Aug. 3, 1926.

R. B. BENJAMIN

1,594,489

HAND PORTABLE ELECTRIC LAMP

Filed July 5, 1924

2 Sheets-Sheet 1

Fig. 1.

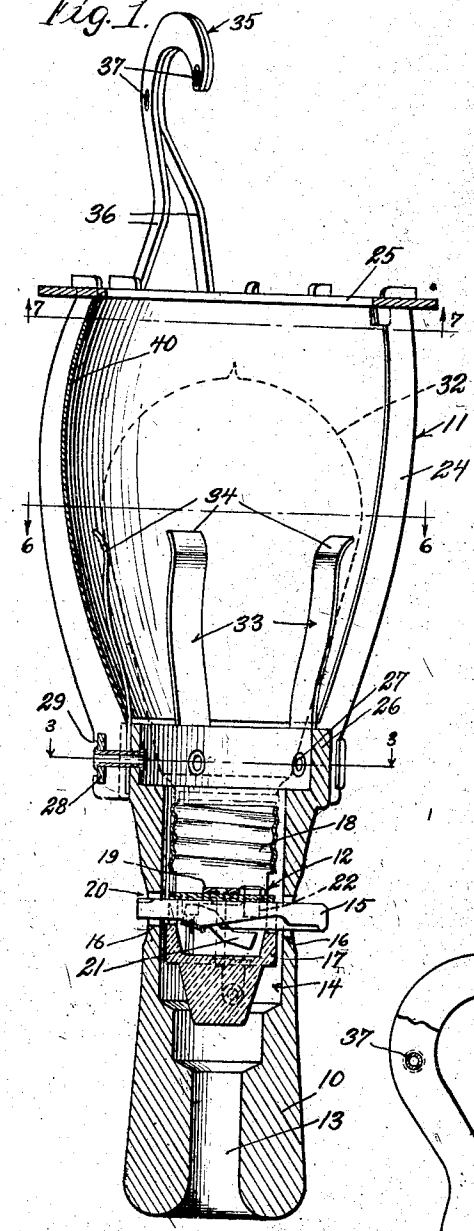


Fig. 2.

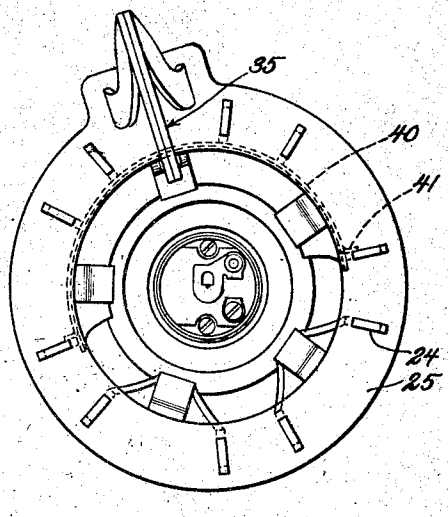
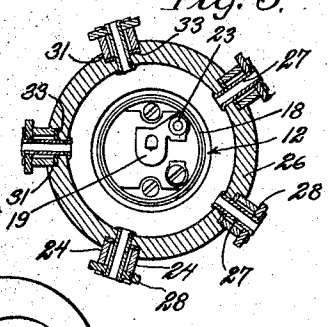


Fig. 3.



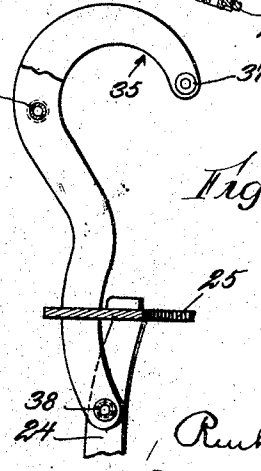


Fig. 4.

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2 Sheets-Sheet 2

Fig. 5.

