Oct. 13, 1936. E. T. CONDON 2,057,477

COMBINED DIRECTIONAL SIGNAL AND SERVICE LAMP

Filed Aug. 12, 1933 2 Sheets-Sheet 1

FIG. 1

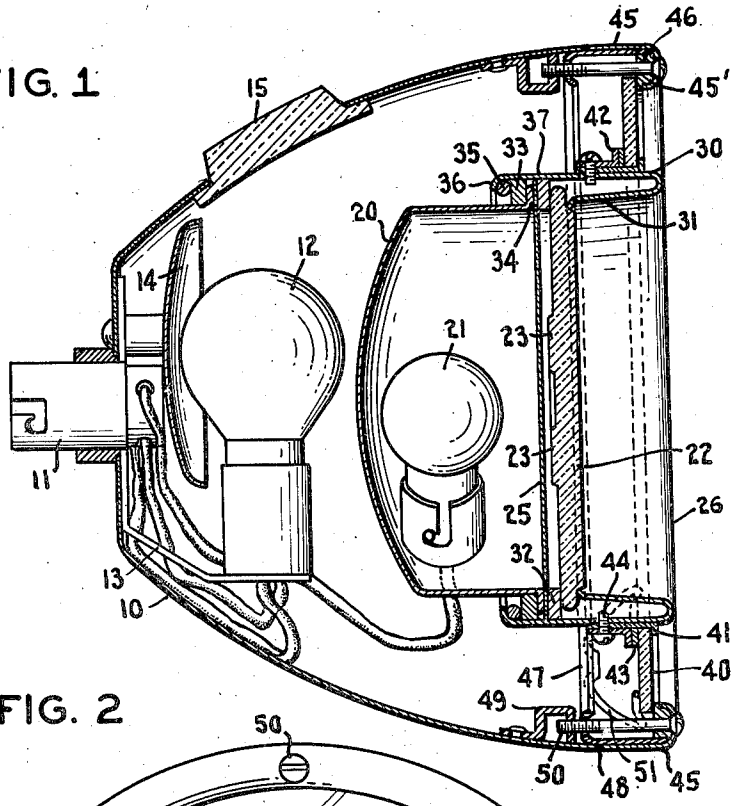
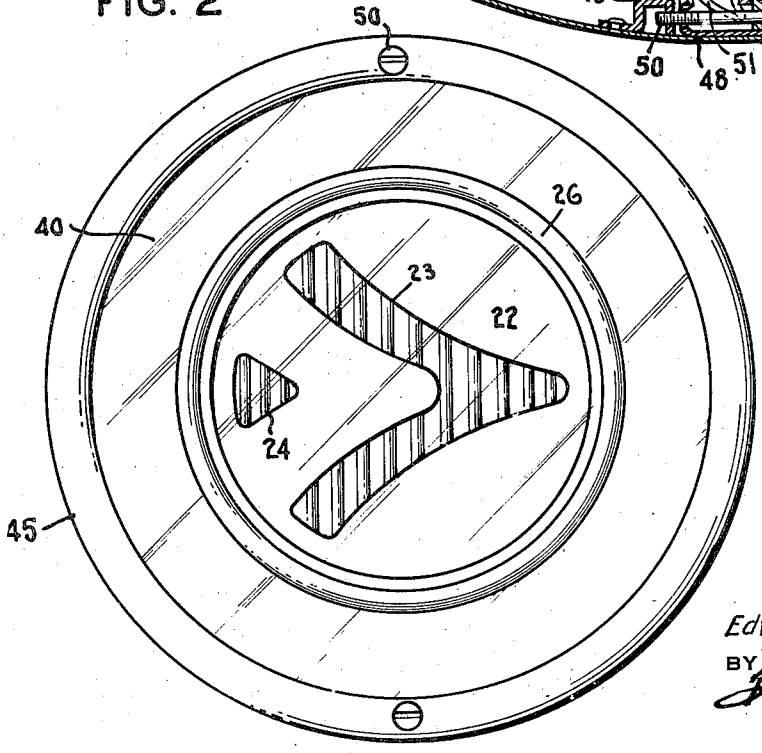


