May 8, 1934. E. F. AYMAR 1,958,028

SIGNAL DEVICE

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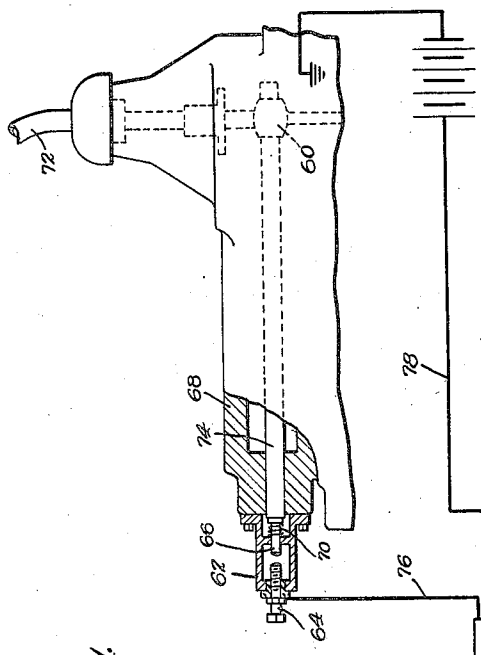


Fig. 1.

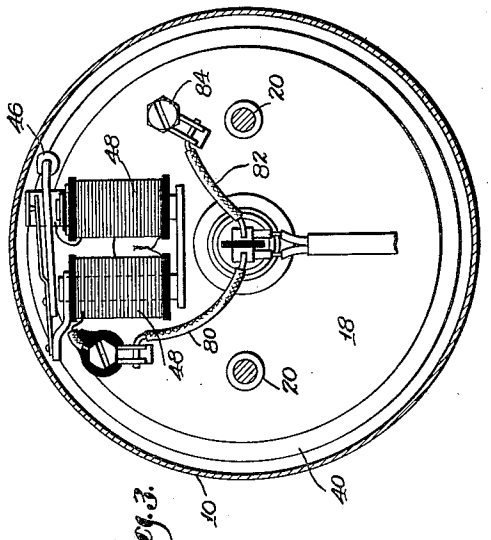
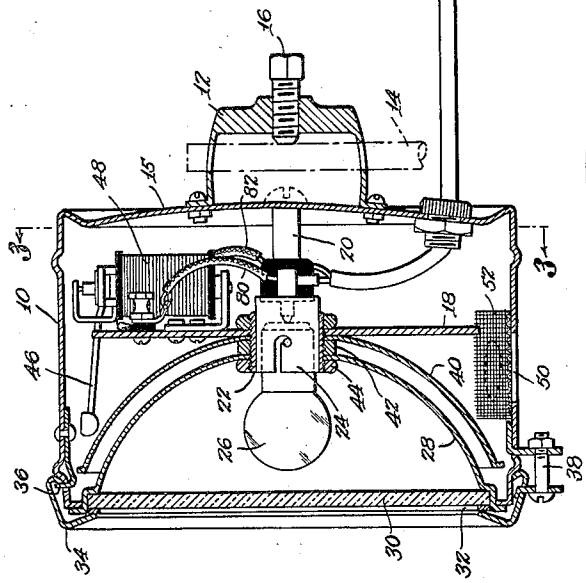


Fig. 3.



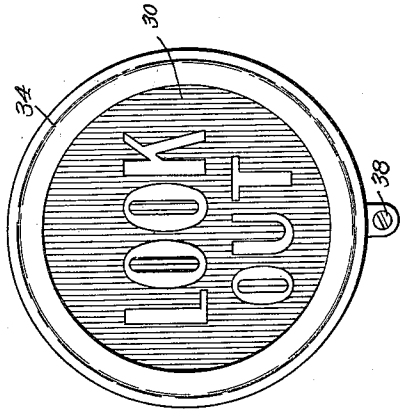


Fig. 2.

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SIGNAL DEVICE

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1 Claim. (Cl. 177—7)

This invention relates to signal devices particularly adapted for use with automobiles, and more especially to a new and improved warning light and audible signal combination. The well-known stop light which is commonly used on motor vehicles ordinarily provides a sufficient warning signal for oncoming vehicles, since the driver usually has his vision focused on the vehicle directly ahead. Quite a different situation is presented, however, when a vehicle is to be operated in the rearward direction, wherein anyone at the rear of the vehicle may be injured and thus place the operator in great jeopardy for damages. The primary object of my invention is to provide an improved warning light and audible signal combination particularly adapted for use on motor vehicles, and more especially in combination with the reverse mechanism thereof, whereby to give both audible and visible warnings when the vehicle is to be moved rearwardly.

