June 19, 1951 H. BERNSTEIN 2,557,859

EMERGENCY ROAD SIGNAL

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Fig. 1.

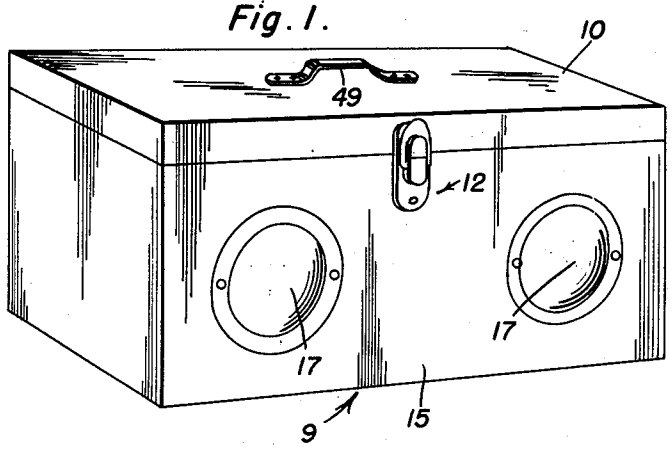


Fig. 7.

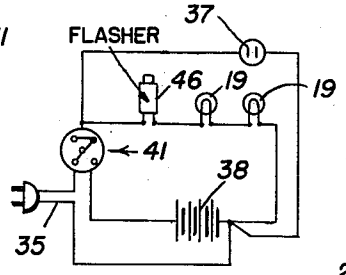


Fig. 4.

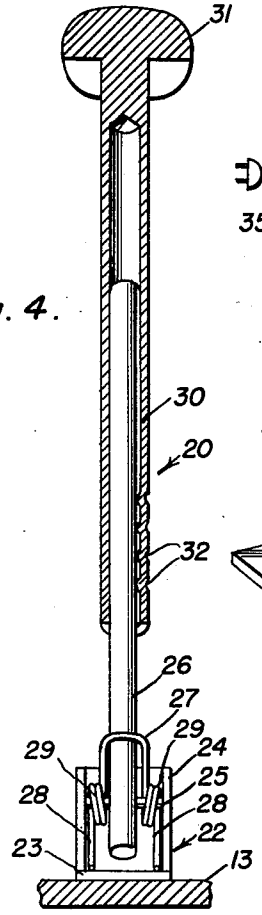


Fig. 5.

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Fig. 2.

