March 31, 1931. N. W. BULLY ET AL 1,798,966

SIGNALING DEVICE

Filed Jan. 27, 1926

Fig. 1.

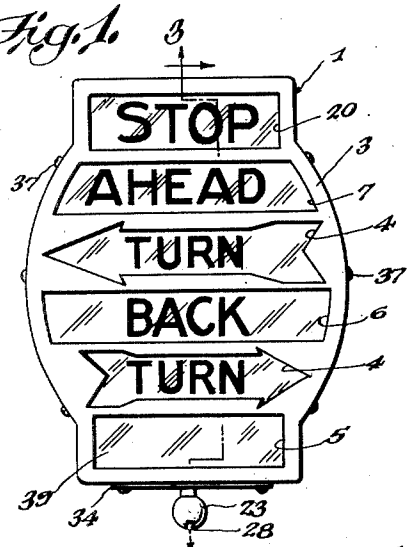


Fig. 2.

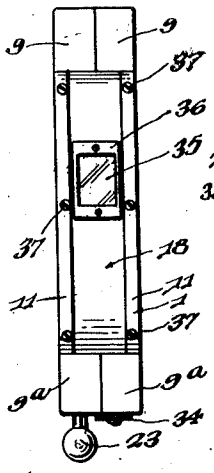


Fig. 3.

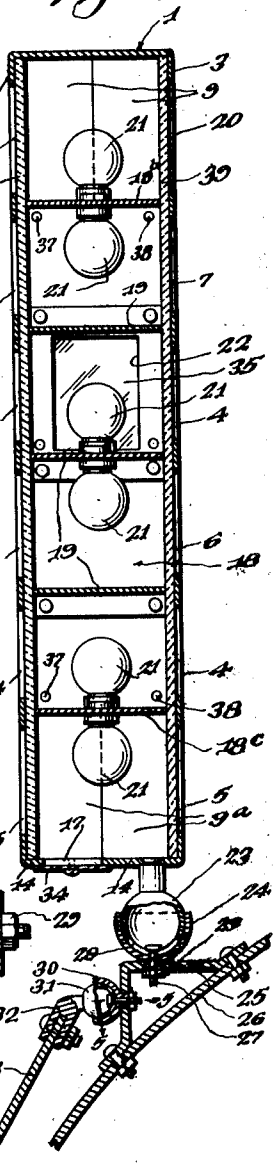


Fig. 4.

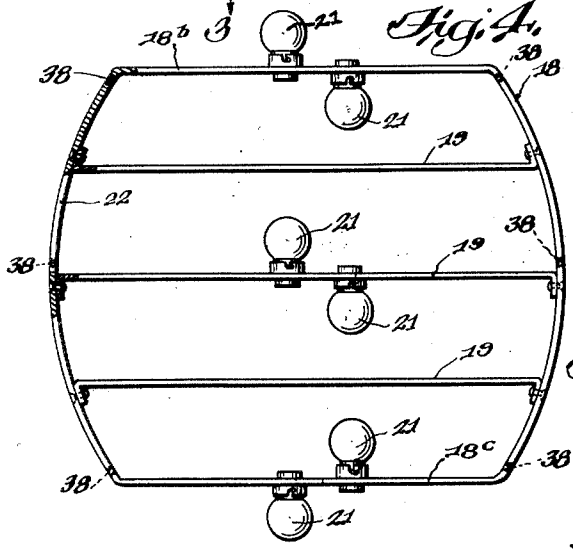


Fig. 7.

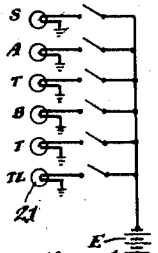
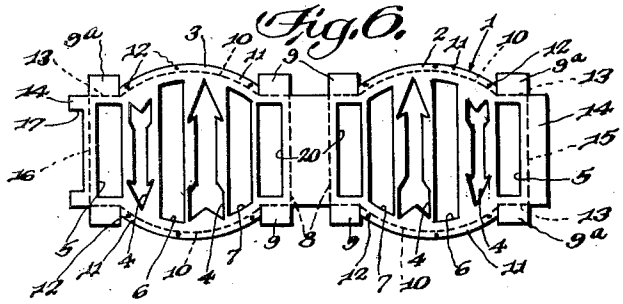


Fig. 5.

