Oct. 26, 1937. C. P. HULST 2,097,237

EMERGENCY LIGHTING UNIT

Filed Feb. 20, 1936

FIG. 1.

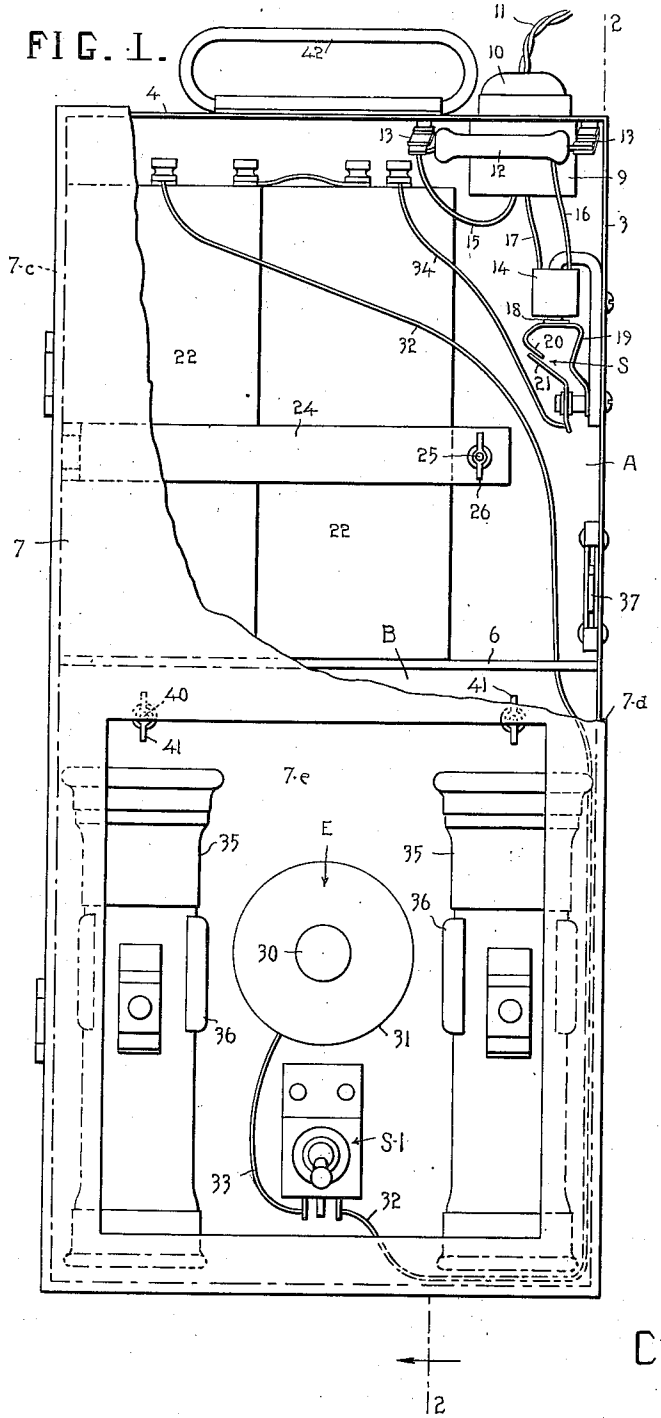
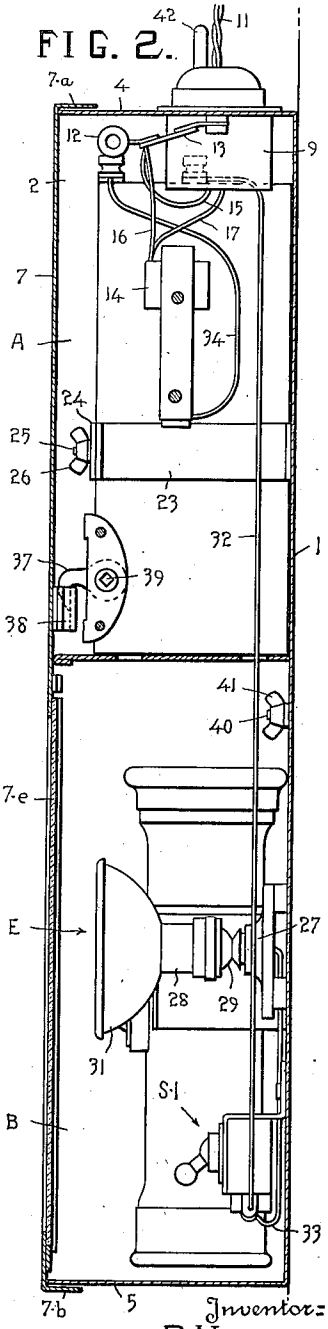