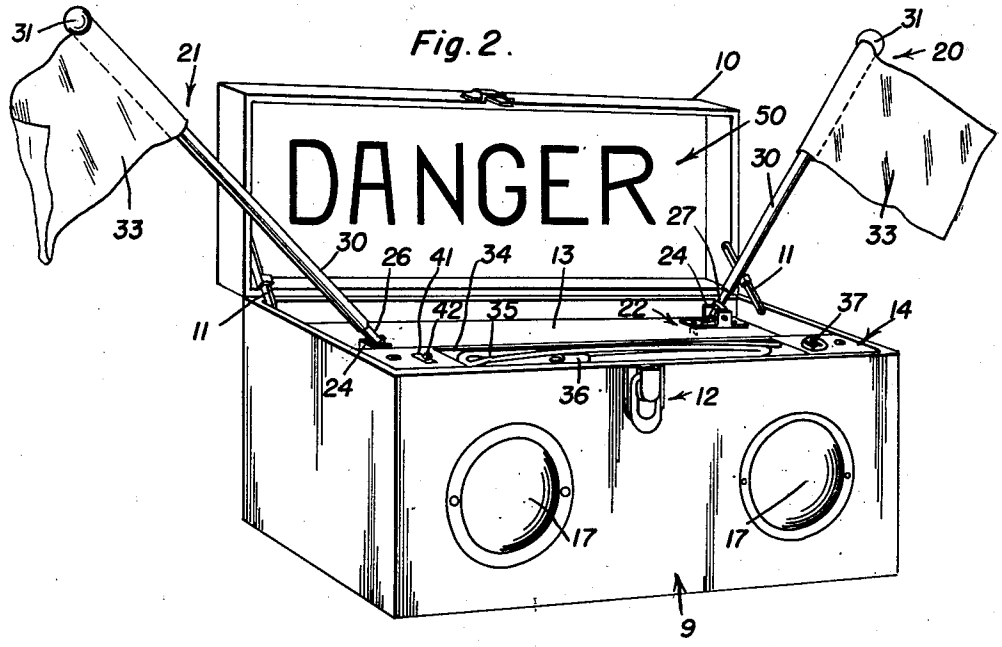


Fig. 3.

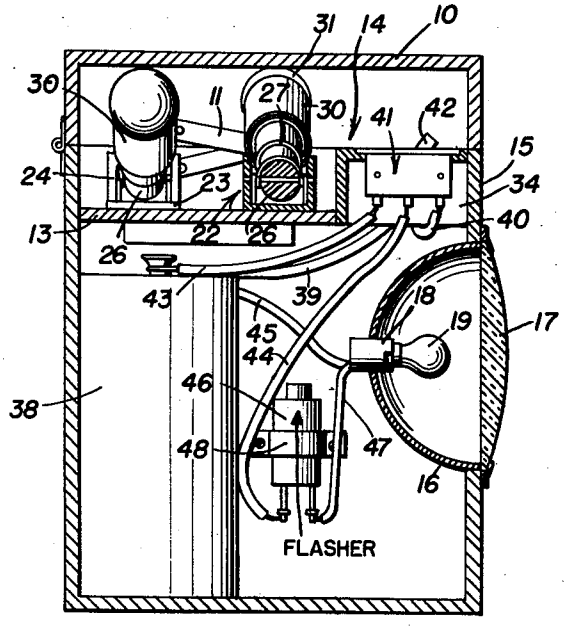
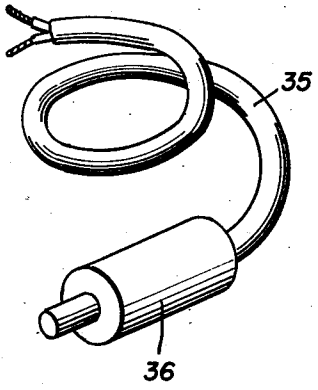


Fig. 6.



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EMERGENCY ROAD SIGNAL

Harry Bernstein, Elizabeth, N. J.

Application August 12, 1947, Serial No. 768,220

3 Claims. (Cl. 177—329)

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The present invention relates to highway and roadside caution and warning signals adapted to be used by automobile, truck and equivalent drivers on or within the vicinity of the vehicle and in a manner to warn drivers of other nearby cars to steer clear of the danger area, whereby to thus assist in minimizing highway accidents.

As the introductory statement of the invention implies, I am aware that the art to which the invention relates comprehends the provision and use of various types of signalling devices characterized by illuminable lamps, caution flags, and the like. It follows that the instant invention appertains to a structure which, it is submitted, is possessed of appreciable refinements and improvements and thereby constitutes a different and worthy contribution to this line of endeavor.

In carrying out the principles of the present invention, I provide a portable chest-type signalling device, the accessories and parts being mounted in the chest proper and being exposed for use when the lid is swung to open position, said lid being supported in a vertical position and serving to display the word "Danger."

In keeping with my inventive ideas, I provide a pair of companion warning flags, the staff portions of same being mounted on novel, spring-equipped fixtures, whereby, when the lid is open, the flags swing out to ready-to-use display positions.

