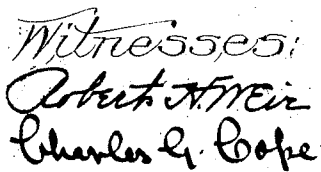


1,038,071.

3 SHEETS—SHEET 1.



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PORTABLE PROTECTED LAMP HOLDER.
APPLICATION FILED JAN. 15, 1910.

1,038,071.

Patented Sept. 10, 1912.

3 SHEETS—SHEET 2.

Fig. 3.

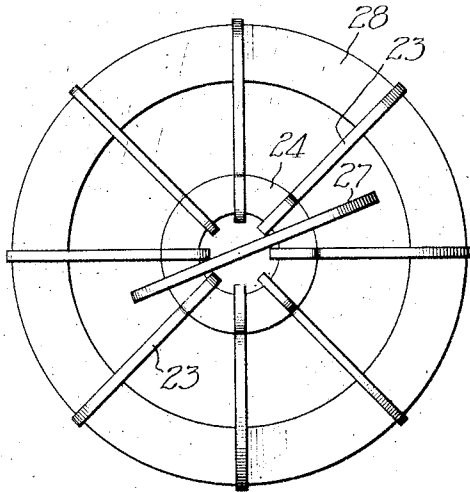


Fig. 4.

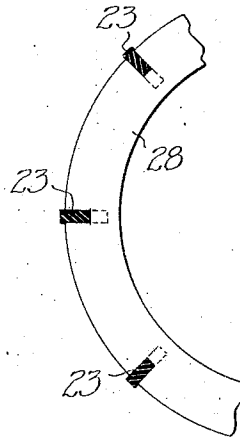


Fig. 8.

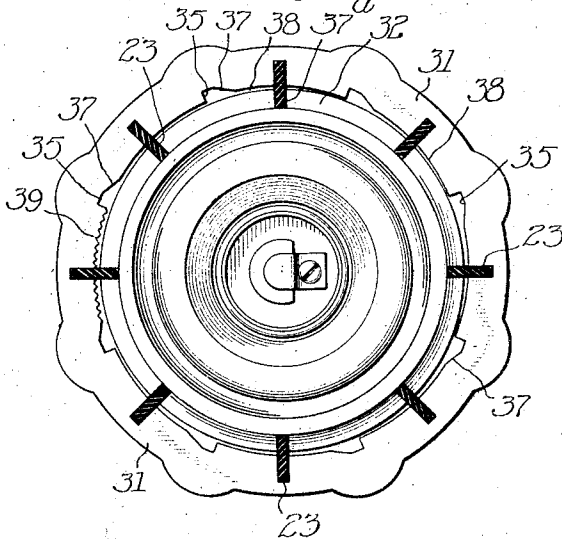
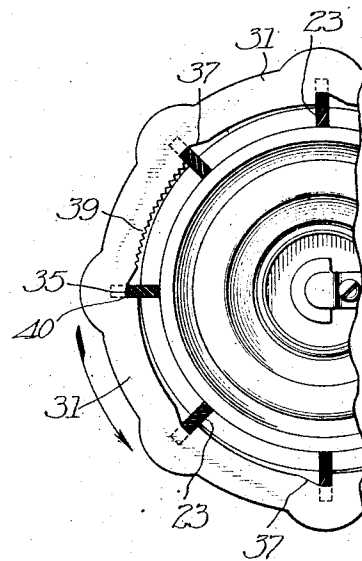


Fig. 9.



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3 SHEETS—SHEET 3.