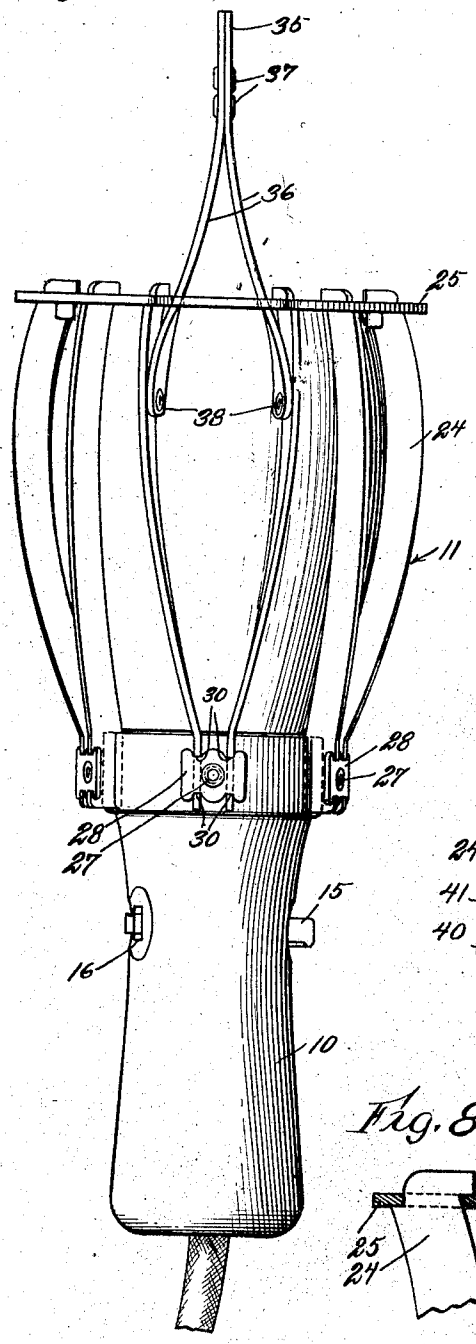


Fig. 6.

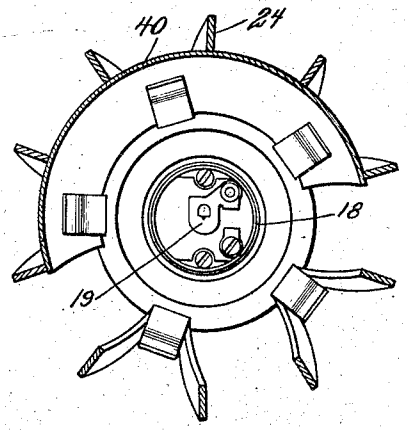


Fig. 7.

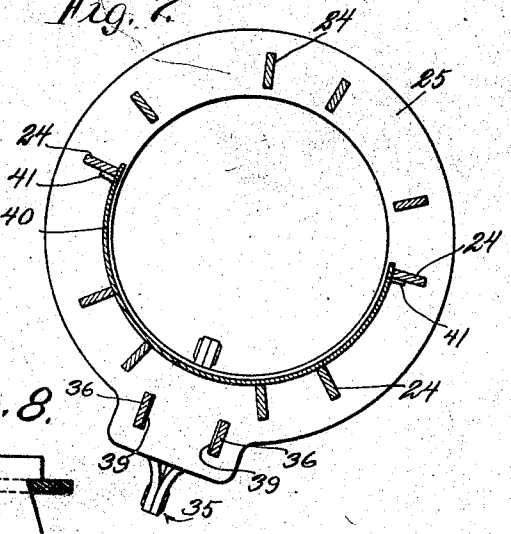


Fig. 8.

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Patented Aug. 3, 1926. 1,594,489

UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

HAND PORTABLE ELECTRIC LAMP.

Application filed July 5, 1924. Serial No. 724,364.

My invention relates to hand portable electric lamps.

One of the objects of my invention is to provide an improved hand portable lamp having no exposed metal parts whereby it can be used safely around apparatus having exposed live parts.

A further object of my invention is to provide an improved hand portable lamp which will be simple, compact and efficient.

A further object of my invention is to provide improved means for attaching the bars forming the lamp guard.

A further object of my invention is to provide an improved hand portable lamp provided with a switch.

A further object of my invention is to provide improved means for holding the switch socket mechanism in place in the handle.

Further objects will appear from the description and claims.

