May 19, 1931. G. J. LANG ET AL 1,805,874

TERMINAL CONSTRUCTION FOR IGNITION COILS

Filed June 1, 1929

Fig. 1.

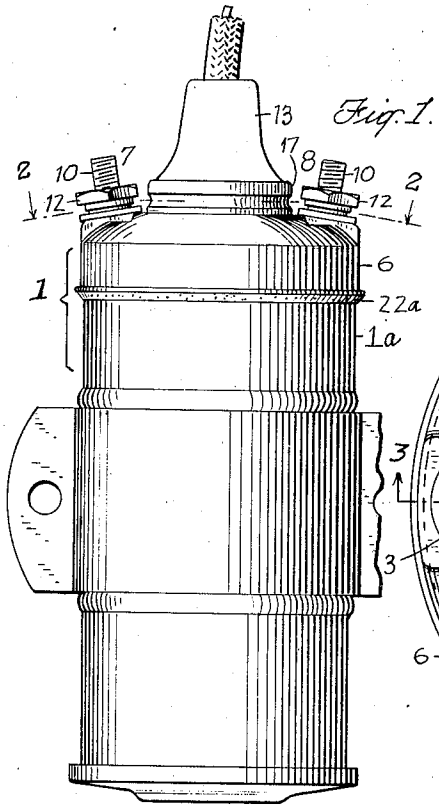
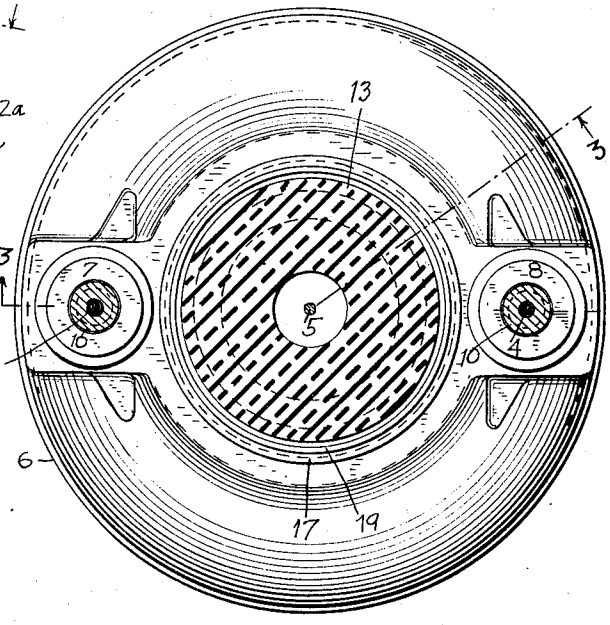


Fig. 2.



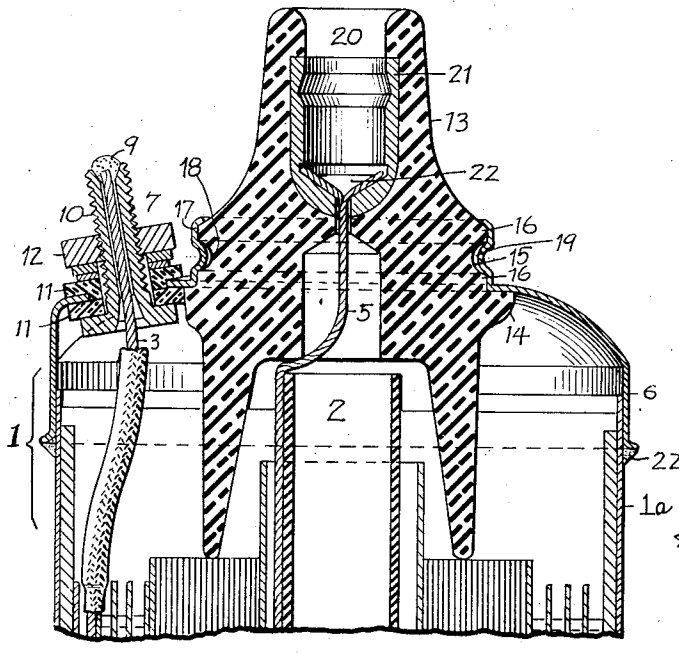


Fig. 3.

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UNITED STATES PATENT OFFICE

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TERMINAL CONSTRUCTION FOR IGNITION COILS

Application filed June 1, 1929. Serial No. 367,682.

This invention relates to ignition coils adapted to be used in ignition systems for internal combustion engines, and more especially to an improvement in the construction and method of mounting the terminals and high tension insulating cap thereon.

Our invention is particularly directed to simplifying the construction, assembly and mounting of the terminals and high tension insulating cap on said ignition coils with the object of making the same rugged, rigid and free of possible free play or looseness.

This we accomplish broadly by mounting each of the low tension terminals and high tension insulating cap of said coil separately and independently on the cover thereof, and one of the novel and important features is the manner of mounting the high tension cap so that the same shall be held rigid with said cover at all times.

In the accompanying drawings we have illustrated a preferred embodiment of the invention, wherein,

Fig. 1 is a front view of an ignition coil with our improved terminal arrangement;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1; and

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

The ignition coil comprises a housing 1 in which are disposed the usual iron core 2, primary and secondary windings (not shown), low tension leads 3 and 4 and high tension lead 5.

The housing preferably comprises a casing 1*a* and a cover portion 6 which may be a continuation of the substance of and integral with the casing, or, as shown, separate therefrom.

The cover 6 is of metal and has mounted thereon low tension terminals 7 and 8 to which are respectively soldered, as shown at 9, the low tension leads 3 and 4 aforesaid. The said terminals each consist of a longitudinally bored screw 10 which is insulated from the cover by washers 11, 11 and secured to said cover by a nut 12.

The molded high tension insulating cap 13 is given a special contour to enable it to be rigidly supported by the cover without additional supporting elements. Said cap is provided with a circumferential shoulder 14 which abuts against the cover. At a point above said shoulder the cap has a circumferential groove 15 providing thereby circumferential shoulders 16, 16.

The cover is provided with an annular flange 17 which is spun around the central portion 18 of the body of the cap 13 so that the same is pressed tightly against and around the shoulders 16, 16 and only partially enters the groove so as to leave an annular air gap or space 19 between the cap and the flange, thereby firmly supporting the plug on and by the cover and making an air and liquid tight seal.

The bore 20 of the cap 13 has a terminal insert 21 to which the high tension lead is electrically connected by means of a lead plug 22.

After the cover is placed on the housing, the seam between the same is soldered as indicated at 22*a*.

Having described our invention, what we claim is:

1. In an ignition coil having a housing, a high tension insulating cap secured in operative position by a portion of the body of the housing spun over said cap.

2. In an ignition coil having a housing, a high tension insulating cap secured in operative position by a portion of the housing spun over a central portion of the body of said cap.

3. In an ignition coil having a housing, a circumferentially-grooved high tension insulating cap, and a flange on said housing spun about the body and into the groove of said cap to provide the sole means for supporting said cap in operative position.

4. In an ignition coil having a housing including a cover, a circumferentially-grooved molded high tension insulating cap, and a flange on said cover spun about the body and partially into the groove of said cap to provide the sole means for supporting said cap in operative position.

In testimony whereof we affix our signatures.

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