FIG. 2



INVENTOR
Edward T. Condon
BY
ATTORNEY

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FIG. 3

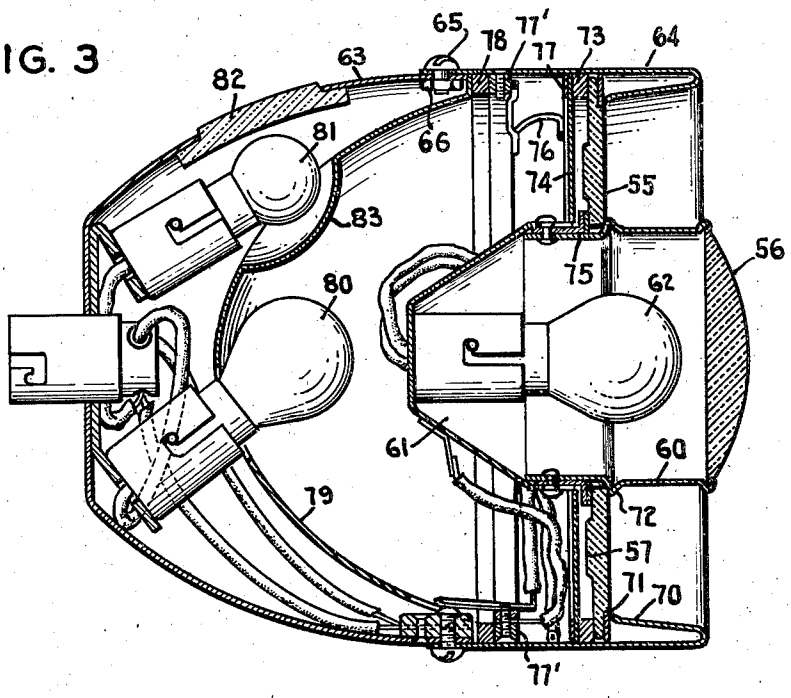
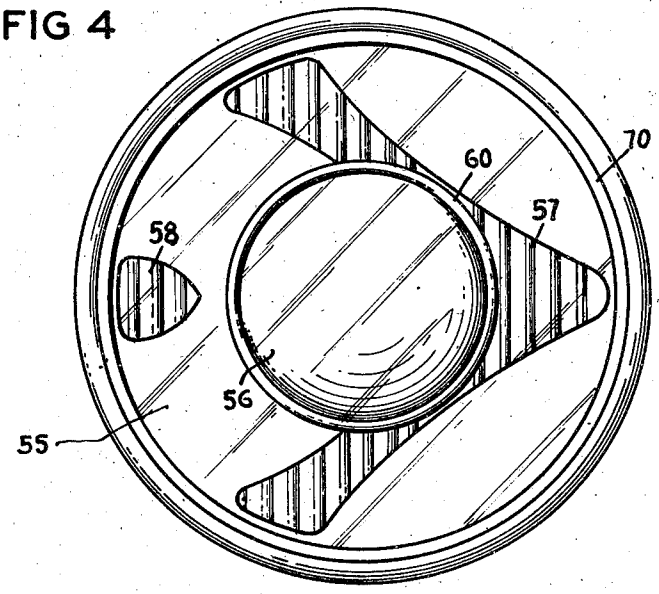


FIG 4



INVENTOR
Edward T. Condon
BY
ATTORNEY

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UNITED STATES PATENT OFFICE

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COMBINED DIRECTIONAL SIGNAL AND SERVICE LAMP

Edward T. Condon, New York, N. Y.

Application August 12, 1933, Serial No. 684,823

1 Claim. (Cl. 177—329)

The invention relates to directional signal devices for motor vehicles, and more particularly to electrically operated devices whereby the vehicle operator's intention to make a turn may be indicated at will to a succeeding or approaching vehicle.

