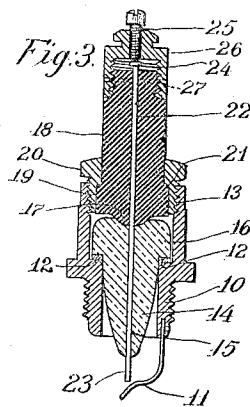
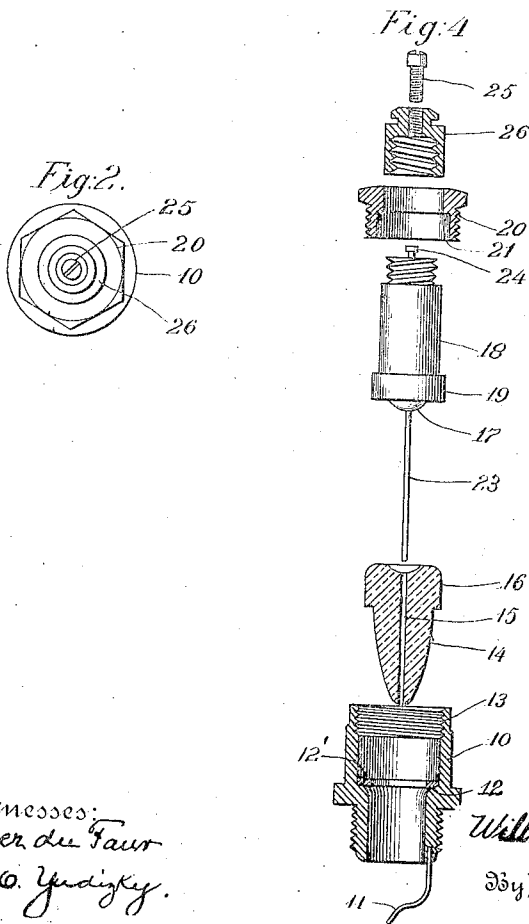
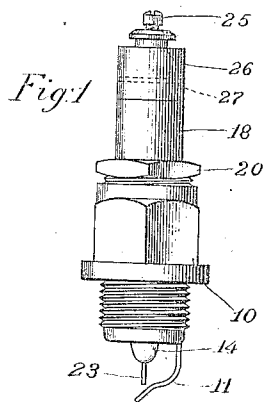


938,108.

W. S. BECHTOLD.
SPARK PLUG.
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Patented Oct. 26, 1909.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM S. BECHTOLD, OF NEWARK, NEW JERSEY.

SPARK-PLUG.

938,108.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM S. BECHTOLD, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Spark-Plugs, of which the following is a specification.

The invention relates to spark plugs such as are used in connection with internal combustion engines, and the like.

It has for its object to provide a plug which will not be so readily destroyed and whose perishable parts may be quickly and inexpensively replaced; also, to provide means for conveniently and readily advancing the sparking point after the several parts have been assembled. I attain these objects in the device illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the improved spark plug. Fig. 2 is a plan view of the same. Fig. 3 is a vertical section of the spark plug; and Fig. 4 a view of the several parts in unassembled position.

Similar characters of reference designate corresponding parts throughout the several views.

Referring now to the drawings, 10 designates a metallic socket of the plug, threaded so as to be screwed into the engine cylinder (not shown) and provided with a sparking terminal 11. The socket 10 is provided with an internal shoulder 12, and at its lower end with internal threads 13. Within this socket is arranged a tapered insulator 14, preferably of porcelain and provided with a central longitudinal hole 15 and an enlargement 16. This insulator fits within the said socket, the enlargement 16 abutting the shoulder 12 of the same through an intermediate packing ring 12'. One end surface of the insulator 14 is recessed and receives a projection 17 of a supplementary insulator 18, preferably composed of fiber or other non-brittle insulating material. In the usual construction of the insulator as one piece, breakage frequently occurs at about the place where I have divided same; and, in making the supplementary portion of some non-brittle insulating material as fiber, breakage is almost entirely obviated. The upper portion of this supplementary insulator fits within the socket 10 and is provided with an enlargement 19. A bushing