Fig. 13

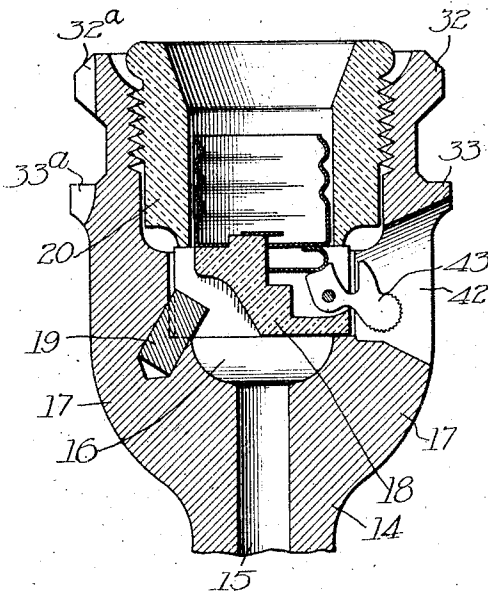


Fig. 7

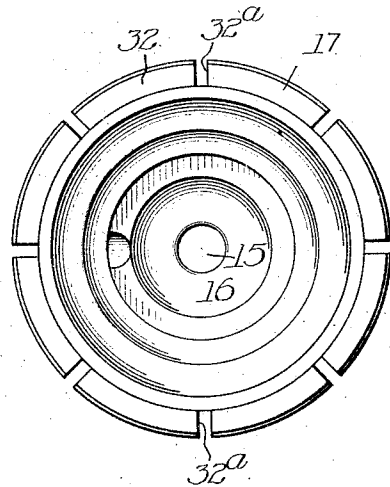


Fig. 10

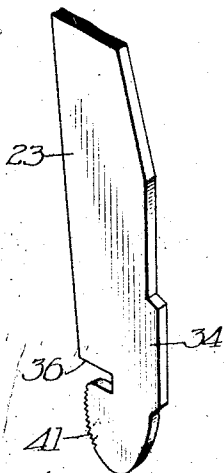


Fig. 6

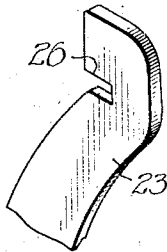


Fig. 5

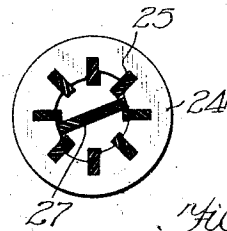


Fig. 12

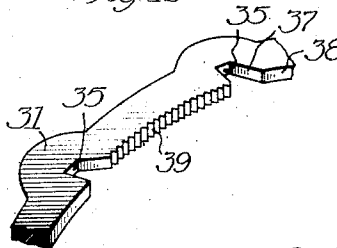
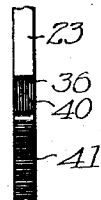


Fig. 11



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UNITED STATES PATENT OFFICE.

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PORTABLE PROTECTED LAMP-HOLDER.

1,038,071.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed January 15, 1910. Serial No. 538,259.

To all whom it may concern:

Be it known that I, REUBEN B. BENJAMIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Portable Protected Lamp-Holders, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to portable lamp holders having lamp-protecting guards.

One of the objects of my invention is the provision of a portable lamp holder of the above character such that there shall be no possibility of short circuits being formed by reason of the device being accidentally placed between live electric terminals, such, for instance, as a pair of bus-bars on an electric switchboard; and such that there shall not be any possibility of a shock being communicated to the user of the device by reason of it being thrown into contact with a live terminal.

It is a further object of my invention so to construct the guard of a portable lamp holder that it may be removed very readily when desired although it is securely held in place when in use.

It is a still further object of my invention to render cheaper the manufacture of lamp holders of the above character by providing a more economical construction.

An embodiment of my invention is shown, by way of example, in the accompanying drawings, but it is to be understood that I do not limit myself to the construction therein shown since changes, within the scope of the appended claims, may be made without departing from the spirit of my invention.

In the drawings: Figure 1 is a sectional elevation of a lamp-holding device constructed in accordance with my invention, the lower part of the handle being broken away; Fig. 2 is a vertical section taken through the lower part of the handle and showing the device which I employ for relieving the lead conductors from strain; Fig. 3 is a plan of the lampholder; Fig. 4 is a fragmentary section taken on the line 4-4 of Fig. 1; Fig. 5 is a horizontal section taken on the line 5-5 of Fig. 1; Fig. 6 is a detail view of the upper end of one of the guard strips; Fig. 7 is a plan of the lamp-

holder with the guard removed; Fig. 8 is a horizontal section taken on the line 8-8 of Fig. 1 and showing the guard as locked to the lampholder; Fig. 9 is a view similar to Fig. 8, but showing the guard unlocked and ready to be removed from the lampholder; Figs. 10 and 11 are detail views of the lower end of one of the guard strips; Fig. 12 is a fragmentary view of part of the locking ring; and Fig. 13 shows in vertical section a device similar to that shown in Fig. 1 but provided with a switch.

Like reference characters refer to like parts throughout the drawings and the following description.

The body of the lampholder comprises a handle 14 having formed therethrough a longitudinal passage 15 for the reception of electrical conductors leading to a lamp socket which is secured in a well 16 formed in the end of an enlarged head 17 with which the handle is provided. The lamp socket comprises the ordinary parts and includes an insulating base 18 which fits into the lower part of the well 16, the latter being properly bored to receive it. A pin 19 is provided in the well 16 for preventing rotation of the base 18, which it does by engaging in a suitable recess with which the base is provided. The base is secured in position in the well 16 by means of a threaded bushing 20 which is secured into the upper end of the well, the latter being suitably threaded for that purpose. A device is thus provided which will carry an incandescent lamp and which may be readily and conveniently grasped and waved about to enable the light to be thrown in any desired direction. Lead conductors are secured to suitable binding terminals upon the rear face of the base 18 and extend out through the passage 15. In order to clamp these lead conductors in the passage 15 and thereby prevent any strain, due to the dropping, etc., of the lampholder, being imparted to the binding terminals, I provide a threaded plug 21 which is threaded into a suitable hole opening into the passage 15. This plug carries at its inner end a block 22 formed of rubber or the like which, when the plug is screwed inward, will engage the conductors and thereby clamp them against withdrawal, the plug thus taking any strain which may be imparted to the conductors.