Another object of the invention is to provide a self-contained source of illumination for a pair of lens-covered lamp bulbs, this phase of the invention having to do with a dry cell battery, an intermittent flasher for the lamp bulb, a three-pole switch, and a complemental receptacle which may be used to accommodate a trouble light, if and when it becomes necessary to use the latter.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings:

Figure 1 is a perspective view of the emergency signalling device constructed in accordance with the principles of the present invention, the same being shown when not in use;

Figure 2 is a perspective view of the same illustrating the arrangement of principal parts when the device is in use;

Figure 3 is a transverse vertical sectional and elevational view on an enlarged scale;

Figure 4 is a sectional and elevational view of a fragmentary type detailing the construction of one of the flag staffs;

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Figure 5 is a perspective view of the special fixture which is used for hingedly mounting the lower end of one flag staff;

Figure 6 is a fragmentary perspective view of one of the details; and

Figure 7 is a wiring diagram.

Referring now to the drawings by distinguishing numerals and their lead lines, the box or chest proper, which is of appropriate material of suitable strength and weight, is denoted by the numeral 9 and the hingedly mounted cover or lid is denoted at 10. The lid is provided with stays 11 for holding same in a vertical position when in use, as shown in Figure 2. Appropriate latch or locking means 12 is provided to keep the lid closed when the device is not in use. As seen in Figure 3, a horizontal partition 13 is mounted in the upper rear half portion of the chest on a plane below the open top of said chest. In addition, an adapter type insert 14 is mounted in the space between the partition and the front panel 15, as shown in Figure 3. Said front panel 15 is provided with apertures to accommodate interiorly arranged reflectors 16, and lenses 17. The lenses are preferably colored red for caution purposes. Each reflector is provided with a socket 18 to accommodate an appropriate lamp bulb 19.

Warning flags 20 and 21 are provided, as before indicated, and these are mounted on the partition 13 in the manner shown. That is to say, the flags are alternately arranged and mounted adjacent opposite ends of said partition so that they may be folded into the chest beneath the lid, as seen in Figure 3, when not in use. When the lid is swung open, the flags swing out to display positions, as is obvious. Each flag is the same in construction and the description of one will suffice for both. To this end, attention is directed to Figure 5 wherein one of the attachment fixtures 22 is shown. This comprises a base plate 23 with an upstanding channel-shaped mount 24, the latter serving to accommodate a hinge pin 25 on which the inner section of the flag staff, the section 26, is mounted. Spring means is provided for swinging the staff out and holding it in an outstanding position. The spring is of general U-shaped form and the bight portion 27 is saddled over the hinged end portion of the staff 26. The limbs 28 rest on the base plate and the intermediate portions of the limbs are coiled around the hinge pin 25, as indicated at 29. Thus, sufficient tension is brought to bear on the staff to swing it out, or to permit same to be swung, by hand, down and into the box to assume an out-of-the-way position when not in use. Each flag

staff includes a sleeve section 30 (see Fig. 4) having a head 31 on its outer end, the sleeve being telescopically mounted on the staff section 26 and having appropriate indentations forming friction detents 32. This permits the flag proper, 33, to be raised to a desired elevation.

The insert 14 has an elongated receptacle portion 34 which provides a pocket for an extension cord 35. This cord is provided with an attachment plug 36 which may be hooked into the electrical system of an automobile. It may be inserted, for example, in the customary cigarette lighter circuit on the instrument panel of the automobile (not shown). Of course, the part 36 may be of suitable construction to permit it to be clipped on a storage battery or otherwise hooked into the lighting system. This cord 35 serves to supply current to a suitable receptacle 37 at one end of the part 14, as shown in Figure 2. Obviously, the receptacle 37 serves to accommodate a plug such as is usually provided on a trouble light (not shown). It is sometimes necessary to use a trouble light, particularly if the storage battery of the adjacent automobile is out of order, and it is therefore one of the purposes of this invention to supply the receptacle 37 with current not only from the cord 35 but also from the interior of the chest. This is accomplished by providing a dry cell 38 on the interior, as shown in Figure 3, and running wires 39 and 40 therefrom to said receptacle. At the end of the part 14 opposite to the receptacle 37 a three-pole switch 41 is provided, this having an appropriate selector and control button 42. The wire 40 is connected with the switch as shown in Figure 3. An additional wire 43 is connected with the dry cell and switch and complemental wires 44 and 45 are provided for supplying current to the lamps, preferably by way of a conventional type flasher 46 and an accommodation wire 47. The flasher is mounted in an appropriate bracket 48.

