

Nov. 18, 1924.

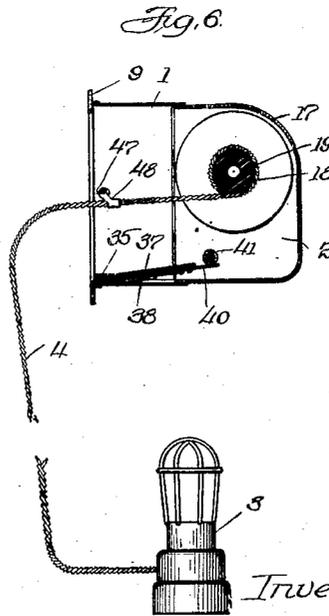
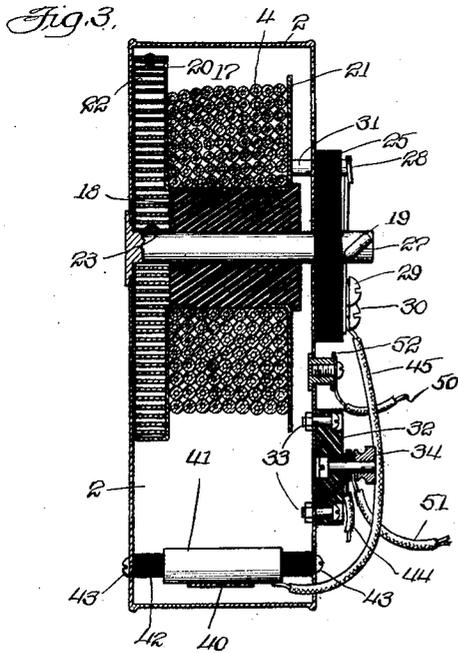
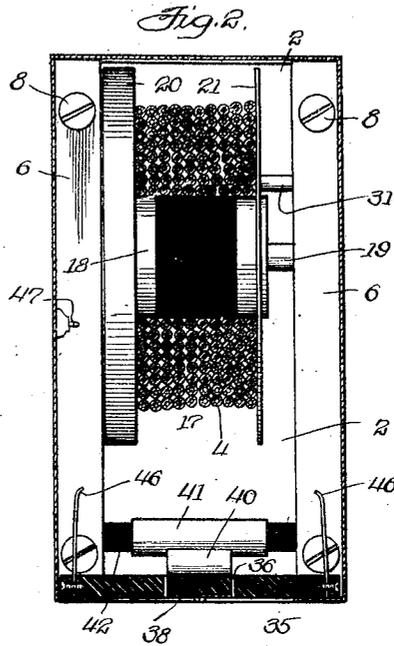
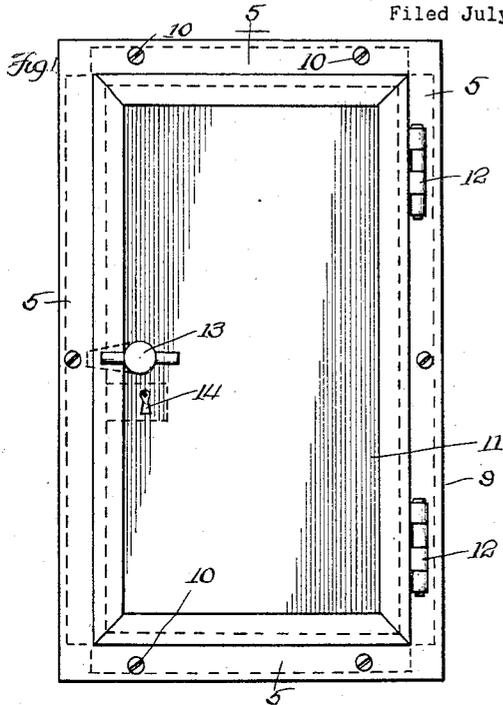
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F. B. LITTLE

