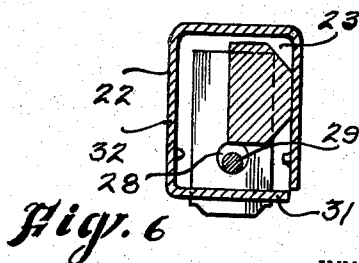
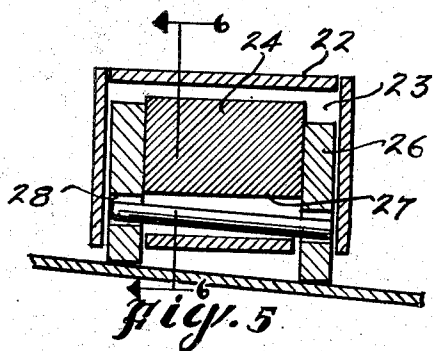
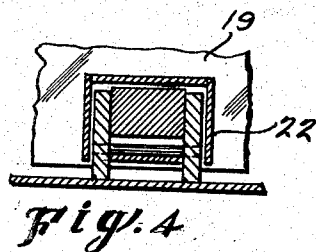
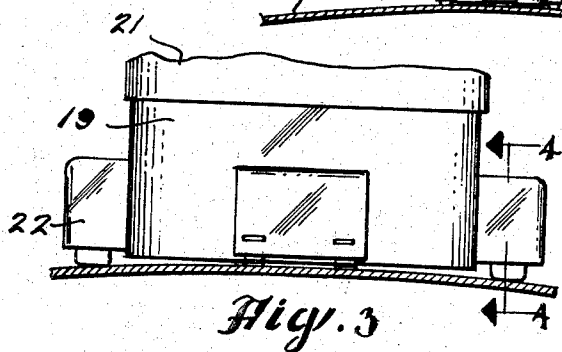
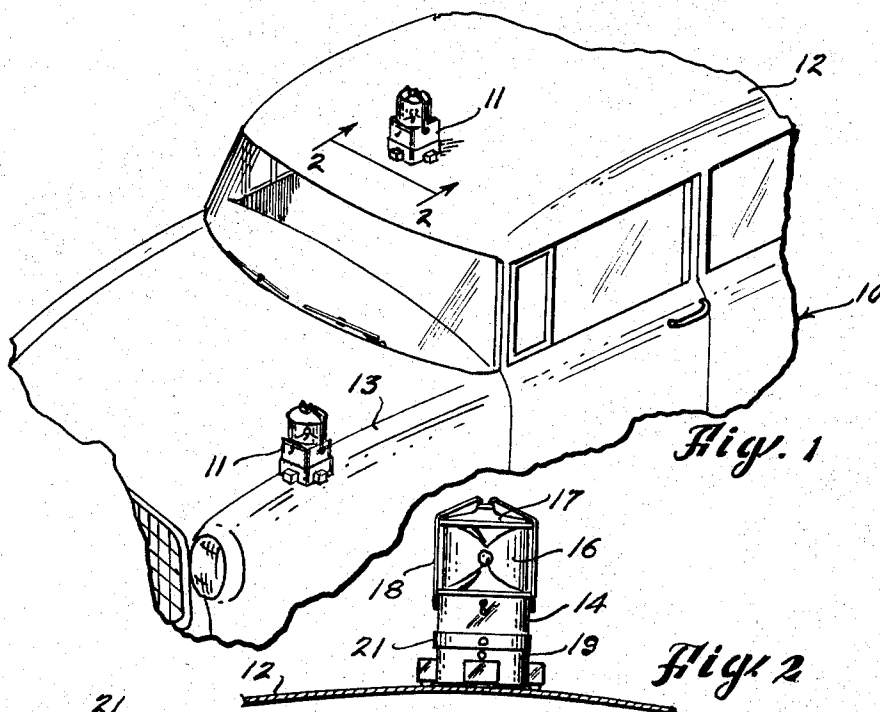


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PORTABLE ELECTRIC LANTERNS

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PORTABLE ELECTRIC LANTERNS

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This invention relates to electric lanterns of the portable type and particularly to those intended for use under conditions of emergency or trouble such, for example, as a warning light for vehicles necessarily stopped on a highway, or as a running light for police, fire, and defense vehicles. More specifically, the invention is directed to structure embodied in a portable lantern that will sustain it in position of use under various conditions and circumstances.

It is, of course, well known that portable lanterns have heretofore been utilized to provide illumination for vehicle repairs along highways or for danger signals, and also for warning and traffic control. Generally, these lanterns have clear glass for illumination for repairs and red or blue glass for police, fire, civil defense, or other official emergency use. In most instances, these lanterns are provided with a handle to enable convenient portability, together with some form of brace or attached brackets by which to sustain them in a position of use. Although many different base supports have been designed, they all appear to have at least one common objection: namely, the inability to sustain the lanterns in many places for most convenient use, or enable the use of the lanterns for other than trouble or warning light purposes. To be sure, the bases of presently produced lanterns, with or without supporting legs or brackets, will undoubtedly prevent the lanterns from tipping over when placed on a flat surface, but with such limitation the lanterns are of little more value than a danger flare or a hand flashlight.

