No. 891,112. PATENTED JUNE 16, 1908.

C. H. STUART.

SPARK PLUG PROTECTOR.

APPLICATION FILED NOV. 13, 1906.

Fig. 1.

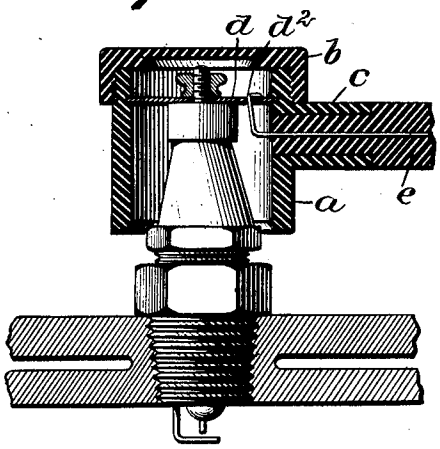


Fig. 2.

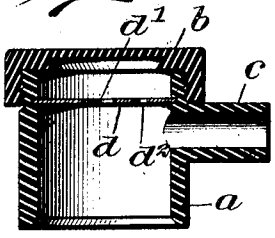
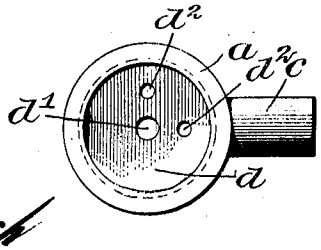


Fig. 3.



WITNESSES:

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CHARLES HENRY STUART, OF NEWARK, NEW YORK.

SPARK-PLUG PROTECTOR.

No. 891,112. Specification of Letters Patent. Patented June 16, 1908.

Application filed November 13, 1905. Serial No. 287,092.

To all whom it may concern:

Be it known that I, CHARLES HENRY STUART, a citizen of the United States, and a resident of Newark, in the county of Wayne and State of New York, have invented a new and Improved Spark-Plug Protector, of which the following is a full, clear, and exact description.

The object of my invention is to provide improved means for protecting spark plugs on internal combustion engines from rain, spray or other moisture which would tend to short circuit the igniting circuit and prevent a proper spark.

The invention is especially useful in connection with spark plugs used in boats, automobiles and in other exposed positions, and it consists in certain special features of construction which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings which illustrate as an example the preferred embodiment of my invention, in which drawings

Figure 1 is a sectional view of the improvement applied to a spark plug; Fig. 2 is a sectional view of the device detached; and Fig. 3 is a bottom plan view.

The body *a* of the protector is preferably cylindric in form, and is constructed of suitable insulating material, such, for example, as indurated rubber or a compound or composition thereof. The body is open at each end, and its upper end is closed by a removably secured cap *b* also of insulating material. Preferably this cap is screwed into place. Projecting from one side of the body intermediate its ends is a nipple *c* which surrounds an orifice in the side of the body *a*, which is also formed of insulating material. I prefer to make this nipple integral with the body *a*. Within the body above said nipple is a wall or partition *d* of metal. This is firmly seated in the body *a*, and is formed with an opening *d'* to receive the central electrode of the spark plug. Said wall is also formed with two openings d^2 to receive the wire *e* which is in connection with the spark plug.

In the use of the invention, the insulation on the conductor *e* is pared down to fit snugly in the nipple *c* and the connection between the insulation and nipple is securely taped to prevent the entry of moisture. The cap *b* is then removed and the wire *e* is passed in and out through the openings d^2 to make electrical connection with the metal wall or plate *d*. The top nut on the central electrode of the plug is then removed and the body of the protector is placed over the plug, the central electrode entering through the opening *d'* in the plate *d*. After this the top nut of the plug is screwed down on the plate *d* and the cap *b* of the protector screwed over the body *a*. The current now passes from the wire *e* to the plate or wall *d* and through the same to the central electrode of the plug. It should be understood that the plate *d* should in no case be allowed to contact with the metal body of the plug since in this event a short circuit would result. This device thoroughly incloses the plug and prevents the collection of moisture thereon, either from rain, spray or other causes, and consequently it prevents the establishment of a short circuit between the conductor *e* and the cylinder of the engine, which short circuit would defeat the production of the spark on which the ignition of the working charge of the engine depends.

Having thus described the preferred form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A spark plug protector having an insulating body, a nipple projecting from the side thereof, an insulating cap removably secured on the top of the body, and a metal wall adapted to have connection with the conductor and secured in the body intermediate its ends and having an opening therein to receive a part of the plug.

2. A spark plug protector having a body of insulating material adapted to inclose the plug, and a metallic member located in the body intermediate its ends and serving as a means for attaching the protector to the plug and a connection between the conductor and plug.

3. A spark plug protector having an insulating body with an opening in its side for the passage of the conductor, an insulating cap removably secured on top of the body, and a perforate metal wall located in the body intermediate its ends.

4. A spark plug protector having a body of insulating material adapted to inclose the plug, and a metallic perforate wall located in the body intermediate its ends, and adapted to effect connection between the conductor and the spark plug.

5. A spark plug protector having an insulation body adapted to inclose the plug, and means within the body for fastening the same to the plug and connecting the conductor with the plug.

6. A spark plug protector having a body adapted to inclose the plug, and a transversely extending metallic member secured within the body intermediate its ends and adapted to be engaged with a part of the plug whereby securely to hold the protector in place.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES HENRY STUART.

Witnesses:
F. M. VAN TASSEL,
ARTHUR L. CHRISTY.