G. W. & E. A. HELLSTRAND.

LANTERN.

APPLICATION FILED MAY 16, 1913.

1,132,091. Patented Mar. 16, 1915.

Fig. 2

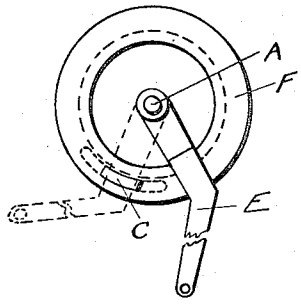


Fig. 4

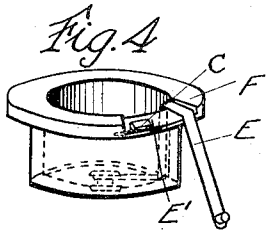


Fig. 3

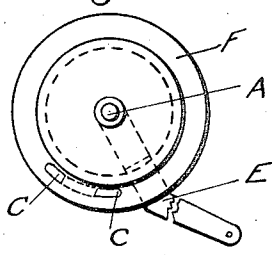
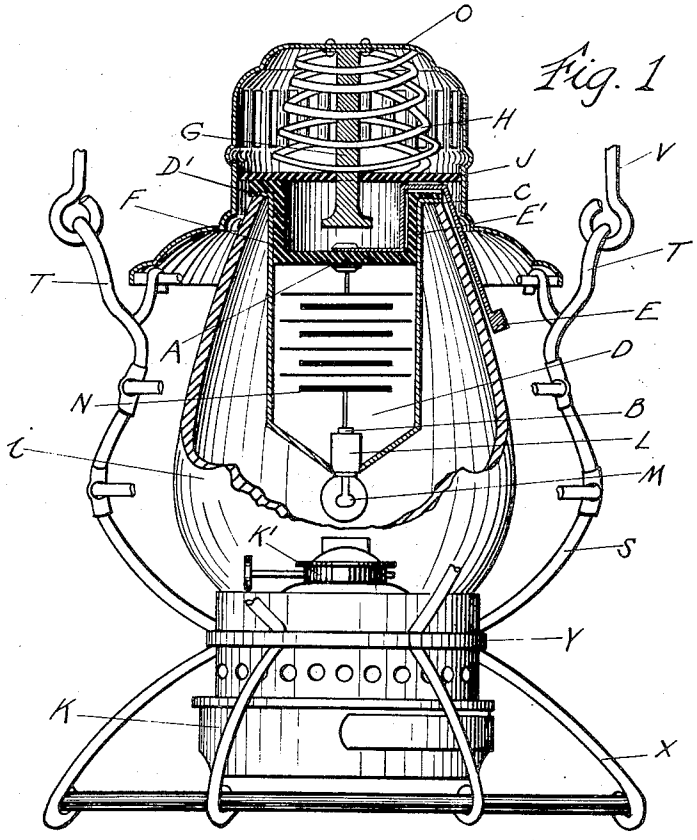


Fig. 1



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LANTERN.

1,132,091. Specification of Letters Patent. Patented Mar. 16, 1915.

Application filed May 16, 1913. Serial No. 767,956.

To all whom it may concern:

Be it known that we, GROVER W. HELLSTRAND and ERICK A. HELLSTRAND, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Lanterns, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to lanterns and contemplates an electric lantern with self-contained battery.

It is an object of our invention to provide a lantern which radiates the light effectively and without the production of undesirable shadows.

It is a further object of our invention to so dispose the light itself that the maximum of brilliancy in illumination may be secured.

A further object of our invention is the production of a lighting arrangement in the form of an attachment which may be applied to any of the standard forms of lanterns, this attachment being provided with a self-contained battery and an incandescent lamp.

The electric arrangement of our invention is such that the incandescent lamp may be placed at the most advantageous position in the lantern globe and so that the oil cup and burner arrangement, or any sort of non-transparent base, may be dispensed with, with the consequent effective enlargement of the range of illumination.

In view of the particular advantages which are secured by the use of our invention, we have in mind particularly the adaptability of our invention for signaling purposes on railroads where, as is well-known, ineffective illumination and restricted ranges of illumination are serious defects.

We secure some of the advantages of our invention by disposing the battery above the incandescent lamp—that is, the lamp itself is inverted and the only shadow necessarily entailed is that of its own base.

Other objects of our invention are the production of a device having the advantages above outlined, which will be of simple construction and of inexpensive manufacture.

