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J. F. MARTIN ET AL

1,993,560

ELECTRICAL CONDENSER

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Fig. 1.

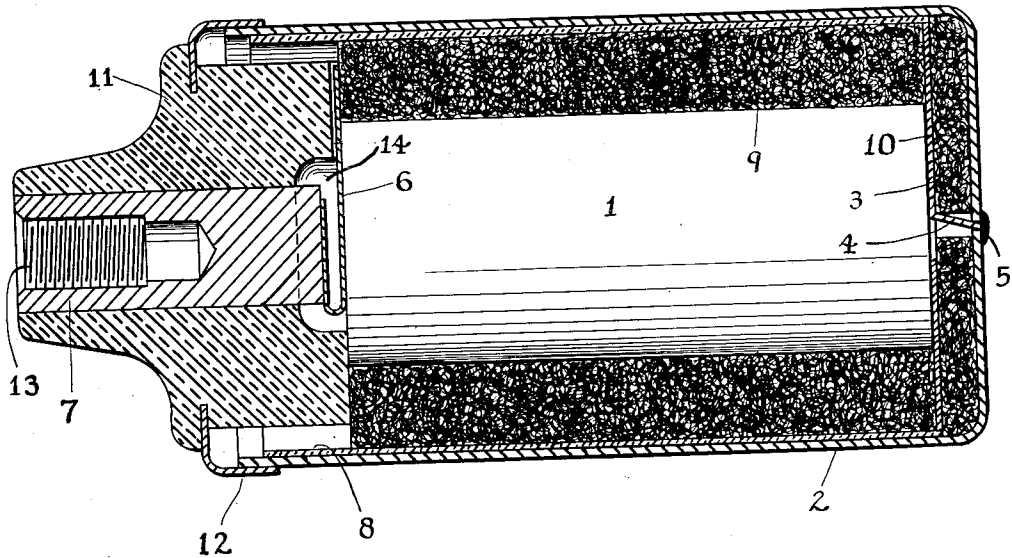


Fig. 2.

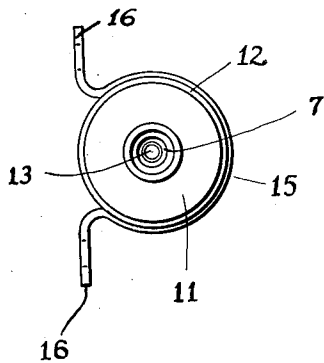
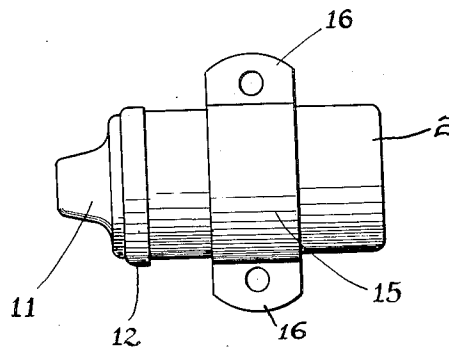


Fig. 3.



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ELECTRICAL CONDENSER

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3 Claims. (Cl. 175—41)

Our invention relates to electrical condensers adapted particularly for replacement purposes in ignition circuits of motor vehicles, but also adapted for other purposes.

5 An object of the invention is to provide a condenser which is compact and efficient and so made as to be less liable to deterioration on the shelf and to damage from vibration and shocks on a moving vehicle.

10 Another object of the invention is to provide an electrical condenser which is so constructed and encased that the likelihood of breakdown due to voids in the condenser body is reduced and the condenser better able therefore to retain its serviceability for relatively long periods.

15 These and other objects and advantages of the invention are set forth in the ensuing specification and the novel features are pointed out in the appended claims, but we, of course, reserve the right to make changes in details without departing from the spirit of the invention.

20 On the drawing, Fig. 1 shows an enlarged longitudinal central section through our condenser; Fig. 2 is a top view thereof, on a reduced scale, suitable for mounting in operative position; and Fig 3 is a side view thereof.

25 The condenser body 1 is made up of sheets of metal foil separated by layers of a suitable dielectric. The body may be in the form of a wax-impregnated coil or stack and is suitably encased by a metal container 2. Near the bottom of the container is a metallic disc 3 which is electrically connected to one pole of the condenser body and which is provided with a tongue 4 extending 30 through an opening in the bottom of the container 2 and soldered thereto at 5 to form the so-called grounded terminal of the condenser. The other pole of the condenser body 1 makes contact with one end of a bent spring strip 6, the other 40 end of which is soldered to the metal insert 7 to form the so-called live terminal of the condenser.

45 The container 2 is lined with fish paper 8 between which and the body 1, around the perimeter thereof, is a layer 9 of relatively soft and absorbent material as felt. A washer 10 of similar material lies between the disc 3 and the bottom of the container, the tongue 4 extending through a central opening in the washer as shown in Fig. 1. The material 9 and 10 serves the purpose of cushioning 50 the condenser body 1 in the container 2 and prevents jars and shocks from impairing the terminal connections thereof.

55 We may also impregnate the material 9 and 10 with oil or any other suitable insulating substance which will work its way into voids in the condenser

body 1 and thereby prevent the entrance of moisture thereinto in case a leak develops in the container. This oil serves as an insulator and as the condenser body of this type is usually impregnated with wax, the oil or the like in the material 9 and 10 will penetrate into all minute spaces 5 which the wax does not fill, thus increasing the efficiency of the condenser and lengthening its life. Furthermore, the oil does not detract from the cushioning effect of the felt.

10 The container 2 is open at the top and receives a molded insulating cap 11 in which the insert 7 is embedded. Also embedded or molded in the cap is a flange 12 fitting around the top of the container 2 and soldered thereto. The outer end 15 of the insert 7 has a threaded opening 13 for a screw to fasten a wire thereto and the inner end has a cavity at 14 to accommodate the terminal 6.

20 To mount the condenser a clamp 15, having perforated ends 16 for fastening screws or bolts, may be welded to the container 2.

Having described our invention, what we claim is:

1. A condenser comprising a container, a wax impregnated condenser body therein, an absorbent 25 material in said container surrounding said body, said material carrying an oil capable of penetrating minute spaces in said condenser body.

2. A condenser comprising a container, a condenser body therein, relatively soft cushioning 30 material in said container surrounding said body, a single metallic member adjacent one end of said body and having an integral struck up portion thereof serving to connect the body to said container, and a washer of relatively soft cushioning material between said member and said container. 35

3. A condenser comprising a metal container, a condenser body therein, a conducting member 40 between said body and the bottom of said container and electrically connecting one pole of said body to said container, cushioning material between said conducting member and one end of said container and also in the container surrounding said body, said cushioning material being im- 45 pregnated with a liquid insulating substance capable of penetrating said body, a molded cap having an embedded flange encircling the other end of said container, a conducting insert in said cap, and a bent conductor strip within said container connecting the inner end of said insert to 50 the other pole of said body.

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