Fig. 6.



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Patented Mar. 31, 1931

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UNITED STATES PATENT OFFICE

NORMAN W. BULLY AND HARRY RUPRIGHT, OF FLINT, MICHIGAN

SIGNALING DEVICE

Application filed January 27, 1926. Serial No. 84,172.

This invention relates to signaling devices and more particularly to what I term a safety signal.

One of the main objects of the invention is to provide a signaling or indicating device particularly adapted for use in connection with automobiles and similar vehicles which presents a neat appearance and is highly efficient. A further object is to provide a device of this character of simple and inexpensive construction. Further objects will appear from the detailed description.

In the drawings:

Fig. 1 is a face view of the device.

Fig. 2 is a side view of the device.

Fig. 3 is a section taken substantially on line 3—3 of Fig. 1.

Fig. 4 is a detail of the inner member of the device partly broken away.

Fig. 5 is a detail of the ball supporting member.

Fig. 6 is a plan view of the blank from which the outer casing is formed.

Fig. 7 is a diagram of the light circuits.

The device includes an outer member or casing 1 which is formed by stamping out of a single piece of sheet metal of suitable gauge. This casing includes front and back sections 2 and 3 which are provided with suitable openings 4 in the form of arrows, and with substantially rectangular openings 5, 6 and 7. In assembling the casing sections 2 and 3 are bent toward each other by bending the blank along the lines 8, and the lateral tabs 9 are bent inwardly at right angles, thus forming the upper portion of the casing. The edge portions of sections 2 and 3 are bent inwardly at right angles along the curved lines 10 forming lateral flanges 11 which are provided with suitably spaced openings 12. Each section is provided at its outer or lower end with tabs 9*a* corresponding to tabs 9, and these tabs 9*a* are bent inwardly at right angles along the lines 13. Section 2 is further provided, at its lower end, with an elongated tab 14 which is bent inwardly at right angles along the line 15, section 3 being provided with a similar tab which is bent inwardly at right angles along the line 16 and is cut out to provide an opening 17 for a purpose to be described.

The casing 1 receives an inner member 18 shaped to fit within the main portion of the casing and divided by plates or partition members 19, which extend transversely of member 18 and are secured thereto by riveting or in any other suitable or preferred manner into a plurality of compartments, these compartments being positioned in alignment with the openings 4, 6 and 7 of the outer or main casing. The space in the upper portion of the main casing is separated from the inner casing or member 18 by the top wall or plate 18*b* thereof, the space at the lower portion of the main casing being separated from the inner casing by the lower wall or plate 18*c* thereof. The main casing is provided, adjacent the upper end of each section 2 and 3 with an opening 20, and incandescent lamps or bulbs 21 are suitably mounted to extend into the respective sections or compartments of the inner casing 18 and into the upper and lower portion of the main casing above and below the inner casing. The inner casing 18 is further provided through its outer lateral wall with an opening 22, this opening being positioned at one end of that compartment of the inner casing which is in alignment with the first or upper arrow openings 4 of the main casing. The lamps 21 are suitably connected to a suitable source of electrical energy, such as a battery E one side of which is grounded, one pole of each of the lamps being grounded. Suitably controlled switches are introduced into the circuits of the respective lamps so that by operating these switches the lamp desired can be illuminated. Preferably, though not necessarily, the uppermost lamp 21 which is positioned in the upper portion of the main casing 1, has its circuit controlled by the operation of the brake lever of the automobile, in a known manner, and the fourth lamp from the top can have its circuit controlled by the gear shifting mechanism of the automobile. These means for controlling the circuits of signal lights are well known in this art, however, and need not be illustrated nor described in detail. A switch for controlling the various lamp circuits can be placed in any suitable or preferred position so as

to be readily accessible to the driver of the automobile.