It is an object of the present invention to disclose structure which, when embodied in the base of a portable electric lantern, will greatly increase its usefulness, and to this end, the lantern base is equipped with feet that extend laterally from the base proper to thus give added stability against being overturned.

Another and important object of the invention lies in the provision of a lantern base that includes parts which are adjustable to properly position the base on an uneven or curved surface.

A further object of the invention lies in the provision of a lantern base having laterally extending hollow feet in which adjustable bars or lugs assure proper positioning of all of the feet with respect to a flat or uneven surface on which the lantern is to be placed or mounted.

A further and very important object of the invention lies in the provision of a lantern base having laterally extending, hollow feet that contain permanent magnets which are vertically adjustable to an extent that they will have physical contact with a surface on which the lantern is placed for the purpose of assuring full magnetic contact and securement to a metal surface even though this surface may be curved or undulated.

Other objects and advantages of the invention will be more fully understood from a consideration of the following specification, taken in conjunction with the accompanying drawing; in which

Fig. 1 is a fragmentary perspective view of a vehicle

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and shows two applications of use of the invention thereto;

Fig. 2 is an enlarged fragmentary view, taken substantially as suggested by the line 2—2 of Fig. 1;

Fig. 3 is a greatly enlarged view of a portion of the lantern base and shows the adaptability of the magnets to engage a curved surface;

Fig. 4 is a fragmentary vertical sectional view taken substantially on the line 4—4 of Fig. 3;

Fig. 5 is an enlarged view similar to Fig. 4 and shows the structure by which the movable end portions of each magnet may adjust to contact a curved or uneven surface; and

Fig. 6 is a vertical sectional view taken substantially on the line 6—6 of Fig. 5.

In order that the many advantages of the present invention may be fully appreciated, the lantern to which the base supporting structure is attached is shown positioned on the top of a vehicle and also on one of the fenders of the vehicle. Lanterns of the type to which the invention is directed are optionally equipped with blinker devices. In the present instance, a red blinker light would be suitable for police and fire vehicles or, if the light is changed to blue, it would be usable by volunteer firemen and civil defense units. Although many emergency vehicles are necessarily equipped with a suitable warning light, it is true, nevertheless, that many private vehicles are required for all kinds of emergency work. The cost of permanent installation of emergency lights on private vehicles and the necessity of their removal and reinstallation each time an owner changes vehicles suggests that the present invention provides an economical answer to this class of usage. Furthermore, it is not inconsistent to believe that many of the vehicles of municipal police and fire departments could provide increased safety for the public by being equipped with additional warning lights at little expense through use of the present invention.

Referring more particularly to the drawing, the reference numeral 10 is employed to generally designate a vehicle for the purpose of illustrating two possible applications of use of the present invention. In Fig. 1 it will be noted that a lantern 11, embodying the invention, is mounted on the rounded or curved forward portion of the top 12 of the vehicle. A further lantern 11 is shown mounted on the upper surface of a fender 13.

The lantern 11, generally speaking, is of standard construction and will only be described to the extent of pointing out that it consists of an upper unit 14 which includes a glass or other transparent enclosure 16. Superimposed on the glass 16 is a top 17 which, in the present instance, is secured in place by a swingable bail 18 carried by the lower portion of this unit. The upper edge of a base 19 is designed to be received in a lower, flared rim 21 of the unit. This arrangement eliminates ingress of moisture or dirt.

In the present disclosure, it is considered expedient to show the provision of four legs 22 for the base 19. These legs extend laterally from the base and the lower edges thereof are substantially in the plane of the bottom of the base. Each leg is shown as a hollow, rectangular member, the opening into an interior compartment 23 being from the bottom. Mounted in the compartment is a multiple element permanent magnet which consists of a central magnetized element 24, engaged at its ends by bars 26. The width of the element 24 is less than the length of the bars 26 and, consequently, these bars may be disposed to extend beyond the lower edge 27 of this element. The portions of the bars that extend below the element are formed with transverse openings 28 in which a pin 29 is loosely mounted. This pin bridges the space between the bars and extends beneath the element 24.

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It will be noted that the bars 26 are of a length to be capable of being extended some distance beneath the foot 22 without their losing any appreciable magnetic contact with the element 24, this being clearly shown in several of the figures of the drawing. The parts of each magnet are assembled and inserted into the compartment 23. When the magnet has been inserted to a point such that the pin 29 is also within the compartment, a flange 31, integral with the outer wall 32 of the foot, is bent inwardly to a position substantially as shown in the drawing. This flange serves to prevent complete withdrawal of the magnet from the compartment but, since it is located centrally of the compartment opening and does not close the ends thereof, the bars 26 may readily move out of the compartment to engage a metal surface in the manner shown.

