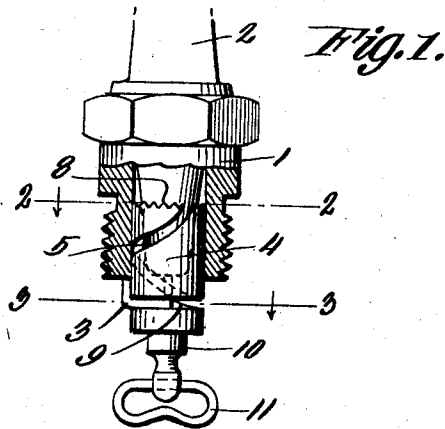
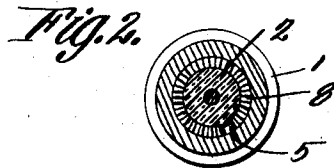
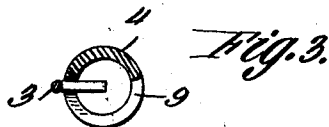
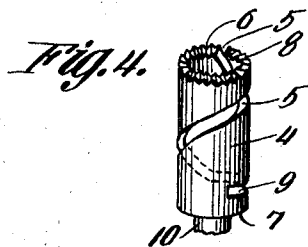


1,387,414.

E. G. LA VOIE.
SPARK PLUG CLEANER.
APPLICATION FILED MAY 26, 1921.

Patented Aug. 9, 1921



WITNESSES

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SPARK-PLUG CLEANER.

1,387,414.

Specification of Letters Patent.

Patented Aug. 9, 1921.

Application filed May 26, 1921. Serial No. 472,633.

To all whom it may concern:

Be it known that I, EMERY G. LA VOIE, a citizen of the United States, residing at Greenwich, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Spark-Plug Cleaners, of which the following is a specification.

This invention relates to spark plug cleaners and has for its principal object to provide a device capable of cleaning the carbon from the interior of spark plugs. The invention as illustrated is shown in conjunction with the well known Titan spark plug but, of course, is in no way limited to this particular spark plug since it is capable of being used with numerous other spark plugs now on the market.

Another object of the invention is to provide a device of this nature which is capable of cleaning the carbon from the spark plug quickly without the danger of any way injuring the electrodes thereof.

A still further object of the invention is to provide a device of this nature which will be of extremely simple, durable and inexpensive construction, one which is efficient and reliable in operation, and well adapted to the purpose for which it is designed.

With these and numerous other objects in view, the invention resides in certain novel features of construction and the combination and arrangement of parts as will be hereinafter fully described and claimed.

In the drawing:—

Figure 1 is an elevational view of the device showing same as actually used.

Fig. 2 is a section taken on the line 2—2 of Fig. 1 looking in the direction of the arrow,

Fig. 3 is a section taken on the line 3—3 of Fig. 1 looking in the direction of the arrow, and

Fig. 4 is a fragmentary perspective view of the device.

Referring to the drawing in detail it will be seen that 1 designates the metallic shell of an ordinary spark plug having situated therein the porcelain member 2 for supporting the central or positive electrode. The negative electrode 3 is fixed to the shell 1 and is provided with a right angled extension passing transversely over the open end of the shell 1 so as to terminate adjacent the terminal of the positive electrode. In the particular type of spark plug here illustrated the lower end of the porcelain 2 is tapered

and extends throughout the major portion of the shell 1 and is spaced therefrom so as to form a cavity into which my cleaner is adapted to operate.

The spark plug cleaner here illustrated consists of a hollow cylindrical shell 4 having a spiral slot 5 therein which extends from the open end 6 to a distance from the closed end 7. The opened end 6 is provided with a plurality of teeth 8. This spiral slot 5 terminates adjacent the closed end 7 in a straight slot 9 which extends approximately half way around the shell 4 as shown clearly in Fig. 3. A shank 10 is situated on the closed end 7 of the shell 4 and a transverse opening is provided therein for receiving the handle 11.

This cleaner is first positioned so that the beginning of the spiral slot 5 adjacent the open end 6 will register with the right angled extension of the negative electrode 3. The shell is then rotated in a clock-wise direction and will enter the cavity between the shell 1 and the porcelain 2 and during this operation scrape the carbon from the inner wall of the shell 1 which is wont to collect thereon. When the opened end 6 of the shell 4 reaches the upper portion of the cavity in the shell 1 the right angled extension of the negative electrode 3 shall have reached the straight portion 9 of the slot and the shell may then be rotated back and forth so as to loosen all carbon which may have collected in the upper portion of this cavity.

Having thus described my invention what I claim as new is:—

1. As a new article of manufacture, a spark plug cleaner including a cylindrical hollow shell having a spiral slot therein, one end of said shell being open and provided with teeth thereon.

2. As a new article of manufacture, a spark plug cleaner including a shell having a spiral slot arranged therein and having one of its ends open and provided with a plurality of teeth thereon, and means provided at the other end of the shell for rotating the same.

3. As a new article of manufacture, a spark plug cleaner comprising a hollow shell having one end open and provided with a spiral slot terminating in a straight slot adjacent the other end thereof.

4. As a new article of manufacture, a spark plug cleaner comprising a hollow shell having one end open and provided with a

spiral slot terminating in a straight slot adjacent the other end thereof, and teeth situated on the open end of the shell.

5 5. As a new article of manufacture, a spark plug cleaner consisting of a hollow shell having a spiral slot therein and an open end, and means attached thereto for rotation of the shell.

6. As a new article of manufacture, a

spark plug cleaner including a cylindrical 10 hollow shell having a spiral slot arranged therein and an open end.

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

EMERY G. LA VOIE.

Witnesses:

W. STANLEY FINNEY,
FLORENCE B. SUTTON.