In its preferred form, the improved signal device comprising my invention has the appearance of the usual stop light and is constructed in a very compact and substantial manner. This arrangement embodies the usual lamp reflector and rearwardly of the reflector, and preferably nested compactly therewith, is a gong which serves to provide the audible signal, an electrically-operated clapper acting to ring the gong. As illustrated in the accompanying drawing, the light and clapper are both in circuit with a switch automatically controlled by the reverse mechanism of the motor vehicle, whereby the switch is closed and the signals automatically operated when the mechanism is placed in reverse gear.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawing, in which

Fig. 1 is a sectional view through the signal device and illustrates the same in combination with the reverse mechanism of a motor vehicle;

Fig. 2 is a front elevation of the device; and

Fig. 3 is a sectional view through the device on line 3—3 of Fig. 1.

The signal device illustrated comprises a housing 10 having a bracket 12 on its rear wall 15 for attaching the housing to a supporting plate or rod 14 by means of a screw 16. A base plate 18 for supporting the signal devices within the housing is carried on studs 20 extending through the rear wall 15. Mounted centrally within the base plate is a bushing 22 carrying therein a socket 24 for the lamp bulb 26. The reflector 28 for the lamp is carried on the exterior of the bushing, the usual glass 30 being supported at the forward end of the housing and closing the front end of the reflector. The glass is held in place by a gasket 32, a rim 34, a hook 36 and clamping means 38.

Mounted on the bushing 22 rearwardly of the reflector and concentrically thereof is a gong 40, nuts 42 and 44 serving relatively to space the reflector and gong and hold them in assembled relation on the bushing. The reflector and gong are preferably bell-shaped, as illustrated, and are assembled in a most compact nesting arrangement, wherein the gong is closely adjacent to the reflector but is not in contact therewith. A clapper 46 for the gong is operated by electro-magnets 48, also mounted on the base plate 18. One or more openings 50 through the housing, preferably covered by a screen 52, permit the sound vibrations to pass out freely from the housing.

The signal device above described is illustrated in Fig. 1 as connected to and automatically operated from the reverse mechanism 60 of an automobile. A switch 62, comprising a fixed terminal 64 and a movable terminal 66, is carried on the gear box 68, a spring 70 normally holding the movable terminal in the open switch position. Whenever the reverse lever 72 is thrown into operative position, a rod 74 connected thereto functions to close the switch. Wires 76 and 78 extend from the switch and reverse mechanism to and into the housing 10 and are respectively connected to the lamp terminals of the socket 24. Other wires 80 and 82 connect such terminals with the electro-magnet and to a stud 84 on the base plate to which the electro-magnet is grounded.

It will now be clear that placing the reverse mechanism in operation will automatically light the lamp 26 and ring the gong, thus giving both sight and audible warnings that the vehicle is to be operated backwardly. It will, of course, be understood that my compact signal device arrangement within the housing is capable of use in other combinations and wherever such a warning is desirable. The glass 30 may be marked with suitable warning words, as the words "Look out" illustrated.

While I have illustrated the signal device of my invention as including a single gong or bell, it will be understood that, if desired, additional bells may be mounted in the same nested arrangement and thus a greater volume of sound or variety of pitch may be secured.

It will be apparent that the concentric and

nested arrangement of the concave or parabolic reflector for the light and the concave bell of the signal results in a particularly compact instrument for carrying out the two desired functions. Moreover, the arrangement is such that neither element interferes with the action of the other, since the reflector is supported within the concavity of the bell without any obstruction to its reflecting surface, and the sound waves are free to pass out laterally from the bell through the openings provided in the casing. I believe that a reflector and bell have not heretofore been mounted in this novel relation in an automobile accessory.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

A combined warning light and audible signal device, comprising a housing, a base plate fixed therein, a bushing carried by said base plate, a socket within said bushing adapted to receive an incandescent electric lamp, a bell-shaped reflector for the lamp mounted on said bushing a bell-shaped gong also mounted on said bushing in nested and spaced relation to and rearwardly of said reflector, the gong being disposed on one face of said base plate, and an electrically operated clapper for cooperation with said gong carried by the opposite face of said base plate.

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