Preferably a hollow ball member 23 is secured to the main casing and seats in a cup 24 secured on a bracket 25 which is secured on a fender 26 of the automobile. A bolt 27 has its head passed through a slot 28 in ball member 23 and the stem of this bolt passes through bracket 25, receiving a securing nut 29 which coacts with the bolt for securing the ball member in adjustment within cup 24. This provides simple and efficient means whereby the casing 1 can be adjusted and secured in upright position on the fender so as to be readily visible from vehicles in front and in rear of the vehicle upon which the device is mounted. A cup member 30 is mounted upon the vertical arm of bracket 25 and receives a ball 31 carrying a clamp 32 in which is secured a license plate 33, the ball 31 being secured in adjustment with the cup 30 in the same manner as the ball member 23 is secured in cup 24. The casing 1 is so positioned upon bracket 25 that the light from the lowermost lamp 21 which passes downwardly through opening 17 illuminates the license plate. Opening 17 is preferably covered by a transparent closure member 34 of celluloid or other suitable material. A closure member 35 of translucent material suitably colored, such as red glass or celluloid, is secured over opening 22 with casing 18 by means of the frame 36.

In assembling the device, the two sections 2 and 3, after being suitably shaped as described, are bent toward each other along the lines 8 and the inner casing 18 is then positioned within these two sections, after which the two sections are moved into their full operative relation to each other so as to fit about and enclose the inner casing 18. Securing screws 37 are then inserted through openings 12 in flanges 11 and are threaded through openings 38 provided in the outer walls of the inner casing 18 for this purpose. These screws serve to secure the inner casing in suitable position within the outer casing and also serve to secure the two casings together in such manner as to effectually prevent relative movement between the same while also eliminating all possibility of spreading apart or opening of the main casing 1. When placing the inner casing within the outer casing we also insert into the inner casing, at the front and back thereof, glass plates 39, these plates bearing suitable inscriptions such as "Stop", "Ahead", "Turn", "Back", and "Turn". These glass plates are preferably colored red though different colors may be used, if desired, as will be understood. When the driver of the automobile desires to stop, the circuit of the uppermost light 21 is closed so as to illuminate the upper section of the main casing above the inner casing 18 thus signaling "Stop" to persons in front and in rear of the automobile. When he again starts the autotmobile the circuit for the second light is closed to signal "Ahead". If the driver desires to make a left turn the circuit of the third light is closed thus illuminating the first arrow and the word "Turn", the arrow pointing in the direction in which the turn is to be made. At this time the translucent closure member 35 is also illuminated to indicate to pedestrians at the left of the automobile that the driver is contemplating making a left turn. If the driver of the automobile desires to back, the fourth light 21 is illuminated to indicate this fact. If a right turn is contemplated the fifth light is illuminated to indicate this fact. The bottom or sixth light is normally illuminated when driving at night and serves to illuminate the portion of the glass plates covering the portions 5 thus serving as a tail light. This bottom light also serves to illuminate the license plate.

What we claim is:

In a device of the character stated, an outer casing formed from a continuous sheet of flat material bent along median fold lines to afford spaced apart integrally connected front and rear sections having spaced apart openings therein, an inner casing comprising side wall portions and end wall portions, said end wall portions being disposed parallel to each other, partitions in said inner casing extended between said side walls parallel to said end walls defining open faced chambers, said outer casing being disposed over said inner casing whereby a portion thereof intermediate said front and rear sections will cooperate with an end portion of said inner casing to define a chamber, tab portions on said outer casing disposed parallel to and spaced from the other of said end portions to define with said last mentioned end portion another chamber, plates of translucent material disposed and retained between said inner and outer casing in alignment with said openings, said partitions extending parallel to the sections of material between said openings to align said chambers with said openings whereby illuminating means may be mounted on certain of said partitions so that an illuminating member will be disposed in each of said chambers.

In testimony whereof we affix our signatures.

NORMAN W. BULLY.
HARRY RUPRIGHT.