J. F. CAVANAGH.

DISTRIBUTER FOR ELECTRIC IGNITION SYSTEMS.

APPLICATION FILED JUNE 14, 1916.

1,217,566.

Patented Feb. 27, 1917.

Fig 1

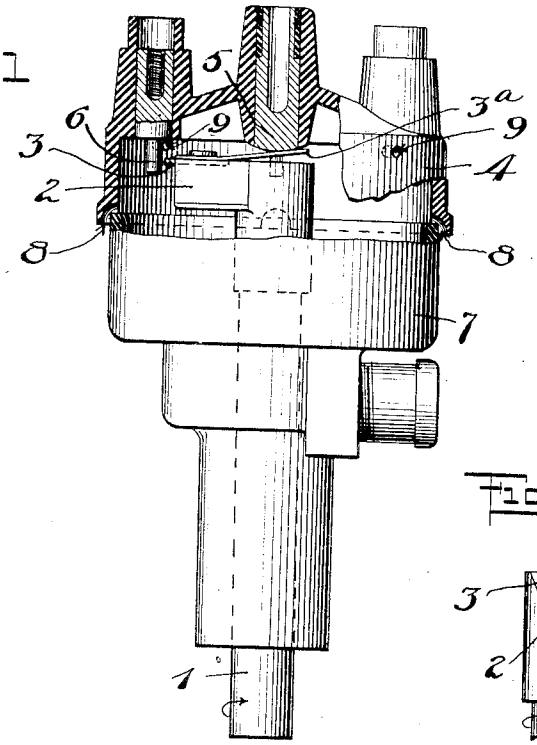


Fig 3

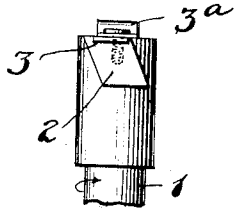
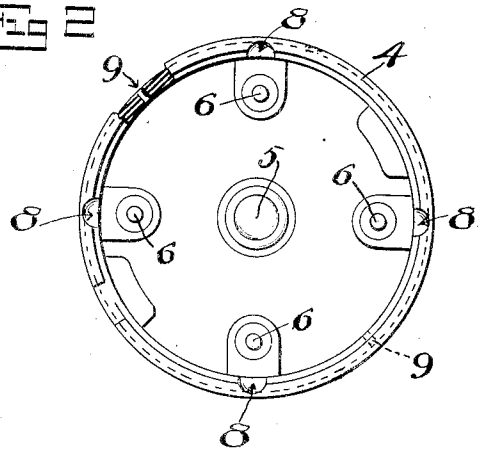


Fig 2



Inventor

John F. Cavanagh

By his Attorneys

Mitchell & Allyn.

UNITED STATES PATENT OFFICE.

JOHN F. CAVANAGH, OF MERIDEN, CONNECTICUT, ASSIGNOR TO THE CONNECTICUT TELEPHONE & ELECTRIC COMPANY, INC., OF MERIDEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

DISTRIBUTER FOR ELECTRIC IGNITION SYSTEMS.

1,217,566. Specification of Letters Patent. **Patented Feb. 27, 1917.**

Application filed June 14, 1916. Serial No. 103,660.

To all whom it may concern:

Be it known that I, JOHN F. CAVANAGH, a citizen of the United States of America, residing at Meriden, Connecticut, have invented a new and useful Improvement in Distributers for Electric Ignition Systems, of which the following is a specification.

My invention relates to improvements in distributers for electric igniters for gas engines, the object being to render the same more durable and efficient. In electric distributers, it is a well known fact that when the electric spark jumps across the space between two high tension terminal points, it forms ozone which tends to attack the metal parts of the distributer and cause oxidation and hence impairs the effective conductivity of the same. It is my purpose to, in a large measure, prevent this, thereby substantially increasing the effectiveness of the apparatus.

In the accompanying drawings:

Figure 1 is a side elevation partly in section, illustrating my invention.

Fig. 2 is a view of the underside of one of the details, also partly in section.

