

Patented June 19, 1923.

1,459,671

UNITED STATES PATENT OFFICE.

WILLIAM S. HARLEY, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO HARLEY-DAVIDSON MOTOR CO., OF MILWAUKEE, WISCONSIN, A CORPORATION OF WISCONSIN.

DISTRIBUTOR CAP OR THE LIKE.

Application filed April 25, 1919. Serial No. 292,731.

To all whom it may concern:

Be it known that I, WILLIAM S. HARLEY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Distributor Caps or the like, of which the following is a specification.

This invention relates to distributor caps or the like.

An object of this invention is to provide a means of securing the terminal of an electric conductor within a distributor cap or the like in such a manner as to form a weather-proof structure.

A further object is to provide a means for connecting the high tension lead of an ignition system within a distributor cap in such a manner that any water that may fall upon such cap will be drained away from the terminal connection.

A further object is to provide a ready means of securing the terminal of a high tension lead of an ignition system within a distributor cap.

A further object is to arrange the terminals in the distributor cap so that the conductors extend away therefrom in a manner to readily facilitate their connection to their respective contacts.

Other objects will hereinafter appear.

Embodiments of my invention are shown in the accompanying drawing:

Fig. 1 is a sectional elevation of one form of the distributor cap;

Fig. 2 is a plan view from the under side of Fig. 1 showing the arrangement of contacts;

Fig. 3 is a view similar to Fig. 1 showing a different form;

Fig. 4 is a view from the under side of Fig. 3;

Fig. 5 is a detail of one of the contacts shown in Fig. 3;

Fig. 6 is a detail of the connector passing to the center contact of Fig. 3;

Figs. 1 and 2, showing one form of the invention, will now be described.

The distributor cap 1 is formed of insulating weatherproof material and is cup-shaped and carries within its interior chamber 2 the distributor contacts 3 and 4. Sockets 5 extend upwardly from the bottom of the distributor cap and communicate with the chamber 2 by means of slots 6. Strand-

ed conductors 7, together with their waterproof insulating coverings 8 are positioned within these sockets. The conductors 7 pass through the openings 6 and are connected to the distributor contacts 3 and 4 by soldering.

Figs. 3 and 4 show a second form of distributor cap which is similar to that shown in Figs. 1 and 2 in its general characteristics but differs therefrom in the manner in which the conductors and contacts are connected.

In this form the contacts 3 are embedded in the material of the cap 1 and are provided with integral tapered screws 11 positioned within the sockets 5. The connector strip 13 for the central contact 4, is also embedded in the cap and provided with an integral tapered screw 12 similarly positioned.

The stranded conductors 9 are cut off flush with their insulating waterproof covering, and are pushed upwardly into the sockets 5 and at the same time given a twisting motion. This causes the conductors to engage the tapered screws 11 and 12 and to be drawn into such sockets by their action upon the screws 11 and 12 thereby securing a good electrical connection with the contacts 3 and 4. Due to the tapered formation of the screws, the conductors are expanded, thereby forcing their covering against the sides of the sockets and forming a secure weather-proof joint therewith.

The distributor cap has an imperforate top which is adapted to shed the water which may fall thereon. By having the conductors extend upwardly into downwardly opening sockets, the water which falls off the distributor cap and upon the conductors will pass downwardly along the conductors and away from the cap and contacts therein.

The invention provides a cap of simple construction in which the conductors and contacts may be readily connected.

The conductors extend downwardly from the distributor cap and may therefore be readily connected to their various contacts without bending said conductors which would be necessary if the conductors extended upwardly.

Obviously other structures may be devised which will embody the invention herein set forth.

What I claim is:—

1. A distributor cap or the like com-

prising an imperforate inverted cup shaped member having a socket formed integrally therewith extending upwardly from the base thereof, and an insulated conductor positioned within said socket.

2. A distributor cap comprising an inverted cup shaped member open at the base and having a socket formed therein, an upwardly extending distributor contact secured in said member, and a conductor positioned within said socket and connected to said distributor contact.

3. A distributor cap for ignition apparatus comprising an inverted cup shaped member open only at the base, and sockets arranged within the walls of said member and extending upwardly from the base thereof.

4. A distributor cap for ignition apparatus having an imperforate top, sockets formed in the wall of said cap extending upwardly from the bottom thereof, contacts positioned in said cap, and an insulated conductor inserted in each of said sockets and connected to said contacts.

5. A distributor cap for ignition apparatus comprising an inverted cup shaped body of insulating material having an imperforate top, sockets formed in the wall of the cup shaped body, contacts extending between the inside of the cap and the sockets, and insulated conductors adapted to be in-

serted within the sockets and connected with the contacts, the connection between the conductors and the contacts tending to force the insulation against the walls of the socket to thereby firmly hold the conductor in place.

6. A distributor cap for ignition apparatus comprising an inverted cup shaped imperforate insulating member having a socket formed in the wall thereof and extending upwardly from the base thereof, a distributor contact imbedded in the material of said member, and a conductor connected to the distributor contact and extending therefrom into the socket.

7. A distributor cap for ignition apparatus comprising an inverted cup shaped insulating member having formed integrally therewith a cable receiving socket open at its lower end only, a distributor contact located in said member, and a conducting member connected to the distributor contact and extending into the base of the socket, the conducting member being embedded in the material of the insulating member.

8. A housing for distributor contacts or the like comprising an insulating hollow body having an imperforate top, contacts positioned therein, sockets extending upwardly into said body from the base thereof, and conductors positioned within said sockets and connected to said contacts.

WILLIAM S. HARLEY.

Certificate of Correction.

It is hereby certified that in Letters Patent No. 1,459,671, granted June 19, 1923, upon the application of William S. Harley, of Milwaukee, Wisconsin, for an improvement in "Distributor Caps or the Like," an error appears in the printed specification requiring correction as follows: Page 2, lines 8 and 9, claim 2, strike out the words "a socket formed therein, an upwardly extending" and insert instead *an upwardly extending socket formed therein, a;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 6th day of November, A. D., 1923.

[SEAL.]

KARL FENNING,
Acting Commissioner of Patents.

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