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3,456,100

SAFETY BARRICADE

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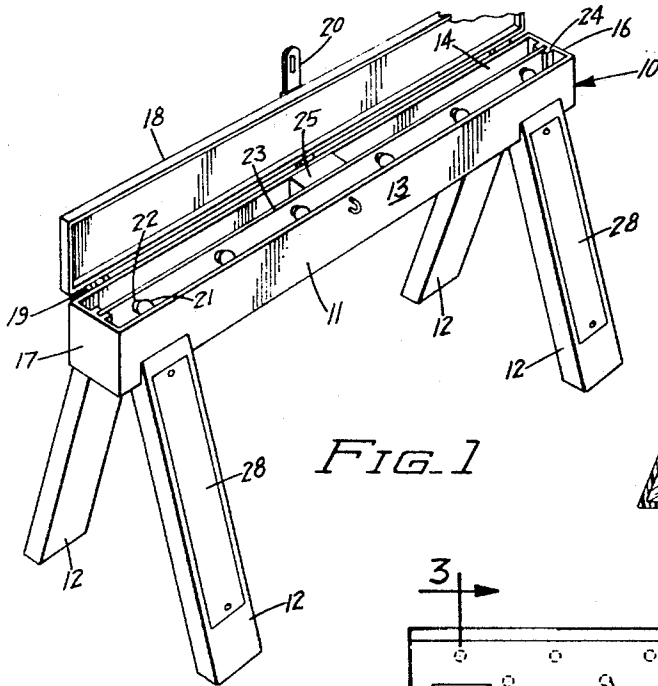


FIG. 1

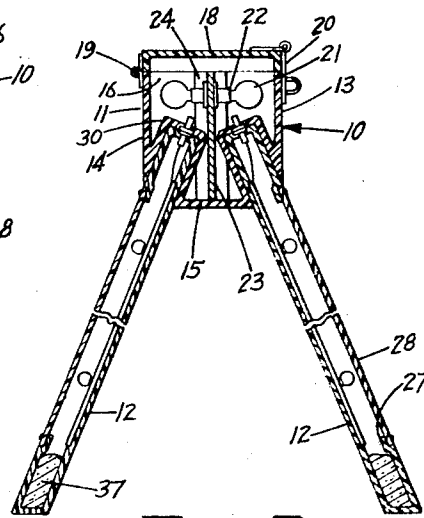


FIG. 3

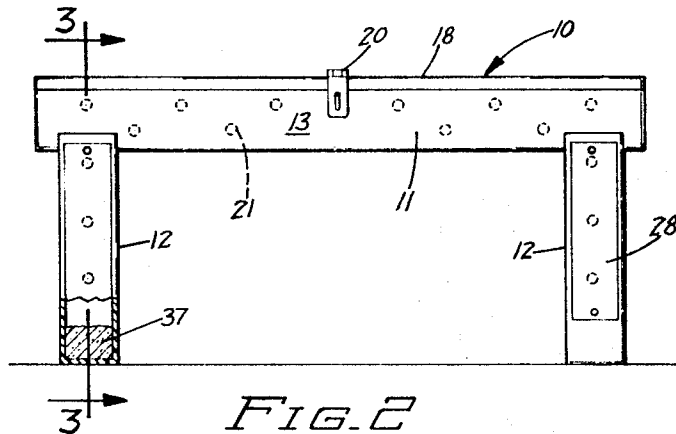


FIG. 2

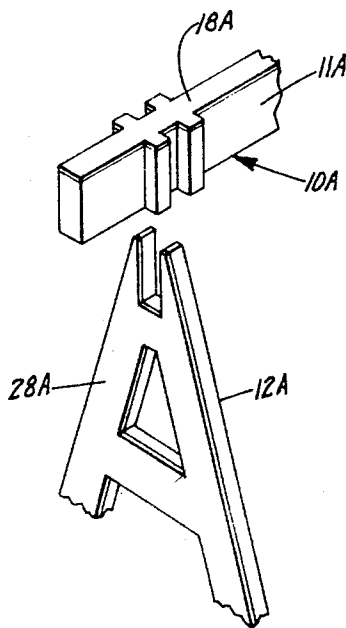


FIG. 5

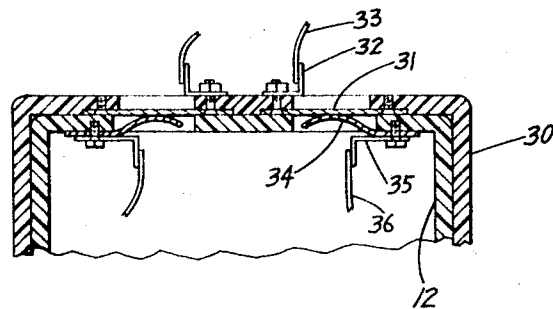


FIG. 4

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SAFETY BARRICADE

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9 Claims

ABSTRACT OF THE DISCLOSURE

A safety traffic barricade which is constructed from translucent plastic material and provided with interior illumination so that the barricade is visible in the dusk and dark. The barricade is battery powered. It is preferably reflectorized for visibility in the event of power failure. It should be weighted for stability and may have an audible alarm to warn against theft and vandalism.