20 fits about the said supplementary insulator and screws into the said socket 10, a shoulder 21 of the same abutting the enlargement 19 and drawing the supplementary insulator 18 firmly against the insulator 14 as the said bushing is screwed into the socket. The supplementary insulator is likewise provided with a central longitudinal hole 22 which registers with the hole 15, and through both of which passes the sparking pin 23. The end of this sparking pin is provided with a head 24 arranged to abut against the inner end of a screw 25 passing through a terminal cap 26 which is screwed to the outer end of the supplementary insulator 18. The cap 26 is preferably locked to the supplementary insulator 18 as by driving a pin 27 through same. By adjusting the screw 25 the sparking pin 23 may be advanced to suit the length of the spark desired and to allow for burning away of the said point. In case of breakage to the insulator, or carbonizing or other difficulties with the sparking point 23, the plug may be readily taken apart and the defective parts replaced.

I claim:—

1. In a spark plug: the combination with a socket, and a sparking terminal attached thereto; of an insulator fitting within said socket; a bushing screwed into said socket to hold said insulator in place; a sparking pin passing centrally through said insulator to cooperate with said sparking terminal; a terminal cap secured to the outer end of said insulator; and means passing through said cap to advance said sparking pin.

2. In a spark plug: the combination with a socket, and a sparking terminal attached thereto; of an insulator fitting within said socket; a bushing screwed into said socket to hold said insulator in place; a sparking pin passing centrally through said insulator to cooperate with said sparking terminal, and a head at the outer end of said pin; a terminal cap secured to the outer end of said insulator; and an adjusting screw passing there-through and abutting the head of said sparking pin.

3. In a spark plug: the combination with a socket, and a sparking terminal attached thereto, of an insulator fitting within said socket; a bushing screwed into said socket to hold said insulator in place; a sparking pin passing centrally through said insulator to

coöperate with said sparking terminal; a removable terminal cap secured to the outer end of said insulator; and means passing through said cap to advance said sparking 5 pin.

4. In a spark plug: the combination with a socket, and a sparking terminal attached thereto; of an insulator fitting within said socket; a supplementary insulator; a bush- 10 ing about a portion of said supplementary insulator and screwed into said socket to hold said insulators in place; a sparking pin passing centrally through said insulators to coöperate with said sparking terminal; a 15 terminal cap secured to the outer end of said supplementary insulator; and means passing through said cap to advance said sparking pin.

5. In a spark plug: the combination with 20 a socket, and a sparking terminal attached thereto; of an insulator fitting within said socket; a supplementary insulator; a bush- ing about a portion of said supplementary insulator and screwed into said socket to 25 hold said insulators in place; a sparking pin passing centrally through said insulators to coöperate with said sparking terminal; a removable terminal cap secured to the outer end of said supplementary insulator; and

means passing through said cap to advance 30 said sparking pin.

6. In a spark plug: the combination with a socket, and a sparking terminal attached thereto; of an insulator fitting said socket, and an enlargement formed on the end of 35 same and provided with a recess; a supplementary insulator, and a projection therefrom fitting said recess, and an enlargement formed on the inner end of the supplementary insulator; a removable bushing sur- 40 rounding a portion of said supplementary insulator, and an internal shoulder thereon abutting said latter enlargement, said bushing being screwed into said socket to hold said insulators in place; a sparking pin pass- 45 ing centrally through said insulators to coöperate with the said sparking terminal; a terminal cap secured to the outer end of said supplementary insulator; and means passing through said cap to advance said sparking 50 pin.

Signed at New York, in the county of New York and State of New York this 21 day of June A. D. 1909.

WILLIAM S. BECHTOLD.

Witnesses:

FRED'K F. SCHUETZ,
A. P. LAMBRECHT.