The lampholder is designed to be used around switchboards, in the holds of ships, and generally under such conditions as would obtain in these and similar places. It is desirable, therefore, that a guard be provided for preventing breakage of the lamp by reason of the latter being accidentally struck or the lampholder being dropped. Such a guard should be arranged so as to obstruct as little light as possible and at the same time be as strong as possible. Furthermore, when the lampholder is to be used around switchboards, electrical machinery, or in other similar places, it is desirable that it should be so constructed as to reduce as much as possible the amount of conducting material, such as screw-heads, wires or the like, carried upon the outside thereof.

The guard according to my invention embodies all the features mentioned in the preceding paragraph. It comprises a plurality of longitudinal strips 23 preferably stamped out from a sheet of fiber and spaced in a circle so as to form a kind of cage around the lamp. The strips are set radially so as to give the maximum strength with the minimum obstruction of the light given out by the lamp. These strips 23 are secured together at their upper ends by means of a flat fiber ring 24 (Figs. 1, 5 and 6) formed with notches 25. The strips 23 are formed at their upper ends with notches 26 by means of which the upper ends of the strips may be securely hooked into the ring 24 at the notches 25. A hook 27 may be secured to the ring 24, if desired, to enable the lampholder to be hung up at will. Intermediate the ends of the strips 23 is placed a spacing ring 28 formed with a plurality of radial notches 29 in which the strips 23 engage, the strips being each provided at that part with a notch 30, enabling them to lock with the spacing ring 28. The strips 23 are inclosed at their lower ends by a ring 31 (Figs. 1 and 8-12), hereinafter termed the locking ring, which ring is of such nature that, when turned, it will force the inner ends of the strips 23 into locking engagement with the upper part of the lampholder, as will be hereinafter described.

The enlarged upper end 17 of the lampholder is formed with a pair of annular projections 32 and 33, respectively, set apart so as to leave an annular groove between them. These projections have formed therein a plurality of recesses 32^a and 33^a of a depth somewhat less than that of the respective projections 32 and 33, these recesses being equal in number to the strips 23 of the guard, the lower ends of which strips they are adapted to receive. The lower ends of the strips 23 of the guard are formed with projections 34 of a width substantially equal to that of the space between the projections 32

and 33 of the lampholder. When placing the guard upon the lampholder, the lower ends of the strips are pushed down through the notches 32^a until their extremities engage in the notches 33^a and their projections 34 are located in the space between the projections 32 and 33 of the lampholder. In this condition of the parts the guard is held against lateral movement by reason of the engagement of the ends of the strips 23 in the notches 32^a and 33^a. However, it will readily slide longitudinally away from the lampholder. In order to prevent this, means are provided for forcing the ends of the strips 23 inward so that their projections 34 engage those parts of the projections 32 and 33 which are left at the bottom of the notches 32^a and 33^a, this means consisting of the locking ring 31 above referred to. The ring 31 is formed with a plurality of notches 35, one for each of the strips 23, which latter engage in these notches. The strips 23 are provided with notches 36 at the parts where they engage in the notches 35 in order to maintain the locking ring 31 in its position upon the strips. One side of each of the notches 35 of the ring 31 is sloped up so as to form a cam surface 37, so that when the ring 31 is turned in the direction of the arrow (Fig. 9) the strips 23 will ride up the cam surfaces 37 and thereby be forced inward so that their projections 34 will engage under the projections 32 and 33 in the manner above described. In order that the strips 23 may be firmly retained in their locked position, the cam surfaces 37 are continued in further cam surfaces 38 of considerably less inclination.