This invention relates to safety barricades for directing and protecting traffic, both vehicular and pedestrian. Such barricades are commonly used at road construction and repair sites, to temporarily close off unused traffic lanes, to temporarily obstruct ends of lanes, to delineate parade routes, to guard excavations and building sites, and generally warn against hazards. Such barricades are usually painted for maximum visibility and usually serve their function very well during daylight hours. However, during periods of dusk and darkness because of poor visibility, the barricades are often not noticed in time to avoid running into them. This has resulted in untold damage to the barricades themselves, to vehicles which run into them and to passengers in the vehicles. To a lesser extent, the barricades are subject to theft and to damage through malicious mischief and vandalism.

It is the principal object of the present invention to provide a safety traffic barricade of high visibility during hours of dusk and darkness which can be seen in sufficient time to avoid collision with the barricade. The barricade is constructed at least in part of rigid light-diffusing material and is provided with interior illumination means for high night-time visibility. At the same time, the barricade is of rugged sturdy construction capable of absorbing collision impact with minimum damage. Where theft, malicious mischief and vandalism are problems, the barricade may be provided with automatic alarm means.

The invention is illustrated in the accompanying drawings in which corresponding parts are identified by the same numerals and in which:

FIGURE 1 is a perspective view of one form of barricade according to the present invention shown with its top open to partially reveal the interior of the cross piece member;

FIGURE 2 is a front elevation of a barricade as in FIGURE 1 shown partially broken away to reveal interior construction;

FIGURE 3 is a vertical transverse section on the line 3—3 of FIGURE 2 and in the direction of the arrows and on a slightly enlarged scale;

FIGURE 4 is a fragmentary elevation in section on an enlarged scale of the coupling means between a barricade cross piece member and a barricade leg showing one means for establishing electrical contact between the parts; and

FIGURE 5 is a fragmentary perspective view of another form of traffic barricade which may be constructed according to the present invention.

Referring now to FIGURES 1, 2 and 3 of the drawings, the traffic barricade, indicated generally at 10, is of the familiar "saw-horse" type. It is composed of an elongated horizontal cross piece member 11 spaced from the ground

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and supported adjacent its opposite ends by two pairs of legs 12. As shown, the legs extend downwardly and outwardly so that the feet provided a broad stable supporting base for the barricade.

The cross piece 11 is hollow and is formed from strong rigid translucent light-diffusing synthetic resinous plastic material. It may be molded or assembled from sheet material of sufficient thickness and strength secured together by means of adhesive or conventional fastening elements. As illustrated, the cross piece 11 includes a front wall 13, back wall 14, bottom wall 15 and end walls 16 and 17. It is open at the top and is provided with a top cover 18 which, as illustrated, may be hinged at 19 and held closed by hasp means 20, or secured by screws or bolts or similar fastening means.

The cross piece 11 houses illumination means. As illustrated, the illumination means comprise a plurality of lamp bulbs 21 carried in sockets 22 which in turn are carried by a center panel 23 supported in spacers 24 on the inside surfaces of the end walls 16 and 17. The center panel 23 is desirably formed from transparent or translucent rigid plastic sheet material. The bulbs may be in line or staggered and preferably are disposed on both sides of the center panel. A power source in the form of a battery 25, such as a 6 volt or 12 volt direct current battery, is housed within the hollow cross piece 11 and connected by means of suitable electrical conductors to the lamp sockets 22. The lamps may burn continuously or the circuit may contain a blinker device for intermittent flashing operation. Neon tubes may be substituted for bulbs.

The legs 12 are desirably also of hollow construction and formed by molding or otherwise from rigid translucent light-diffusing plastic material. As illustrated, the outward facing surface of each leg is formed with an access opening surrounded by a recessed flange 27 which supports a closure panel 28 secured by screws or otherwise for easy removal and access to the interior of each leg. In some instances, it may be desirable for only the panel 28 to be formed of translucent light-diffusing material while the remainder of the leg may be opaque. The inside back surface of each leg opposite the access opening supports a plate or panel on which are carried a plurality of sockets and bulbs for illumination of the leg.

As shown, the cross piece 11 is provided with recessed sockets 30, molded or otherwise formed in the cross piece, and of a size and shape to receive the upper end of a leg 12 with a close slide fit. Each such socket 30 is formed in the bottom edge of the cross piece and extends downwardly and outwardly corresponding to the angle of the leg. The barricade is thus easily assembled and disassembled.

One form of electrical contact between the legs and cross piece is illustrated and best seen in FIGURE 4. Contact plates 31 are fitted into the wall surface in the bottom of each leg socket 30 and connected through terminals 32 to wires 33 forming part of the circuit through the light sockets 22 to the power source 25. Corresponding spring contacts 34 are disposed in the top surface of each leg 12 and connected through terminals 35 and wires 36 to the sockets and lamps within the leg. Each spring contact 34 engages a plate 31 when the barricade leg is in engagement with the leg receiving socket to permit the legs to be illuminated from the same source as the cross piece.

