A. KLEVER.

SPARK PLUG.

APPLICATION FILED JULY 17, 1919.

1,340,899. Patented May 25, 1920.

FIG_1_

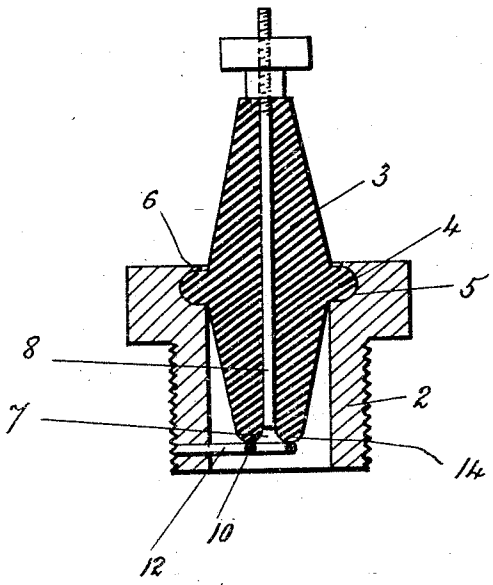
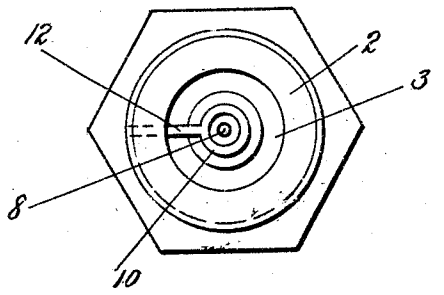


FIG_2_



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UNITED STATES PATENT OFFICE.

ARCHIE KLEVER, OF HANNIBAL, MISSOURI.

SPARK-PLUG.

1,340,899. Specification of Letters Patent. Patented May 25, 1920.

Application filed July 17, 1919. Serial No. 311,401.

To all whom it may concern:

Be it known that I, ARCHIE KLEVER, a citizen of the United States, residing at Hannibal, in the county of Ralls and State of Missouri, have invented certain new and useful Improvements in Spark-Plugs, of which the following is a specification.

This invention relates to spark plugs for igniting the combustible charges of internal combustion engines; and its consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a longitudinal section through a spark plug constructed according to this invention. Fig. 2 is a plan view of the same.

The plug or tubular body portion 2 is formed of metal and is screwed into or otherwise secured to the engine cylinder. A sleeve 3 of insulating material is secured in the plug 2. This sleeve preferably has tapering end portions, and it has a circumferential rib 4 at its middle part. This rib 4 is rounded or is made of hemi-spherical outline, and it is secured in a corresponding groove 5 in the outer end portion of the plug. The rib fits tightly in the groove, and the thin metal or lip 6 at the top of the plug is pressed down over the rib, after the rib has been placed in position, so as to secure the sleeve 3 in place.

The inner end of the sleeve is provided with a flaring depression or recess 7, and a wire or rod electrode 8 is secured centrally in the sleeve so that its end comes level with the bottom of the recess which is of the same diameter as the wire. A metal or wire ring 10 is provided, and is connected to the plug 2 by a stem 12, or in any other suitable manner. This ring is arranged to bear on the end 14 of the sleeve around the larger end of the recess, and the end 14 of the sleeve is preferably rounded. Any other form of ring may be used in place of the wire ring shown, which will form a spark gap with the end of the central wire 8 in the said flaring recess.

The spark is concentrated in this spark gap, and is caused to pass over the flaring wall of the recess and thereby keep it free from all deposit of carbon, which is a great source of trouble in spark plugs as ordinarily constructed.

What I claim is:

In a spark plug, a body portion, a sleeve of insulating material secured in the body portion and having a flaring recess at its inner end, a wire electrode secured in the sleeve with one end at the bottom of the recess, and an electrode formed of a ring of wire and provided with a stem for securing it to the body portion, said ring being arranged in contact with the end of the sleeve around the larger end of the said recess.

In testimony whereof I have affixed my signature.

ARCHIE KLEVER.