HOUSING FOR ELECTRIC LAMPS

Filed July 15, 1921

2 Sheets-Sheet 1



Inventor:
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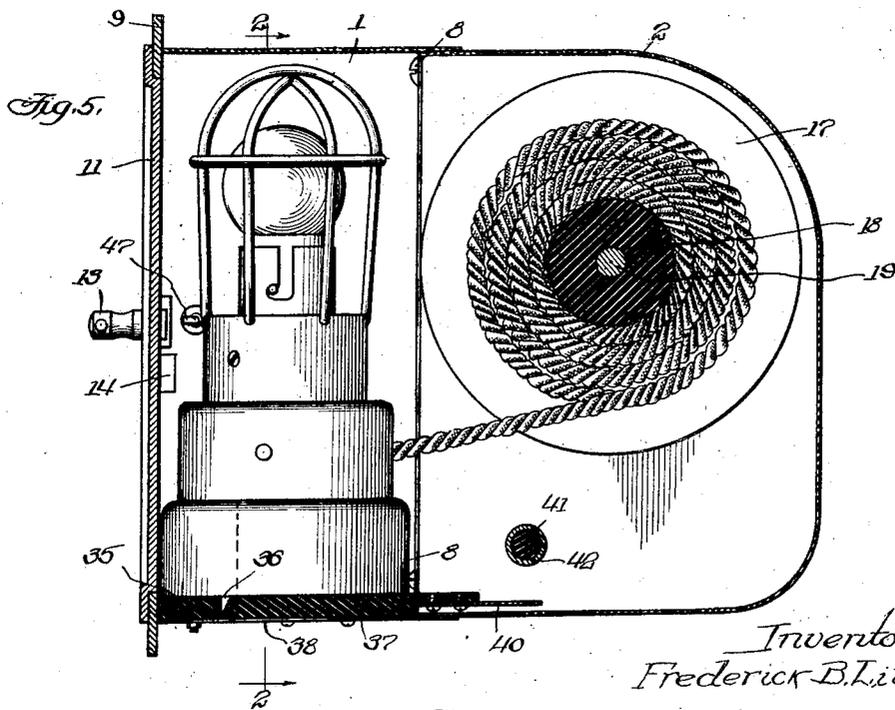
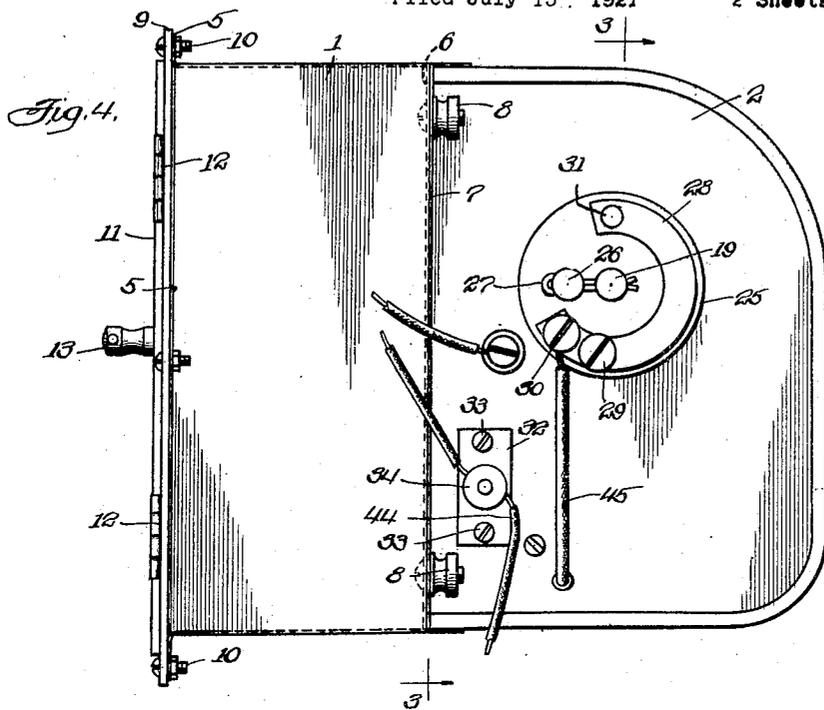
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UNITED STATES PATENT OFFICE.

FREDERICK B. LITTLE, OF CHICAGO, ILLINOIS.

HOUSING FOR ELECTRIC LAMPS.

Application filed July 15, 1921. Serial No. 484,932.

To all whom it may concern:

Be it known that I, FREDERICK B. LITTLE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Housings for Electric Lamps, of which the following is a specification.

This invention relates to housings for electric lamps.