Each leg 12 is desirably weighted, as at 37, for greater stability. The weighting material may be sand or the like which may be inserted at the site of use of the barricade. Alternatively, it may be a more permanent material such as concrete set in situ in the barricade leg. Desirably the leg may be formed with a separate compartment at its lower end for addition and removal of weighting material

without the risk of possible damage to the lighting fixtures.

In FIGURE 5, there is shown an alternative form of traffic barricade which may be made according to the present invention. According to this form of the invention, the cross piece 11A is supported adjacent opposite ends by an A-frame leg member 12A. The cross piece member 11A is hollow and formed by molding or otherwise from a translucent light-diffusing plastic material and is provided with a removable cover 18A for access to the interior which is provided with illumination means and a power source, generally as described. The leg members 12A are similarly desirably hollow and formed by molding or otherwise from translucent light-diffusing plastic material and provided with a removable cover plate or panel 28A for access to the interior which is provided with suitable illumination means. The ends of the cross piece 11A couple with the leg members 12A with a slide fit. This coupling means is desirably also provided with spring contact electrical connection means to permit the illumination means of the leg members to be powered from the same source as the cross piece.

The luminescent safety traffic barricades according to the present invention may be constructed from any of a variety of synthetic resinous materials which are readily available for related uses. Among these may be mentioned: high density polyethylene, which may be readily injection molded; rigid polyvinylchloride; acrylic resins, which are readily cast; polyesters; epoxies; polycarbonates; and the like. These materials may be formulated so as to be translucent with light-diffusing properties, rigid and sturdy. Reinforcing materials, such as fiber glass, may be desirable for extra strength. Ultra violet absorbers are desirably included to prevent weather-induced degradation. Yellow or red pigments or dyes may desirably be included to denote caution or danger. At least part of the outer surfaces of the barricades are desirably provided with light-reflective material, such as glass beads and the like commonly used for this purpose, for better visibility in the event of failure of the power source.

To discourage theft, malicious mischief and vandalism, and to alert law officers and the public of accidents involving such barricades, an audible alarm system is desirably incorporated. United States Patents No. 1,611,749 to Himmelman; 2,407,122 to Young and 2,724,823 to Toepfer, all disclose alarm systems which are activated by sudden jarring movement, such as occurs when a traffic barrier is hit by a vehicle. Such alarms may be connected to the same power source as the illumination means and when activated sound an electrically operated audible alarm such as a horn, bell or siren.

It is apparent that many modifications and variations of this invention as hereinbefore set forth may be made without departing from the spirit and scope thereof.

I claim:

1. A free-standing luminescent safety traffic barricade comprising:

- (A) a generally horizontal cross piece member,
- (B) a plurality of longitudinally spaced apart supporting members secured to said cross piece adjacent opposite ends thereof to support the same spaced from the ground,
- (C) at least said cross piece member being hollow and formed from rigid translucent light diffusing synthetic resinous material,
- (D) illumination means within said hollow member, and
- (E) a power source for said illumination means.

2. A barricade according to claim 1 further characterized in that said supporting members are hollow leg mem-

bers downwardly extending from said cross piece and formed from rigid light diffusing synthetic resinous material and having illumination means therein.

3. A barricade according to claim 2 further characterized in that:

- (A) said leg members are detachably secured to said cross piece,
- (B) coupling means are provided for securing said leg members and cross piece together, and
- (C) electrical contact means are provided between adjacent coupling surfaces of said leg members and cross piece to provide power for the illumination means of the leg members.

4. A barricade according to claim 2 further characterized in that the bottom ends of said legs are weighted for stability.

5. A barricade according to claim 2 further characterized in that at least part of the outer surfaces of said hollow members are reflectorized.

6. A barricade according to claim 3 further characterized in that said electrical contact means include a stationary plate member on one of said members and a spring loaded contact engageable therewith on the other member mating therewith.

7. A barricade according to claim 3 further characterized in that said illumination means is battery powered.

8. A barricade according to claim 3 further characterized in that:

- (A) said cross piece is provided with a pair of recessed leg receiving sockets on opposite sides adjacent each end,
- (B) each of said sockets extending downwardly and outwardly,
- (C) each of said sockets being adapted to receive one end of a supporting leg in rigid slip-fit engagement, and
- (D) a pair of electrical contacts is provided in the walls of said sockets and corresponding contacts on the surfaces of the leg members are positioned to engage the same.

9. A barricade according to claim 3 further characterized in that:

- (A) said leg members extend downwardly and outwardly,
- (B) a pair of leg members at opposite ends of the cross piece are secured together,
- (C) a slot is provided at the apex of each pair of leg members to receive one end of said cross piece in rigid slip-fit engagement, and
- (D) a pair of electrical contacts is provided in the walls of said slots and corresponding contacts on the surfaces of the cross piece to engage the same.

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