It is obvious that the switch means may be utilized and thrown in to energize the flasher means and bulbs from the self-contained dry cell battery 38. If the dry cell battery is dead and an electrical source is available on the nearby automobile, then the cord 35 and means 36 may be brought into play to supply current from the latter source to the receptacle 37 and also to the bulbs or lamps 19.

Obviously, I am not especially concerned in this mechanical case with the electrical phases, but, as shown in the wiring diagram in Figure 7, such as may be employed if desired.

I am primarily concerned with the portable, weighted self-standing chest, lamp means, flag means, trouble light accommodating receptacle means, and the incidental complemental parts. For example, in practice, I will provide the lid with a carrying handle 49 and also, on the interior of the lid, will provide further signalling means 50. This has to do with the word "Danger," which is painted on the underside of the lid using said underside as a display panel. Luminous paint may be employed for lettering the sign.

The invention shown and described constitutes a handy and aptly usable accessory which may be brought into play when emergency requirements on highways are met.

The manner of use and operation of parts will be self-evident, for which reason a description of same is thought to be not required.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the construction, operation and advantages of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though I have herein shown and described a preferred embodiment of my invention that the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In a signaling device of the class described, a flag comprising a sectional staff, the sections being telescopically connected together and one section carrying a flag, a mounting fixture for said staff comprising a horizontal base plate having an upstanding channel-shaped portion, a hinge pin mounted in said channel-shaped portion, an end portion of one section of said staff being located within said channel-shaped portion and being pivotally mounted on said hinge pin, a U-shaped spring having its bight portion saddled over the pivoted end of said one section, having its limbs coiled around the hinge pin and having the free ends of the limbs confined in said channel-shaped portion and resting on said base plate, an upper edge of said channel-shaped portion serving as a rest for said one section in a manner to check the swing of one section in an outward direction, whereby to hold said flag in a signaling position.

2. A portable roadside danger signal device comprising a flat bottomed open-top self-standing box, a hingedly mounted closing lid completely covering the open top of said box, means for positively holding the lid in a vertical open position, means for fastening the lid down in closed horizontal position, a horizontal partition in said box, a flag, a flag accommodating fixture mounted on said partition, said fixture embodying a hinge pin, said flag including a staff mounted on said hinge pin, and spring means mounted on said hinge pin within the limits of the fixture, said spring means serving to exert constant pressure on the adjacent portion of the complemental flag staff, said closing lid coacting with said flag to mechanically force and press same into the box in an out-of-the-way position when not in use and said lid serving as trip means so that when said lid is opened, said spring means comes into play to automatically swing said flag up and out through the open top to signaling position, said fixture constituting a stop for the flag staff and limiting the outward swinging position of the latter.

3. A portable roadside danger signal comprising a self-standing flat bottom rectangular box having vertical side and end walls, said box being open at its top, a closing lid hinged to the upper edge portion of one side wall and adapted to close said open top, means to hold said lid in its closed position, means to hold said lid in a vertical open position in alignment with said one side wall, a horizontal partition mounted in said box on a plane slightly below the upper edges of said side and end walls, said partition cooperating with the latter in defining a relatively shallow signaling flag folding and storing compartment, a fixture embodying a horizontal base secured to said partition, said base being provided with an upstanding channel-shaped portion, the open side of the latter facing into said storing compart-

ment and the closed side facing outwardly and constituting a check, the depth of said channel-shaped portion being less than the depth of said compartment, a hinge pin mounted in said channel-shaped portion, a signaling flag having a staff, one end of the latter being mounted on said hinge pin and spaced from said base, and spring means also mounted on said pin and resting in part against the staff and in part against said base.

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