A. SCHMIDT.

SPARK PLUG.

APPLICATION FILED OCT. 13, 1913.

1,138,797.

Patented May 11, 1915.

Fig. 2.

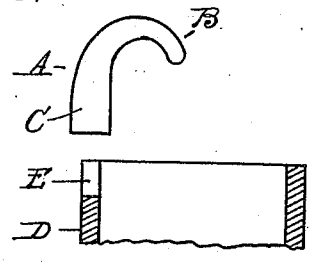


Fig. 1.

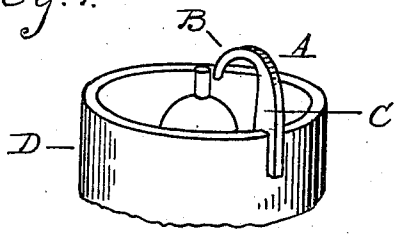
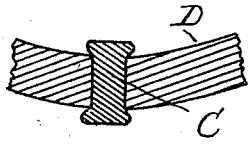


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT SCHMIDT, OF FLINT, MICHIGAN, ASSIGNOR TO CHAMPION IGNITION COMPANY, OF FLINT, MICHIGAN, A CORPORATION OF MICHIGAN.

SPARK-PLUG.

1,138,797. Specification of Letters Patent. Patented May 11, 1915.

Application filed October 13, 1913. Serial No. 794,972.

To all whom it may concern:

Be it known that I, ALBERT SCHMIDT, a citizen of the Republic of France, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Spark-Plugs, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to spark plugs and particularly to the construction of the grounded electrode and manner of mounting the same as hereinafter set forth.

In the drawings: Figure 1 is a perspective view of a portion of a spark plug, showing my improved construction of electrode applied thereto; Fig. 2 is a section through a portion of the plug casing with the detached electrode ready for engagement therewith; and Fig. 3 is an enlarged cross section showing the manner of securing the electrode.

It is the primary object of the invention to obtain a construction of grounded electrode which is inexpensive to manufacture, may be readily attached to the plug casing, will rapidly dissipate the heat generated at the sparking point, and is easily adjusted for proper spacing of the spark gap. To this end the electrode A is preferably formed of a stamping from sheet metal, having the hooked or return-bent end B for extending into proximity to the coöperating electrode, and the widened shank C for attachment to the plug-casing D. The method of attachment employed is, first, to cut a slot E in the wall of the plug, which is of a width to receive the thickness of the shank. The shank portion C is then inserted in this slot, being of a width to project beyond the opposite ends thereof, and is then secured by pinching or upsetting the projecting portions, as shown in Fig. 3. This results in expanding the metal within the slot so as to press the opposite surfaces thereof in close contact with the contacting surfaces of the slot, thereby not only securely fastening the electrode in position, but also obtaining good heat conduction. As a result, the heat generated by the spark will be rapidly dissipated through the enlarging section of the electrode until it reaches the upset shank, from which it will pass through the contacting walls and the slot into the plug-casing. The electrode is also one which permits of being readily adjusted for proper spacing of the spark gap, as the return-bent or hook portion B may be easily bent.

What I claim as my invention is:

1. A spark plug, comprising a plug-casing having a transverse slot in the inner end wall thereof, and an electrode fashioned from sheet metal inserted in said slot and projecting beyond the sides thereof, the projecting portions being upset to expand the metal in the slot into heat-conducting contact with the casing.

2. In a spark plug, a plug-casing having a transversely-extending slot in the inner end wall thereof, and an electrode formed of sheet metal having a shank portion inserted in said slot and expanded to form a retaining and heat-conducting connection.

3. In a spark plug, the combination of a plug-casing having a transversely-extending slot in the inner end wall thereof, and an electrode of hooked or return-bent form having an enlarged shank and tapering toward the point, said shank being inserted in said slot to project beyond the opposite sides thereof and being upset to form a retaining and heat-conducting connection.

4. In a spark plug, a plug casing having a transverse slot in the inner end wall thereof, and an electrode formed of sheet metal having a shank portion inserted in said slot and extending longitudinally from said wall and expanded to form a retaining and heat-conducting connection.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT SCHMIDT.

Witnesses:
LELAH WILKINS,
ALICE SWEETWOOD.