One of the objects of the invention is to provide an improved housing within which to contain a portable electric lamp for use in and around automobiles and other like vehicles or devices.

Another object is to provide an automatic switch, associated with the housing, which will close the circuit thru the lamp when the latter is removed from the housing and which will open the circuit thru the lamp when it is returned to the housing.

Another object is to provide the housing with a spring driven reel upon which to automatically rewind the duplex flexible conductor cord thru which current passes to the lamp.

Another object is to provide a lamp and reel housing which may be mounted flush with its support.

Another object is to provide means to prevent the reel from rewinding the conductor thereon when it has substantially all been removed therefrom.

Another object is to provide a housing which may be cheaply manufactured and in which the apparatus may be readily assembled.

Another object is to provide a housing for a magnetic lamp.

Other objects and advantages will hereinafter appear.

In the drawings

Fig. 1 is a front elevation of the housing with the door thereof closed.

Fig. 2 is a section taken substantially on line 2—2 of Fig. 5 with the lamp removed therefrom.

Fig. 3 is a section taken substantially on line 3—3 of Fig. 4.

Fig. 4 is a side elevation of the housing.

Fig. 5 is a section taken substantially on line 5—5 of Fig. 1.

Fig. 6 is a reduced sectional view of the housing with the lamp removed, and the switch closed.

One of the features of this invention is the provision of a convenient housing within which to contain a magnetic service lamp for use about an automobile. An example of such a lamp is set forth in my co-pending application, Serial No. 424,165, filed November 15, 1920. Briefly such a lamp comprises a magnetic lamp supporting base having an energizing winding in series or parallel with the filament. When the magnet is energized it supports the lamp upon any magnetizable article against which the magnet may be placed.

The present invention, associated with such a lamp or one of similar character, may also be used around and in connection with other machines, mills, and devices, such as lathes, looms, boilers, engines and in other similar situations where emergency occasions require a convenient lighting means.

Some of the advantages of the structure herein sought to be patented are the complete protection afforded the lamp and connecting cord to prevent fracture and other damage; the ease and celerity with which the lamp and cord may be taken from the housing for use and restored to their normal resting place in compact form; the fact that the circuit is open thru the lamp when it is in the housing so that current is not wasted and the life of the lamp shortened; the prevention of unauthorized use by closing and locking the housing when required; the protection of the lamp and cord from dirt and dust; the flush mounting of the casing so that the same does not protrude beyond its support; and the extended field that may be explored by the use of the lamp owing to the relatively strong cord permitted by the liberal capacity of the reel.

The housing comprises, in general, a cabinet formed of a lamp casing 1 and a reel casing 2. The lamp casing is adapted to receive and house a magnet lamp 3 and the reel casing is adapted to accommodate a flexible extension lamp-conductor cord 4.

The lamp casing is a rectangular open ended box which may be formed from a single piece of sheet metal. The edges of the front end of the lamp casing are formed into outwardly projecting flanges 5. The vertical edges at the back of the lamp casing are formed into inwardly projecting flanges 6.

The reel casing is a substantially rectangu-

lar box which is preferably slightly narrower than the lamp casing. The back of the reel casing is closed. The reel casing like the lamp casing may be formed from a single piece of sheet metal. The vertical edges at the open end of the reel casing are formed into outwardly extending flanges 7.

The lamp and reel casings are secured together by means of bolts and thumb nuts 8 which clamp flanges 6 and 7 tightly together.

Casing 1 has a rectangular frame or face plate 9 secured to its front flanges 5 by means of bolts 10. These bolts also may be used to secure the housing to its support. A door 11 hinged to plate 9 by hinges 12 serves to close the housing. The door may be provided with a handled latch 13 and a key controlled lock 14.

A reel 17 is journaled within reel casing 2. This reel has a drum 18 of suitable insulating material. Drum 18 is rotatably mounted upon a shaft 19 which passes through and is supported on the side walls of casing 2. A metal reel head 20 is secured to one end of drum 18 and a metal reel head 21 is secured to the other end of the drum. Reel head 20 is cup or dish shaped to enclose a spring 22. One end of spring 22 is secured to head 20. The other end has a hole which fits over a small projection or hook 23 on shaft 19. Shaft 19 is held stationary, as will be hereinafter explained, and consequently the rotation of the reel in one direction tensions its spring to provide for the automatic rewinding of the lamp cord upon the drum.