In order to disclose our invention to those skilled in the art, we shall describe our invention as particularly concerned with a so-called "railroad type" of lantern and in the accompanying drawing we have illustrated such a device.

In this drawing Figure 1 is a front elevational view of the device, parts being broken away and shown in section in order to reveal the interior construction; Fig. 2 is a top view of the switching arrangement and support therefor; Fig. 3 is a bottom view of the parts shown in Fig. 2; and Fig. 4 is a perspective view thereof.

The particular lamp which we have illustrated is of the standard "railroad type" and we have shown the usual oil cup and burner in place. The important elements of our invention are applied to this standard lantern as an attachment and we claim for such an arrangement particular and special utility.

A base X in the form of a wire skeleton is provided. This base carries a ring Y and the oil cup K is set in this ring. The oil cup carries the burner K′. A globe *i* is mounted upon the oil cup K. This globe is of the usual type, open at the top and the bottom. At the top a cylindrical casing D is inserted through the open end, this cylindrical casing having a flange D′ at its upper end which rests upon the upper edge of the globe, as clearly illustrated in Fig. 1. A cup F of insulating material, such as fiber, fits snugly in the top of the casing D. This fiber cup is illustrated in detail in Figs. 2, 3 and 4. The bottom of the casing D carries a socket L into which an incandescent lamp M may be screwed. Dry batteries N are placed in the casing D and one terminal of the battery is attached to the center contact B of the lamp socket. The outer contact of the lamp socket makes electrical engagement with the casing D, which is of metal. The other terminal of the battery is connected to a pivot A in the center of the base of the fiber cup F and within the fiber cup the pivot A carries a switch lever E. This switch lever is bent over the rim of the cup and operates in a mortise E′ in a flange on the rim of the fiber cup, as clearly illustrated in Fig. 4. A contact member C is disposed in the base of this mortise and permanently engages the metallic casing D. The switch member E is adapted to engage the contact C and this

closes the circuit through the battery and the lamp. The switch member E extends down alongside the globe where it may be manipulated manually.

On top of the fiber member F a disk J is disposed, which is preferably of insulating material as a matter of precaution. A cap O is passed over the disk and over the end of the globe and the disk J is held firmly in place by means of a spring H, which is disposed on the inside of the cap and bears down upon the disk. A guide member G, which assists in properly positioning the cap, is provided. A skeleton cage or protecting structure is illustrated at S, this cage surrounding the glass globe and attached to the cap or hood and to the supporting ring. Ears T, T extend from the sides of the cage and a bail V is mounted upon these ears.

It will be seen that the arrangement is such that the casing containing the battery and carrying the lamp, and the fiber cup and switch arrangement may be inserted in the top of any adaptable globe. The result is an efficient electric lantern.

It will be seen that the arrangement is such that the incandescent lamp may be disposed at the most advantageous part of the globe and if the oil cup is substituted by a transparent closure the cast shadows are reduced to a minimum. The inversion of the light subscribes to this advantage, as is apparent.

We claim as new and desire to secure by Letters Patent:

1. In combination, a transparent globe, a casing fitted within and closing the top of said globe, an incandescent lamp carried on the under side of said casing, an electric battery in said casing, and a switch carried by said casing and controlling the circuit through said lamp and battery.

2. In combination, a transparent globe, a casing depending into said globe, an incandescent lamp carried on the under side of said casing, an electric battery in said casing, a fiber supporting member on said casing, and a switch carried by said member and controlling the circuit through said lamp and battery.

3. In combination, a transparent globe, a casing depending into said globe, an incandescent lamp carried on the under side of said casing, an electric battery in said casing, a fiber supporting member on said casing, a switch carried by said member and controlling the circuit through said lamp and battery, a hood over said globe, a spring in said hood and bearing down on said casing, and a cage surrounding said globe and connecting the bottom of said globe and said hood.

4. In combination, a transparent globe, a casing depending into said globe, an incandescent lamp carried on the under side of said casing, an electric battery in said casing, a fiber supporting member on said casing, a switch carried by said member and controlling the circuit through said lamp and battery, a hood over said globe, a spring in said hood and bearing down on said casing, a cage surrounding said globe and connecting the bottom of said globe and said hood, and a bail carried by said cage.

In witness whereof, we hereunto subscribe our names, this 14th day of May, 1913.

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ERICK A. HELLSTRAND.

Witnesses:
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