It has for an object to provide in a single and compact device indicating means of the aforesaid nature as well as means for displaying a tail light or a stop light signal; or affording with the signal light a service light such as a parking or driving light.

Another object of the invention resides in the provision of means therewith for furnishing illumination externally of the device, for example, to a license plate.

Still another object of the invention resides in the novel lamp assembly whereby the various parts constituting the signal device are all carried by a shell or enclosing housing element.

A further object of the invention resides in the novel structure whereby convenient assembly may be had.

In carrying out the invention, a lamp housing of suitable shape is provided with an internal opaque member or coaxial housing affording a surrounding annular space, and electric lights are mounted respectively in the two housings which are closed by transparent or translucent members or lenses, one of which bears signal indicia while the other is adapted solely to be illuminated, preferably in color. The arrangement is such, furthermore, that the light for illumination of the annular portion is screened by the coaxial housing from illumination of the translucent member of the latter housing and which is adapted for illumination solely by the light mounted within the said internal housing.

The nature of the invention, however, will best be understood when described in connection with the accompanying drawings, in which:

Figs. 1 and 2 are respectively a longitudinal section through the novel lamp and a front elevation thereof.

Figs. 3 and 4 are similar views illustrating a modification.

Referring to Figs. 1 and 2 of the drawings, 10 designates a housing of acorn or truncated ellipsoid shape and at the apex of which is provided a conductor-receiving fitting 11 for receiving and holding in the usual manner a plug or the like (not shown) for the purpose of conveying power to the various lamps utilized within the housing. One of these lamps 12 is shown as mounted in the rearward portion of the housing as upon a bracket 13 secured to the apex. If desired, a reflector 14 may be also secured to the bracket behind said lamp, while the housing above the lamp 12 is indicated as apertured to receive a lens 15 for providing illumination exteriorly of said housing, for example, for illumination of a license plate (not shown).

Provision is made to screen centrally light from the lamp 12, more particularly in the line of the longitudinal axis of said housing; and to this end opaque means, such as a further or second housing 20 is mounted within the housing 10 and substantially in the longitudinal axis of the latter housing. Housing 20 is designed to retain a further lamp 21 for illumination, in the present embodiment, of a signal lens 22 having provided thereon a light-transmitting portion embodying, for example, an arrow-head 23 and a tail-portion 24 designed to light up when energy is supplied to lamp 21. A colored translucent disk 25, as of celluloid, may be held behind the lens 22 to reduce tendency of undesired illumination of the signal portion of the lens from the rays of the sun or from the light of a head-light of a succeeding vehicle; and this disk may be of any desired color.

Furthermore, provision is made to set back the lens 22 from the outer edge 26 of the housing to afford a "shadow-box" effect and elimination therewith and with the disk 25 of any tendency to illumination of the lens from external sources.

The second housing structure is conveniently assembled and a "shadow-box" effect provided for by means of an annular carrying member 30 having the inturned lip 31 of a depth corresponding to the desired set-back for the "shadow-box" effect and serving also as an abutment for the lens 22. It will be understood that the outer surface of the lip 31 may be given a dull black finish to minimize reflections from sources of light external to the housing. This lens is backed by a gasket 32 inserted between the same and the disk 25 which, in turn, is backed by a gasket 33.

The enclosing housing 20 is provided with an outwardly extending flange 34 which is designed to be fitted between the disk 25 and gasket 33, the entire structure being held in assembled relationship by means of a split spring-ring 35 held between the inturned edge 36 of the other wall 37 of annular member 30 and the gasket.

The said annular member 30 is designed, also, to support an annular light-transmitting mem-

ber 40 which may be held thereon by an annular strip, soldered or otherwise secured to the wall 37 and having the outturned rim 41, and an annular backing strip with outturned rim 42 and intermediate holding washer 43, the strip with rim 42 being held to the wall 37 through screws 44. This affords a compact and simple unit comprising both lenses 22 and 40 and may readily be mounted within the surrounding housing 20.