In order to preclude any chance of the lock ring 31 slipping backward and thereby enabling the strips 23 to spring outward and the guard to become released, one of the cam surfaces of the ring is made somewhat shallower than the others and is formed with a scored edge, as at 39. The particular strip 23 which corresponds in position to the scored cam surface 39 is formed with vertical scorings 40 at the bottom of its notch 36, these scorings engaging those of the cam surface 39 and forming a lock. The fact that the scored cam surface 39 is somewhat shallower than the other cam surfaces causes its particular strip 23 to have a certain freedom of movement, so that, when it is desired to lock the guard upon the lampholder, this particular strip may be pressed inward by the thumb, whereby the resistance of the teeth, formed by the scorings 39 and 40, to the turning of the ring 31 will be avoided. When the ring 31 has been turned into the position shown in Fig. 8, the end of the strip may be released, when it will spring outward and engage, by means of the scoring 40, with the scoring of the cam surface 39, thus causing a locked connection. When it is desired

to remove the guard, the strip 23 which engages the scored cam surface 39 may be manually pressed inward, when the ring may readily be turned. In order that the particular one of the strips 23 which is to be manipulated in order to enable the guard to be locked or unlocked may be readily determined, the lower end of this strip is knurled, as shown at 41 (Fig. 11).

It will be seen from the above, that the embodiment of my invention described above, does not present a single exposed metallic part so that if the device should be brought into contact with one or more live terminals, both the circuits and the user of the lampholder will come to no harm. Moreover, the construction is strong and economical and the guard may be removed by a very simple operation.

In the modification illustrated in Fig. 13 I have shown the head 17 of the lampholder as being provided with an opening 42 through which access may be had to the handle 43 of a switch with which the socket is provided. It is to be noted that the end of the switch lever 43 is contained within the opening 42 whereby any possibility of the switch being accidentally actuated or injured by the lever 43 being struck is avoided.

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

1. A lamp-holder comprising a lamp-receiving member having a locking projection thereon, a guard including a plurality of strips each having a locking projection thereon adapted to engage the projection of the lamp-receiving member; and manually releasable means for maintaining the projections of the guard strips and the projection of the lamp-receiving member in engagement.

2. A lamp-holder comprising a lamp-receiving member having a locking projection thereon, a guard including a plurality of strips each having a locking projection thereon adapted to engage the projection of the lamp-receiving member, manually releasable means for maintaining the projections of the guard strips and the projection of the lamp-receiving member in engagement, and releasable locking means for said retaining means.

3. A lamp-holder comprising a lamp-receiving member having an annular projection thereon, a guard including a plurality of guard strips arranged in a circle and each having a projection adapted to engage beneath said annular projection, and manually-releasable means for maintaining the projections of said guard strips in engagement with the projection of the lamp-receiving member.

4. The combination with a guard comprising a plurality of guard strips arranged in

a circle, of a lamp-receiving member formed with slots for receiving the ends of said guard strips, whereby said strips receive lateral support, and means for preventing longitudinal withdrawal of said strips from said slots.

5. The combination with a guard comprising a plurality of longitudinal strips arranged in a circle and each having a projection thereon, of a lamp-receiving member formed with slots for receiving the ends of said guard strips, whereby said strips receive lateral support, and also formed with a projection beneath which the projections of said strips are adapted to engage, and manually releasable means for maintaining the projections of said strips in engagement with the projection of said lamp-receiving member.

6. The combination with a guard comprising a plurality of longitudinal strips arranged in a circle and each having a projection thereon, of a lamp-receiving member formed with slots for receiving the ends of said guard strips, whereby said strips receive lateral support, and also formed with a projection beneath which the projections of said strips are adapted to engage, and a ring surrounding said strips and formed with cam projections for moving the projections of said strips into locking relation with the projection of said lamp-receiving member; whereby the lamp-receiving member and the guard are locked together.

7. The combination with a guard comprising a plurality of longitudinal strips arranged in a circle and each having a projection thereon, of a lamp-receiving member formed with slots for receiving the ends of said guard strips, whereby said strips receive lateral support, and also formed with a projection beneath which the projections of said strips are adapted to engage, a ring surrounding said strips and formed with cam projections for moving the projections of said strips into locking relation with the projection of said lamp-receiving member, whereby the lamp-receiving member and the guard are locked together, and manually releasable means for retaining said ring in its locked position.

8. A lamp guard comprising an insulating disk having a plurality of notches therein, a plurality of circularly arranged insulating strips arranged to engage at their ends in the notches of said disk, said strips being formed with notches at the parts at which they engage said disk, and spacing means for retaining said strips in position.

9. A portable lamp-holder comprising a lamp-receiving member having a well formed therein for the insertion of a lamp

socket, said lamp-receiving member being formed with an opening therethrough communicating with said well, and a switch for said lamp socket having a lever extending 5 into said opening, said lever being of insufficient length to extend beyond said opening.

10 10. A lamp holder comprising a lamp-receiving member having a locking projection thereon, a guard including a plurality of strips, one of said strips having a locking projection thereon adapted to engage

the projection of the lamp-receiving member, and manually releasable means for maintaining the projection of said guard 15 strip and the projection of the lamp-receiving member in engagement.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

REUBEN B. BENJAMIN.

Witnesses:

CHARLES G. COPE,
E. R. KING.