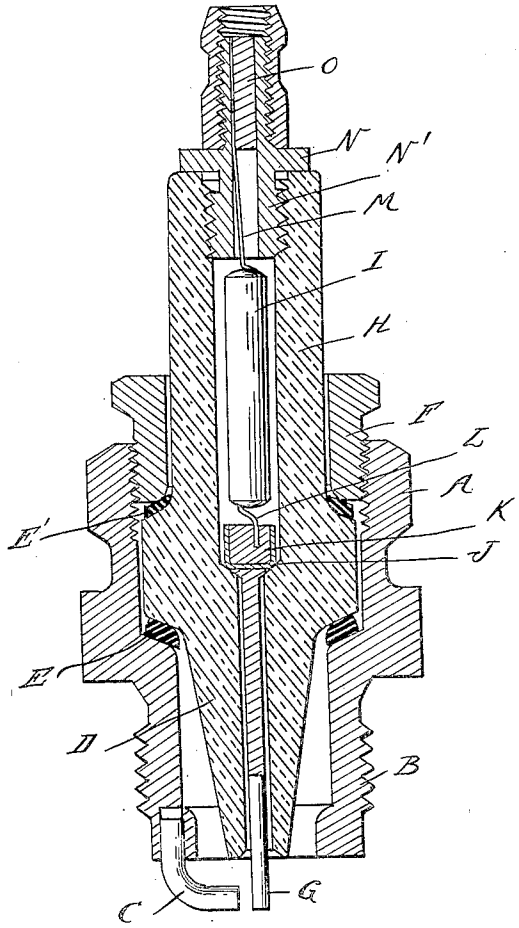
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SPARK PLUG

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INVENTOR

Rex J. L. Dutterer

BY Whittemore Hulbert Whittemore & Belknap

ATTORNEYS

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SPARK PLUG

Rex J. L. Dutterer, Toledo, Ohio, assignor to Defiance Spark Plugs, Inc., Toledo, Ohio, a corporation of Ohio

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3 Claims. (Cl. 123—169)

The invention relates to spark plugs of that type including oscillation dampeners adapted to avoid interference with radio apparatus. Heretofore plugs of this character have been made in which the suppressor unit has been enclosed within the insulator of the plug. It has been found, however, that with such constructions the suppressor will rapidly deteriorate and after a certain time will lose its efficiency. It has been the object of the present invention to avoid this difficulty and to this end the invention consists in the construction as hereinafter set forth.

In the drawing I have represented on a greatly enlarged scale a spark plug of my improved construction.

As illustrated, A is the outer casing of the plug provided with the usual threaded nipple B for engagement with the engine casing, the fixed electrode C, the insulator D sealed by gaskets E and E' and a clamping sleeve F, these parts with the exception of the insulator being of usual construction.

The insulator D is formed with a central recess which in its lower portion is of a size to receive the electrode G, and above this portion the recess is enlarged in diameter as indicated at H to receive the suppressor unit I and to provide a clearance around the same. The electrode G is cemented in to the lower portion of the central recess and is provided with a head J preferably in the form of a cup for receiving solder K and for the attachment thereto of a conductor wire L leading to the suppressor I. The opposite end of the suppressor is connected by a conductor M with a hollow terminal post N which has a threaded nipple N' for engaging a correspondingly threaded aperture in the insulator. The conductor M is electrically connected to the hollow post preferably by a solder plug O in the upper end thereof which also seals the recess in the insulator.

With the construction as described, in assembling the parts the electrode G attached to the suppressor by the conductor L soldered in the cup J is inserted within the recess in the insulator and the electrode is cemented in the lower portion of this recess. After the cement has thoroughly dried the terminal post N is engaged with the upper end of the insulator and the conductor M which passes upward through the hollow post is electrically connected thereto by the solder plug O. This leaves the suppressor unit suspended within the recess H out of contact with the walls of said recess and having no thermal conductive connection with the heated part of the plug other than through the conductor L which is of small cross section. As a result when the plug is in service and heat is conducted upward through the electrode G and lower portion of the insulator, this will not be communicated to the suppressor unit on account of the small cross section of the electrical conductor L. Furthermore, as the unit I is free from the walls of the insulator it can only receive heat therefrom by radiation, and as the upper part of the insulator is relatively cool, the amount of heat thus transferred is small. The advantage of the construction is that the deterioration of the suppressor unit is caused by heat so that the cooler this unit can be maintained, the longer will be its life. Furthermore, it is advantageous to keep the unit free from contact with moisture containing cement which in my construction is accomplished by its free suspension in the recess H.

What I claim as my invention is:

1. In a spark plug, an insulator provided with a recess in the upper portion thereof, an electrode secured in the lower portion of said insulator and having its end projecting into said recess, a terminal post at the upper end of said insulator, a suppressor unit suspended within said recess and spaced from the walls thereof to be out of heat conducting contact therewith, and an electrical connection of small thermal conductivity between said unit and said electrode.

2. In a spark plug, an insulator provided with a central recess in the upper portion thereof, a terminal plug closing the upper end of said recess, a suppressor unit suspended within said recess and of smaller diameter to be free from contact with the walls thereof, an electrode in the lower portion of said plug, electrical connections between the opposite ends of said suppressor and said electrode and terminal plug respectively.

3. A spark plug comprising an insulator having a recess within the upper portion thereof, an electrode in the lower portion of said insulator having a solder cup at its upper end projecting into said recess, a suppressor unit in said recess out of contact with the walls thereof, an electrical conductor of small cross section and low thermal conductivity having its lower end soldered in said cup and connecting said electrode to said suppressor unit, a hollow terminal post at the upper end of the insulator and an electrical conductor connecting the upper end of said suppressor unit with said terminal post passing through the latter and soldered into the hollow thereof.

REX J. L. DUTTERER.