From the foregoing, in conjunction with the disclosure in the drawing, it will be clearly evident that a magnet carried by each foot will be capable, through the bars 26, of contacting a flat, curved, or even an undulated surface, and in this manner the lantern is provided with four anchorage points with the bottom of the base portion of the lantern in contact with the entire metal surface (if flat), or with the highest portion of such a surface (if curved). It is believed pertinent at this point to mention that permanent magnets of the type contemplated for use by applicants have high magnetic properties and, in fact, are capable of withstanding a force, by which to separate them from a metal surface, up to many pounds. As a result, with the distribution of the magnets in the manner shown, the lantern is magnetically held in place and cannot become dislodged except by the application of a direct tilting and pulling force exerted in a manner to individually separate the magnets from a metal surface.

Attention is further directed to Fig. 5, wherein it is shown that not only will the magnets adjust themselves, one with respect to the other, on an uneven or undulated surface, but the bars of each magnet are capable of self-adjustment to engage any irregular surface. In this view, the metal surface is inclined with respect to the magnet and one of the bars is shown to be extended farther than the other for the purpose of engaging the surface. The looseness of the pin 29 in the openings 28 enables this individual movement of the bars and yet serves to prevent complete withdrawal of the bars from the compartment of the foot.

Although applicants have shown and described only two applications of use of the invention and one form of foot or enclosure for mounting permanent magnets, it is contemplated that the number and arrangement of the magnets may be varied as required to secure a lighter or heavier weight lantern and that such variations in the structure shown are contemplated as being within the spirit and scope of the invention insofar as is set out in the annexed claims.

Having thus set forth our invention, what we claim as new and for which we desire protection by Letters Patent is:

1. Structure for sustaining a portable lantern in an upright operative position comprising feet joined to and extending laterally from the lower portion of the base of said lantern, said feet increasing the size of said base in a manner and to an extent to substantially eliminate inadvertent tipping of said lantern from said upright position and self-adjustable means carried by said feet assuring complete support for said base on both plane and curved surfaces.

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2. Structure for sustaining a portable lantern in an upright useful position comprising hollow feet joined to and extending laterally from the base of said lantern, the lower edges of said feet being substantially in the plane of said base and constituting lateral extensions of said base whereby to reduce the possibility of tipping said lantern from its upright position, permanent magnets in said feet, and means providing limited movement of said magnets to enable individual contact thereof with a metal support having a curved or undulated surface.

3. Structure for securing a portable lantern in an upright usable position comprising hollow feet joined to the vertical edge of the base of said lantern, the lower edges of said feet being substantially in the plane of the bottom surface of said base and extending laterally therefrom whereby to enlarge the area of support for said lantern, permanent magnets mounted in said hollow feet, said magnets being individually vertically adjustable with respect to said feet to enable engagement thereof with a curved or undulated metal surface on which said lantern may be mounted.

4. Structure for securing a portable lantern in a usable position comprising a set of uniformly distributed laterally projecting feet secured to the vertical edge of the base of said lantern, said feet being of the nature of downwardly opening receptacles and having their lower edges substantially in the plane of the bottom surface of said base, permanent magnets mounted in said feet, said magnets including bars relatively movable with respect to said feet in a direction to project beneath said base whereby to enable engagement of said bars with both flat and curved metal surfaces.

5. Structure for sustaining a portable lantern in an upright useful position comprising hollow feet joined to and extending laterally from the base of said lantern in uniformly spaced relationship about the periphery of said base, said feet having downwardly opening compartments, the lower edges of said feet being substantially in the plane of said base and serving to increase the supporting area of said base, multiple part permanent magnets in said compartments, said magnets comprising central magnetized elements and bars, means securing said elements against displacement from said compartments and enabling movement of said bars with respect to said feet and in a direction to project beneath said base into contact with a flat or curved metal surface.

References Cited in the file of this patent

UNITED STATES PATENTS

1,598,559	Cohen	Aug. 31, 1926
1,932,143	Piercy	Oct. 24, 1933
2,489,475	Blind	Nov. 29, 1949
2,503,467	Blind	Apr. 11, 1950
2,504,800	Campagna	Apr. 18, 1950
2,508,305	Teetor	May 16, 1950
2,653,001	Padjen	Sept. 22, 1953
2,655,337	Diesfeld	Oct. 13, 1953
2,681,199	Harwood	June 15, 1954
2,701,158	Schmitt	Feb. 1, 1955
2,726,110	Teeter	Dec. 6, 1955
2,792,249	Saxton	May 14, 1957

FOREIGN PATENTS

889,322	Germany	Sept. 10, 1953
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