The annular light-transmitting member 40 is to this end designed to be fitted within the outer housing 10 substantially at its base, and the housing for this purpose is made separable having the outer cap member 45 whose outer edge may be turned inwardly as at 45' to receive a gasket 46 against which the annular light-transmitting member 40 may contact to close off the interior of the housing 10.

A further ring 47 is soldered or otherwise permanently secured to the inner wall of the cap 45 and extends inwardly behind the same to seal the seam 48 between the housing proper 10 and its cap 45. Furthermore, there is secured to the housing 10 a plurality of lugs 49 which are threaded to receive holding screws 50 for locking the cap to the housing portion, said screws limiting, also, lateral movement of the lens 40. Ring 47 is turned inwardly at its inner edge to afford a support for a plurality of spring clips 51 adapted to press against the inner surface of the lens 40 to further hold the same rigidly in position.

It will be appreciated that with the arrangement shown, light from lamp 12 is visible only through the annular member 40 or through the lens 15, while light from lamp 21 is visible only through the lens 22. As indicated, therefore, when light 21 is flashed on, a directional signal will be afforded, while when lens 40 is illuminated, the same may serve as a tail or as a stop-light; or, in instances in which the device is utilized for a front signal device, the light passing through lens 40 may be utilized as a parking light or as a driving light, or both, where the lamp 12 is provided with a double filament. The lens 40 will in these instances preferably be of clear glass to afford the maximum illumination and the lens 15 may be omitted.

In Figs. 3 and 4, the signal lens 55 is shown arranged about the central stop or tail-light lens 56, the arrow portion 57 and tail portion 58 thereof being provided on the annular lens portion 55 as clearly shown in Fig. 4 of the drawings. Lens 56 is conveniently mounted in a lens-barrel 60 which is removably secured to an inner housing 61, as by means of a bayonet joint, so as to render the lamp 62 within said housing readily accessible.

The outer housing in the present embodiment is constructed also in two sections, the inner section 63 being held to the outer or cap portion 64, for example, by means of screws 65 fitting nuts 66 within the outer housing. The outer or cap portion 64 is provided with the inturned lip 70 to provide for a "shadow-box" effect for the lens 55 which is arranged to abut the edge 71 of the inturned lip, said lens 55 also abutting a circular ridge 72 provided on the barrel 60.

Behind lens 55 is provided an annular gasket 73 and located behind the same is an annular celluloid disk 74, the lens 55 being backed by a flanged strip 75 secured to the housing 61 and the disk 74 held in place by spring-clips 76 abutting at their opposite ends metal rings 77 and 77', the latter being secured to the portion 64 of the outer housing. The ring 77', through an intermediate annular gasket 78, serves as an abutment for a reflector 79 which is held in place through contact with the outer edge of the housing portion 63.

Within the reflector 79 is mounted a lamp 80 serving for illumination of the lens 55; and in the present instance, a further lamp 81 is provided for affording illumination externally of the outer housing as through the lens 82 provided in its wall. To accommodate the said lamp, reflector 79 may be indented as indicated at 83.

With the modified arrangement hereinbefore set forth, lens 56 may serve as a stop-light and/or tail-light, its lamp 62 then being provided with two filaments, while the lens 55 provides the illumination for signals relative to change in direction.

I claim:

An automobile signaling device, comprising two coaxial housings one of which is disposed within the other, and both of which terminate substantially in a single plane, a cylindrical wall common to said housings, a light-transmitting element cooperating with said cylindrical wall to close the inner housing, an annular light-transmitting element cooperating with said cylindrical wall to provide a closure for the outer housing, said light-transmitting elements being respectively disposed in planes normal to said cylindrical wall, said planes being displaced with respect to each other whereby said wall functions as a light screen between both housings and a shadow box element for one of said housings, and means to independently project light through said light transmitting elements.

EDWARD T. CONDON.