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J. F. BARR

2,190,765

SPARK PLUG WITH UMBRELLA

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FIG. 1.

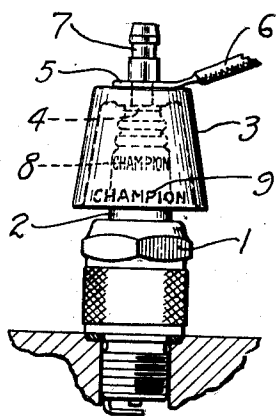


FIG. 2.

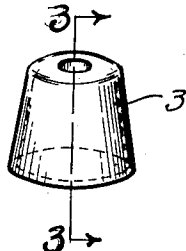
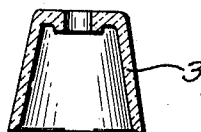


FIG. 3.



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SPARK PLUG WITH UMBRELLA

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2 Claims. (Cl. 123—169)

This invention relates to a spark plug having a shield against moisture, or umbrella, for the upper end thereof.

Somewhat similar shields have been previously employed, but the particular kind of a shield disclosed herein has certain advantages which will appear more clearly as the description proceeds.

In the accompanying drawing forming a part of this specification,

Figure 1 is an elevation of a spark plug embodying the invention and showing a fragmentary section of a cylinder head in which the plug is mounted;

Fig. 2 is an isometric view of the shield, and

Fig. 3 is a section along the line 3—3 of Fig. 2.

In the embodiment disclosed, there is a spark plug of the well known type comprising a shell 1 and an insulator 2. A shield or umbrella 3 is mounted over the upper end of the insulator, preferably resting upon a washer 4 at the top of the insulator. A connection 5 to a conductor 6 may be held in contact with the central electrode by a nut 7 and this nut at the same time serves to hold the shield firmly against washer 4.

The shield 3 is preferably made of transparent material. Consequently, the identifying insignia customarily placed upon the insulator, as indicated at 8, will be readily apparent through the shield. Also, the upper end of the insulator may be inspected to ascertain whether or not it is shorting or otherwise operating improperly. If identifying marks are placed upon the shield or umbrella, they are preferably arranged at a different level from the insignia on the insulator so that they will not conflict therewith. In the form shown, the insignia is placed upon the shield at 9, below the insignia on the insulator.

The material of the shield or umbrella is not

only transparent, but is also of a heat resisting plastic molded body which will resist the shocks to which it is subjected in use and not be injured by heat. Such material is provided with a smooth surface and is readily kept clean. Even if dirt or moisture or both should accumulate upon the outer surface of this shield, the lower edge is sufficiently spaced from the shell 1 so that no path of low resistance between the central electrode and the shell is created thereby.

It will be seen, therefore, that the shield as disclosed combines the advantages of protecting the upper end of the insulator from moisture and dirt while revealing the identifying insignia upon the insulator without interfering with the ready inspection of the operation of the insulator.

The shield is referred to above and in the claims as transparent, but it will be readily understood that the shield may be tinted somewhat, providing the tinting is not sufficient to interfere with the objects stated above.

What I claim is:

1. A spark plug having a shell, an insulator projecting above the shell and a central electrode through the insulator and projecting thereabove, and a shield around the central electrode above the insulator and projecting downward and outward over the upper end of the insulator, and the lower end of the shield being above and spaced from the upper end of the shell, said shield being of transparent molded heat resisting plastic.

2. A spark plug with a shield in accordance with claim 1 and having identifying indicia on the insulator within the shield and upon the shield, the indicia on the shield being at a different level from that on the insulator.

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