FIG. 2.



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EMERGENCY LIGHTING UNIT

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Application February 20, 1936, Serial No. 64,966

2 Claims. (Cl. 240—1)

My invention consists in a new and useful improvement in emergency lighting units and constitutes an improvement over my invention described and claimed in my co-pending application for United States Letters Patent, Serial Number 30,676. The particularly novel and useful features of my invention herein described and claimed are the means which I provide to render my improved device portable, the means for adjusting the lamp in the device to control the direction of its projected beam, and the means which I provide to utilize the current-control means as a means for obviating condensation of moisture, fogging the transparent portion of the device through which the emergency light is projected.

While I have illustrated in the drawing filed herewith and hereinafter fully described one specific embodiment of my invention, it is to be distinctly understood that I do not consider my invention limited to said specific embodiment, but refer for its scope to the claims appended hereto.

In the drawing:

Fig. 1 is a front elevation of my improved device, a portion of the door thereof being broken away to expose the interior construction.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

As illustrated in the drawing, my device comprises a housing having the rear wall 1, the side walls 2 and 3, the top wall 4 and the bottom 5, and the horizontally disposed shelf 6 dividing the housing into the upper compartment A and the lower compartment B. Hinged to the side wall 2 is the door 7 having the flange 7—*a* and the flange 7—*b*, to overlie the top 4 and the bottom 5 respectively, and the flanges 7—*c* and 7—*d* to overlie the walls 2 and 3 respectively, when the door 7 is closed. The door 7 is provided with a transparent panel 7—*e* of glass, or other frangible material, to render visible the interior of the compartment B of the housing when the door 7 is closed.

Mounted in the top 4, there is the male member 9 of a main-circuit coupling, its contact fingers extending outside of the housing, to be received into the female member 10 of the coupling, the wires 11 of which are connected to the main lighting circuit. I provide a resistor 12 suitably mounted adjacent the member 9 by means of insulated mounts 13. I provide the electro-magnet 14 suitably mounted on the wall 3. The wire 15 leads from one contact of the member 9 to the resistor 12, the wire 16 leads from the resistor 12 to the electro-magnet 14, and the wire 17 leads from the electro-magnet 14 to the other contact of the member 9, thus completing the circuit from the coupling, through the resistor 12 and the electro-magnet 14.

The armature 18 of the electro-magnet 14 is mounted on a spring arm 19 suitably mounted in a grounded connection on the wall 3, and provided with a contact arm 20, to co-act with a second contact arm 21 which is suitably mounted in an insulated connection on the wall 3, these contact arms 20 and 21 forming the switch S.

I provide the electric batteries 22 in the compartment A, resting upon the shelf 6. I provide a post 23 fixed to the rear wall 1 and projecting forwardly adjacent the edge of one of the batteries 22, and a strap 24 hinged to the wall 2, and having an orifice through which extends the bolt 25 on the outer end of the post 23. A wing nut 26 on the bolt 25 serves to clamp the strap 24 on the post 23 to maintain the batteries 22 in proper position.

Suitably positioned in the compartment B, behind the transparent panel 7—*e* of the door 7, is the emergency light E, comprising a base 27 suitably mounted upon the rear wall 1, a socket 28 mounted by a ball-and-socket joint 29 on the base 27, a lamp 30 in the socket 28 and a reflector 31 about the lamp 30.

Suitably mounted on the rear wall 1, below the emergency light E, is the manually controlled switch S—1.

