that this invention is not limited to the specific forms disclosed. It is believed that this invention is new and all such changes as come within the scope of the appended claims are to be considered as part of this invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. An improved spark plug having a metallic body with a wrench accommodating portion and an externally screw threaded end for mounting in the cylinder head of an internal combustion engine, characterized by the fact that the outermost full external thread at the end of said body member is provided with an inclined thread interrupting notch for wiping carbon deposits from the internal screw threads of a cylinder head as the spark plug is being mounted or initially turned for removal of burned carbon deposits.

2. The invention as set forth in claim 1, characterized by the fact that the thread interrupting notch in the outermost thread of the metallic body member is of V cross-section with its sides at equally inclined angles with respect to the axis of the spark plug.

3. The invention as set forth in claim 1, characterized

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by the fact that the thread interrupting notch in the outermost thread of the metallic body member is inclined outwardly and limited to the first full thread and is of rectangular cross-section with opposite sides in spaced parallel relation.

4. The invention as set forth in claim 1, characterized by the inclined fact that the thread interrupting notch in the outermost thread of the metallic body member is of triangular cross-section with one side extending in a plane radial to the axis of the plug.

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