G. WRIGHT.

SPARK PLUG.

APPLICATION FILED OCT. 1, 1910.

1,020,006.

Patented Mar. 12, 1912.

Fig. 2.

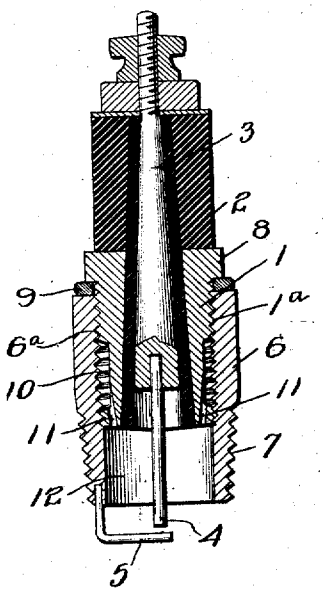


Fig. 1.

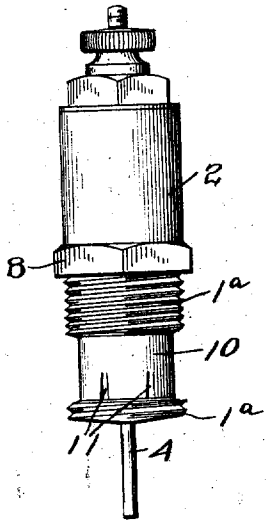


Fig. 3.

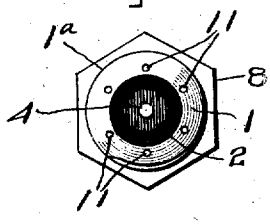
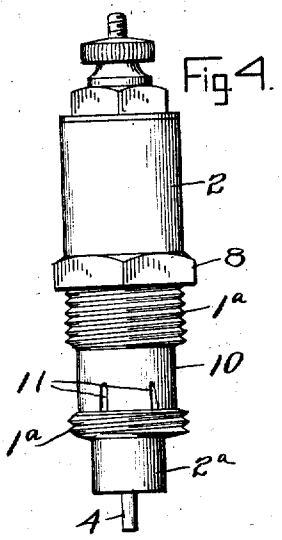


Fig. 4.



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SPARK-PLUG.

1,020,006. Specification of Letters Patent. Patented Mar. 12, 1912.

Application filed October 1, 1910. Serial No. 584,873.

To all whom it may concern:

Be it known that I, GEORGE WRIGHT, a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented new and useful Improvements in Spark-Plugs, of which the following is a specification.

The present invention relates to spark-plugs for internal combustion engines and has for its object the provision of means associated with the spark-plug designed to automatically effect the cleaning of the sparking terminals in the normal running of the engine. To this end it is proposed, in summary, to provide a chamber within the spark-plug having communication with the explosive cylinder of the engine, which through the medium of the working piston and the explosions of the fuel causes a movement of the oil and gases therein and thereby prevents accumulation of carbon thus assuring a more perfect working of the plug at all times.

The invention further contemplates an arrangement embodying the above features wherein no auxiliary parts are employed, or separate adjustments required, also whose parts are simple in design, and wherein the structure in its entirety is secured in position after the usual manner of applying the spark-plug to the cylinder.

The invention is shown by way of illustration in the accompanying drawing wherein:

Figure 1 is a side elevation of the spark-plug, Fig. 2 is a vertical central section thereof, Fig. 3 is a bottom plan view of the same, and; Fig. 4 is a side elevation of a modified design of plug.

Referring to the structure in further detail and with like characters of reference indicating corresponding parts in the different views shown 1 designates the brass bushing within which is mounted the insulated core 2 carrying the usual conductor 3. The conductor 3 has its lower end provided with a sparking terminal 4 disposed adjacent its coöperating terminal 5 which is secured at the lower end of the casing or shell 6 which surrounds the plug. The shell 6 is externally screw threaded, as at 7, for securing the plug in position on the cylinder, and on its inner surface said shell has screw threads 6^a to receive and have secured therein the bushing 1, said bushing having screw threads 1^a complementary to the threads 6^a on the shell. Said bushing further has a nut shaped head 8 for assembling the parts, and the under surface of said head affords a bearing for the binding ring or collar 9 which seats against the shell 6.

The structure of parts aforesaid and their manner of assembling is of known type and no claim thereon is therefore made in the present case.

The lower screw threaded portion 1^a of the bushing 1 is circumferentially cut away to provide an annular recess 10 which, with the casing 6 in position, provides the chamber hereinbefore referred to. Said chamber 10 has communicating therewith a plurality of channnels 11 formed within the lower portion of the bushing 1 and disposed slightly inward with respect to the terminal 4.

With the chamber 10 so located and communicating with the explosive cylinder the combustible mixture will have movement therein due to the working of the piston and on the ignition of the charges the products of combustion will be directed within the surrounding terminal chamber 12 and thus effectively keep clean the sparking terminals and the parts immediately adjacent thereto.

In the arrangement shown in Fig. 4 the structure is substantially the same as that disclosed in the foregoing, differing only in that in the present instance the insulated core 2^a extends below the end of the bushing 1 while in the former instance it meets flush therewith.

What I claim is:

1. A spark-plug for internal combustion engines comprising a shell, and a bushing fitting within and having screw threaded connection with the shell, said screw threaded connection between the bushing and shell being partially cut away to provide an annular chamber, and said bushing having a plurality of passsageways therein communicating with the chamber and adapted to direct the combustible mixture to said chamber for the purpose set forth.

2. A spark-plug for internal combustion engines comprising a shell having an internal screw threaded portion and a bushing having screw threads secured within said shell, said bushing having a circumferential groove formed within its screw threaded portion and providing a chamber with the shell, and passageways formed within the bushing and communicating with the cham-

ber and adapted to direct the combustible mixture to said chamber for the purpose set forth.

3. A spark-plug for internal combustion engines comprising a shell, a bushing within said shell, said bushing having a circumferential groove formed between said shell and bushing, providing a chamber with said shell, and passageways formed in said bushing and communicating with said chamber, and adapted to direct the combustible mixture to said chamber, for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE WRIGHT.

Witnesses:

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