The batteries 22 are connected in series, and a wire 32 leads from the batteries 22 to one of the contacts of the switch S—1, a wire 33 leads from the other contact of the switch S—1 to one of the contacts of the socket 28 for the lamp 30. The other contact of the socket 28 is grounded. The contact 20 on the armature 18 of the electro-magnet 14 is grounded through the spring arm 19, and the contact 21 is connected by the wire 34 with the batteries 22, thus completing the circuit from the batteries 22, through the switches S and S—1 and the lamp 30.

I provide in the compartment B a plurality of portable electric lamps 35 in spring clips 36 fixed on the rear wall 1.

I provide on the wall 3 a pivoted latch 37 to co-act with an eye 38 on the door 7 to maintain the door 7 in closed position. This latch 37 has a central, squared orifice 39 into which may be inserted the squared end of a key passed through the wall 3, to control the latch 37.

Suitably disposed through the rear wall 1 are the heads of bolts 40 with which co-act the wing nuts 41 to attach the housing to the bolts 40 when

they have been suitably fixed in the supporting medium for my device, such as a wall, etc.

I provide a suitable handle **42** on the outside of the top **4**.

From the foregoing description of the details of construction of my improved device, its use and operation will be obvious. When the device has been mounted on the bolts **40** and the member **9** engaged in the member **10**, the current of the main lighting circuit flowing through the resistor **12** and the electro-magnet **14** causes the armature **18** to draw the contact arm **20**, against the influence of the spring arm **19**, away from the contact arm **21**, thus opening the circuit from the batteries **22** to the lamp **30** (the switch S—**1** being closed). Immediately upon failure of the current in the main lighting circuit, the electro-magnet **14** is de-energized, releasing the armature **18**, and the contact arm **20** under the influence of the spring arm **19** is brought into contact with the contact arm **21**, and current flows from the batteries **22** to the lamp **30** which projects its light through the transparent panel **7**—*e* of the door **7**. If it is desired to turn out the lamp **30**, this may be done by switch S—**1**. It is obvious that by the use of a key in the latch **37**, the door **7** may be released and opened, giving access to the portable lamps **35**, as well as the switch S—**1**. In an emergency and no key being available, the frangible panel **7**—*e* may be broken and access to lamps **35** be afforded. In either case, access may be had to the wing nuts **41** which can be readily removed from the bolts **40**, permitting removal of the device from its location, the members **9** and **10** being readily and automatically uncoupled by the removal of the device from the bolts **40**. The handle **42** then renders the device portable.

It is to be noted that the ball-and-socket joint **29** for the mounting of the lamp **30** makes possible adjustment of the lamp **30** and its reflector **31**, to direct the beam of light from the lamp **30**, as desired.

The resistor **12** is provided to permit use of an electro-magnet operable by a current of considerably less voltage than that of the main electric lighting circuit, and it is to be noted that the operation of the resistor **12** supplies a beneficent warmth within the device to obviate moisture liable to deteriorate the mechanism and fog the transparent panel **7**—*e*.

Having described my invention, what I claim is:

1. In an emergency lighting unit, the combination of a metallic housing; a transparent panel in the wall of said housing; a battery-operated electric lamp having one of its wires grounded on said housing; a switch therefor having a spring-arm grounded on said housing; an electro-magnet adapted when energized to hold said arm in disconnected position; means for connecting said electro-magnet with an electric circuit; and a resistor adapted to cause said circuit to supply only sufficient current to cause said arm to be disconnected by the electro-magnet and thus to supply sufficient heat in the housing to prevent moisture from fogging the panel.

2. In an emergency lighting unit, the combination of a housing; a transparent, frangible panel in one of the walls of said housing; a battery-operated lamp in said housing; a switch therefor; an electro-magnet for operating said switch; means for connecting said electro-magnet with an electric circuit, said means being adapted to uncouple when the housing is removed from its supporting medium; bolts passing through the wall of said housing and adapted to be fixed in said supporting medium so as to be inaccessible except from within said housing; and a nut on each bolt to removably attach said housing to said supporting medium by means of said bolts, the bolts and nuts being so positioned as to be readily accessible through the orifice in the wall of the housing provided by breaking the frangible panel.

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