An insulating disc 25 is rigidly secured to the outside of one of the side walls of casing 2 and has a hole through its center for the passage of shaft 19. A pin 26 is carried by disc 25. A cotter pin 27 passing through openings in shaft 19 and pin 26 prevents the rotation of the reel shaft.

A curved conducting spring 28 is fixed to disc 25 by means of screws 29 and 30. The free end of spring 28 carries a metal stud 31. Stud 31 passes loosely through holes in disc 25 and casing 2 and is held in contact with metal reel head 21 by spring 28. This stud, therefore, acts as a current conducting brush to convey current to one of the metal reel heads in any position thereof.

An insulating terminal block 32 is mounted upon the outside of casing 2 by means of bolts 33. Block 32 carries a screw conductor terminal 34.

The lamp casing has a non-magnetic block 35 secured in its bottom. Block 35 has a slot 36 extending from its rear edge to a point near its front edge. In this slot is a movable switch contact support 37. Support 37 is hinged to block 35 by a leaf spring 38. The free end of support 37 carries a flexible contact spring 40. Contact spring 40 cooperates with a fixed contact 41. Contact 41

may be made by securing a section of metal tubing to an insulating rod 42. Rod 42 is secured to casing 2 by screws 43.

A spring 38 normally biases the contact support so that movable contact 40 is in engagement with fixed contact 41. A conductor 44 interconnects contact 40 and terminal 34 and a conductor 45 interconnects contact 41 and spring 28 on disc 25.

Block 35 in the bottom of casing 1 has a pair of spring clips 46 secured thereto. These spring clips fit and clamp the base of lamp 3 to hold the same in the casing. When the lamp is inserted its base engages switch support 37, depressing the same and causing the separation of contact 40 and 41.

The inside of casing 1 has a hook 47 secured thereto near the door. This hook is adapted to cooperate with an eyelet 48 secured to cord 4 near its inner or anchored end. When the cord is almost completely withdrawn it may be secured against the automatic rewind by hooking the eyelet over the hook. Several eyelets may be employed if desired so that the cord may be locked against rewinding in several lengths.

The two conductors of cord 4 are secured respectively to the two insulated metal reel heads 20 and 21. Thus the conductors are electrically connected to the respective heads and the cord is anchored to the reel. The service wires 50 and 51, which may be attached to the terminals of any suitable source of current, for example, the automobile storage battery, are secured respectively to terminal 34 and a terminal 52 which is carried by and electrically connected to the housing.

When the lamp is removed from the casing switch contacts 40 and 41 engage and circuit to the lamp is completed from the source over conductor 50, terminal 52, the housing, reel head 20, the conductors of cord 4 and the lamp, head 20, stud 31, spring 28, conductor 45, contacts 41 and 40, conductor 44, terminal 34, and conductor 51 back to the source. The insertion of the lamp into casing 1 separates contacts 40 and 41 as previously described and the circuit to the lamp and its energizing winding interrupted. Consequently the lamp is illuminated and its magnet winding may be energized when the lamp is removed from the housing. On the other hand the lamp is extinguished and its magnet winding deenergized when the lamp is inserted in the housing.

The housing, being made of two cooperating casings which may be individually manufactured of sheet metal, is relatively inexpensive to produce. It may be mounted, for example, on the instrument board of an automobile so that it is substantially flush. The lamp is readily accessible and the cord may be extended without effort. When the lamp is to be replaced the cord is automat-

ically rewound out of the way and the locked door prevents unauthorized use. The two part housing facilitates the assembly of the apparatus and renders the same readily accessible for inspection and repair.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:—

A device of the character described comprising a housing having a door thru which to insert and remove a lamp; a reel casing separably attached to the housing; a spring driven lamp-cord reel rotatable within the

casing; a lamp cord wound thereon; a lamp supporting structure connected to the outer end of the cord; a circuit switch within the housing arranged to be opened by insertion of the lamp and a winding spring within the reel for winding the cord about the reel and drawing the lamp supporting structure within the housing whereby to open the switch.

In testimony whereof I hereunto subscribe my name.

FREDERICK B. LITTLE.