J. MEARA.

SPARK PLUG.

APPLICATION FILED AUG. 22, 1917.

1,264,836. Patented Apr. 30, 1918

Fig. 1,

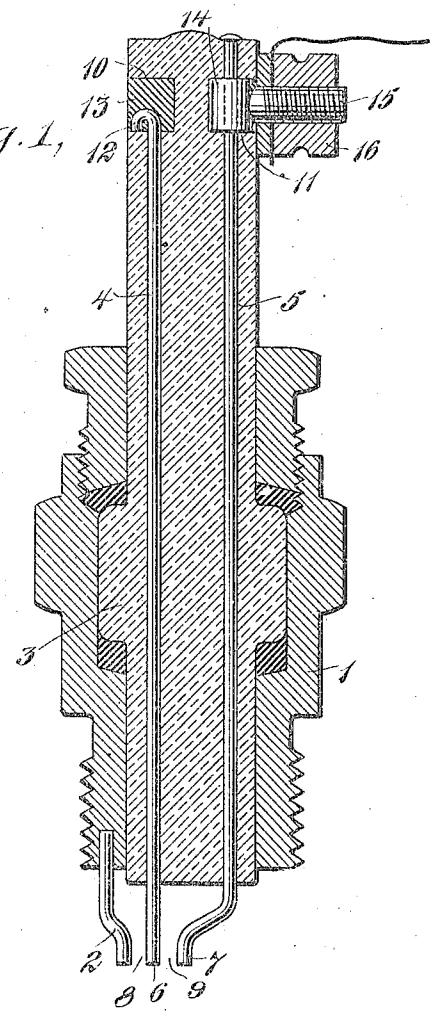
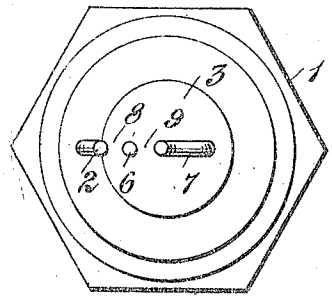


Fig. 2.



WITNESSES

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JOSEPH MEARA, OF TRENTON, NEW JERSEY.

SPARK-PLUG.

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To all whom it may concern:

Be it known that I, JOSEPH MEARA, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented a new and Improved Spark-Plug, of which the following is a full, clear, and exact description.

This invention relates to a double gap spark plug and the invention has for its general objects to improve and simplify the construction of devices of this character so as to be reliable and efficient in use and comparatively inexpensive to manufacture.

A more specific object of the invention is to provide a spark plug in which the porcelain bushing is so designed that it can be inexpensively made and at the same time firmly hold one of the active electrodes and the dead or insulated electrode.

With such and other objects in view the invention comprises various novel features of construction and arrangement of parts which will be more fully set forth hereinafter taken in connection with the accompanying drawings in which similar reference characters are employed to designate corresponding parts and in which—

Figure 1 is a central vertical section of the spark plug; and

Fig. 2 is a bottom plan view thereof.

Referring to the drawings, 1 indicates a shell or body of the spark plug which may be of any improved construction and in which is the electrode 2. In the shell is clamped a porcelain or other bushing 3 which is molded with two parallel passages 4 and 5 for the electrodes 6 and 7 respectively which are in the form of wires of suitable diameter. The electrode 6 is placed centrally between the electrodes 2 and 7 and in suitable proximity thereto to provide the spark gaps 8 and 9. In the upper end of the bushing 3 are oppositely disposed recesses or chambers 10 and 11 and into the chamber 10 extends the upper end of the electrode or conductor 6 which upper end is bent backwardly so that the electrode can not become displaced. After the electrode is bent at 12 the chamber 10 is filled with a suitable sealing material 13. In the chamber 11 is fitted the eye or aperture head 14 of the binding post screw or stud 15. The electrode 7 passes through the eye 14 so that the binding post screw is held in place. On the screw is a clamping knot 16 whereby the circuit wire is fastened to the active electrode 7. It will be understood that the other side of the circuit is connected with the engine on which the spark plug shell 1 is grounded so that the ignition current will pass between the electrodes 2 and 7 by way of the gaps and the insulated or dead electrode 6.

From the foregoing description taken in connection with the accompanying drawings the advantages of the construction and method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the appended claim.

I claim:

A spark plug comprising a shell having an electrode, an insulating bushing in the shell having a pair of longitudinal passages, one passage extending entirely through the bushing and the other passage terminating short of the outer end of the bushing, chambers in the sides of the bushing at the outer end and arranged in line with the respective passages, an electrode extending through the longer passage, a stud having an apertured head disposed in one of the chambers and through which the second-mentioned electrode passes, a nut on the stud to form a binding post, a third electrode in the shorter passage and disposed between the first and second electrodes, the outer end of the third electrode being disposed in the other chamber and bent back therein to form an anchorage, and sealing material in the last-mentioned chamber for rigidly holding the third electrode in place.

JOSEPH MEARA.