Fig. 3 is a side elevation of one of the details shown in Fig. 1, looking from left to right.

1 represents a shaft having mounted at its upper end a laterally projecting arm 2 carrying an electric contact point 3. The latter is insulated from the shaft 1, ordinarily by making the part 2 of insulating material. 4 is a housing which is ordinarily constructed of insulating material and which carries two or more high tension contact terminals. In the present instance 5 represents a central terminal and 6, 6, 6, 6 represent four points of other contact terminals arranged uniformly around the terminal 5. The contact point 3 is arranged to sweep past each of the contact points 6—6 as the shaft 1 is rotated so that a high tension current may jump the space between the point 3 and any one of the points 6—6 when the same are brought close enough together. The contact point 3 is kept in electrical connection with the terminal 5 by means of a suitable brush 3^a. The housing 4 is preferably made of suitable insulating material and is usually mounted upon a hollow support 7 through which the shaft 1 passes. The housing 4 is preferably made removable at will from the part 7, any suitable means being provided to secure the same together in the operative position. 8, 8, 8, 8 are openings or recesses in the lower part of the housing 4, which recesses are preferably below and adjacent to the contact points 6, 6, 6, 6. In the upper part of the case are suitable holes or passages 9, 9 which may be of an appropriate size and of any suitable number.

The housing or cap 4 which forms the upper part of the housing in which the high tension contacts are mounted is usually molded to shape and a convenient and practical method of forming the air inlet passages 8 in the housing is by molding such passages in the lower edge of this cap or upper part of the housing, substantially as indicated in Figs. 1 and 2. A further feature of decided utility illustrated in these views, is the formation of these passages inwardly from the extreme outer edge of the cap so as to leave a lip overhanging the entrances to such passages for preventing ingress of dirt, etc. This disposition of the passages is made possible, in the illustration, by thickening the rim of the cap so as to stand out beyond the rim of the housing base 7 and the passages may then be formed by the simple provision of notches extending from the inner circumference of the cap downwardly and outwardly to the lower edge of the cap near the outer circumference thereof. This construction provides when the parts are assembled, upwardly and inwardly extending passages opening into the interior of the housing, with lips protecting the entrances to said passages and serving to deflect rising currents of heated air into the inside of the housing, this directing of the heated air currents being facilitated by the vertical disposition of the distributer housing.

In operation air is permitted to enter one of the sets of openings and escape through the other set, for example, in the present instance the air will enter the openings 8—8 and escape through the passage 9—9. By permitting air to enter the housing 4, particularly at points closely adjacent to the contact points 6, 6, the ozone formed therein is adulterated and carried off through the outlet passages so that it will not attack and corrode the contact points. The arm 2

operates not only as a carrier for the contact point 3 but also produces a fan effect which assists in the drawing in of fresh air and the expulsion of contaminated air. Obviously the arm 2 may be of any suitable design to facilitate said fan action, for example, the forward face thereof may be so inclined in a direction to force the air upwardly toward the discharge outlets 9 as the shaft revolves. By thus maintaining relatively pure air within the housing the life and efficiency of the contact points is substantially increased.

It should be understood, of course, that my invention is capable of modification and that I have shown herein merely a preferred form thereof.

What I claim is:

1. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing.

2. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a dependent rim portion overhanging the edge of the other member and said overhanging dependent rim having a notch therein extending from the lower edge portion of said rim upwardly and inwardly to the interior of said members.

3. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing, and a protecting lip overhanging the entrance to said passage.

4. A distributer housing comprising housing members joined in edge to edge relation, one of said members having a passage formed in the edge thereof in communication with the interior of the housing, and one of said members having another passage whereby circulation of air through the housing is provided for by said passages.

5. A vertically disposed distributer unit comprising coöperating housing members separable on a substantially horizontal line, the upper one of said housing members having upwardly and inwardly extending passages formed in the lower edge thereof at the line of separation between the two members.

JOHN F. CAVANAGH.