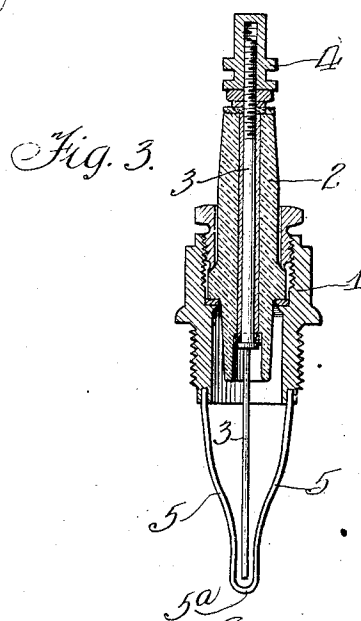
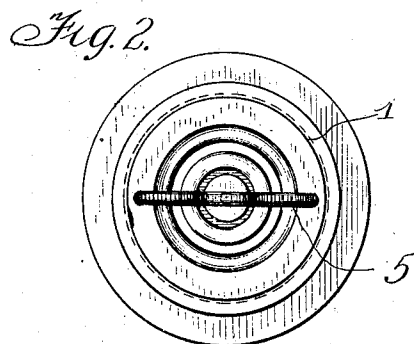
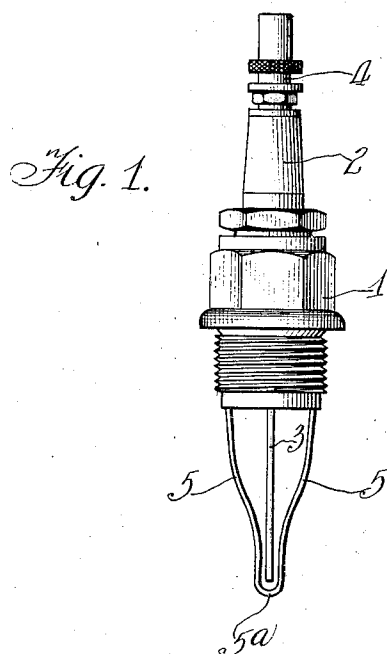


C. C. ELDRIDGE & E. J. BEEBE.
SPARK PLUG.

APPLICATION FILED FEB. 17, 1911.

1,011,595.

Patented Dec. 12, 1911.



Witnesses:

J. C. Devick.

O. Paul Parker.

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Att'y.

UNITED STATES PATENT OFFICE.

CHARLES C. ELDRIDGE AND EDWIN J. BEEBE, OF MARSHALLTOWN, IOWA.

SPARK-PLUG.

1,011,595.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed February 17, 1911. Serial No. 609,217.

To all whom it may concern:

Be it known that we, CHARLES C. ELDRIDGE and EDWIN J. BEEBE, citizens of the United States, residing at Marshalltown, in the county of Marshall and State of Iowa, have invented certain new and useful Improvements in Spark-Plugs, of which the following is a specification.

The object of this invention is to produce an improved spark plug adapted to draw a large spark and one which will need cleaning less frequently than plugs heretofore produced.

In the accompanying drawings, Figure 1 is a side elevation of a spark plug embodying the features of our invention. Fig. 2 is an end view, and Fig. 3 a longitudinal central section through the plug.

The present embodiment of our invention comprises a casing 1, in this instance in the form of a bushing adapted to be screwed into an engine cylinder. Within the casing is secured an insulating member 2 and extending through said insulating member is a rod 3 forming one of the electrodes of the spark plug. Upon the upper end of the rod 3 is mounted suitable means 4 for attaching an electric conductor to the rod. The other electrode 5 of the plug consists of a wire of general U shape, the free ends of the arms of the electrode being secured in the end of the casing 1 in any suitable way. As shown in the drawings, the outer portion of the electrode is shaped to lie more or less closely along the end portion of the central electrode 3 for a considerable distance. By reason of this shape of the lower end of the electrode 5 a relatively large spark is formed between the two electrodes when an electric circuit is closed through the spark plug.

It will be observed that the electrodes project outwardly from the end of the casing a relatively great distance, so that the incoming fresh charge of gases in the engine cylinder will sweep the burned gases away from the

electrodes and carry any deposit of carbon therefrom, and also the spark will be formed at a point which will be well surrounded by the fresh charge of gases. The result of this arrangement is that the electrodes need cleaning much less frequently than they would if they were short and perhaps partially housed by the end of the casing 1.

As will be understood, the connecting portion 5^a between the two arms of the electrode 5 stiffens the arms so that the electrode is not easily bent out of position in cleaning the plug when cleaning becomes necessary.

We claim as our invention:

In a spark plug of the character described, in combination, a bushing-like casing adapted to be screwed into an engine cylinder, an insulating member in said casing, an electrode in the form of a rod lying within said insulating member, means at one end of said electrode for attaching an electric wire thereto, the opposite end of said electrode projecting a relatively great distance beyond the end of said casing, and a second electrode comprising a wire bent at its middle portion to form two arms, the ends of which are fixed in the end of the casing, the outer end of said arms adjacent to said bend being shaped to lie at opposite sides of said central electrode and substantially parallel therewith for a short distance, whereby a relatively large spark will be drawn at a point a considerable distance beyond the end of said casing, the bend connecting the outer portion of said arms serving to maintain said arms in rigid relation to each other and to the central electrode.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES C. ELDRIDGE.
EDWIN J. BEEBE.

Witnesses:

C. L. BROWN,
ORA L. WILLIAMS.