In the drawings in which an embodiment of my invention is shown—

Figure 1 is an axial section through the hand portable lamp;

Fig. 2 is a view looking down on the lamp;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 shows a detail of the supporting hook;

Fig. 5 is a side elevation of the lamp;

Fig. 6 is a section on the line 6—6 of Fig. 1;

Fig. 7 is a section on the line 7—7 of Fig. 1; and

Fig. 8 is a detail view showing how the guard bars are secured to the outer ring.

Referring to the drawings in detail, the construction shown comprises a handle 10, a lamp guard 11 mounted on the handle and a switch socket 12 mounted in the handle. The handle 10 may be of wood or other suitable material. It has an axial passage 13 for the feed wires leading to the socket which is seated in an axial recess 14. The socket is held in place in the handle by means of the push bar 15 of the switch mechanism, which push bar extends transversely through the socket and through the openings 16 in the handle. The push bar is readily detachable from the socket so that to remove the socket it is only necessary to remove the push bar laterally through one of the openings 16, thus releasing the socket and permitting it to be removed from the recess 14 in the handle. The switch socket comprises an insulating base 17, shell and center contacts 18 and 19 and switch mechanism 20. The switch mechanism includes the oscillatable switch arm 21, a pair of contact members 22, (the circuit between which is controlled by the oscillatable switch arm or bridging member 21) and the push bar 15 referred to above which controls the operation of the switch arm 21. The center contact 19 and one of the switch contacts 22 are formed as parts of an integral stamping secured to the insulating base 17 by means of an eyelet 23. The other switch contact is electrically connected with one of the binding terminals. The shell contact 18 is electrically connected with the other binding terminal. The switch mechanism thus controls the circuit between one of the binding terminals and center contact, effecting a double break in series when moved to "off" position.

The lamp guard comprises a plurality of insulating fiber bars 24, placed substantially edgewise with respect to the source of light so as to obstruct the light as little as possible and a retaining ring 25 into which the outer ends of these bars are hooked as shown in Fig. 8. The inner ends of these bars are brought together in pairs as indicated in Fig. 3, and are secured to the flange portion 26 of the handle by means of rivets or eyelets 27. There is one rivet for each pair of bars. This rivet lies between the bars of the pair and is provided with an insulating washer 28 at its outer end, the rivet or eyelet extending through the flange portion 26 between the bars 24 and through the insulating washer 28 and being riveted over at one end on the flange 26 and at its other end on the washer 28. The edges of the bars are notched as indicated at 29 to receive the washer, and the upper and lower edges of the washer are notched as indicated at 30 to receive the edges of the bars.

In assembling the guard, the bars are hooked into the outer retaining ring and are then sprung inwardly and fitted into the notches 31 in the flange 26, after which the eyelets 27 are riveted over to secure the bars in position.

In order to steady and yieldingly support the lamp bulb 32, a plurality of spring fingers 33 are provided, the tips 34 of which

engage the lamp bulb and the inner ends of which are clamped between the edges of the bars 24 and the flange 26.

The construction as a whole is such as to prevent injury to the lamp filament due to rough handling. The fiber bars 24 of the guard absorb some of the shock when the guard strikes a solid object. The leaf-springs 34 act to floatably support the lamp bulb which is screwed into the shell 18, and fulcrumed and retained in place by the bar 15. The engagement of these spring fingers 34 with the lamp bulb is such as to urge the bulb outwardly against the holding action of the bar 15.

The insulating hook 35 may be formed of a pair of fiber stampings 36, riveted together as indicated at 37, and riveted to a pair of the bars 24 is indicated at 38. The two members of the hook are spread apart and extend through holes 39 in the retaining flange 25 to hold the hook in proper position.

A glare shield 40 may be provided for protecting the eyes from the direct rays from the lamp. This glare shield may be of insulating material as sheet fiber bent to conform to the inner edges of the bars 24. In order to hold this glare shield in place, lugs 41 are struck up from the fiber for engagement with a pair of bars 24.

While I have shown but one form of my invention, it is to be understood that I do not desire to limit myself to this particular construction since many changes and modifications may be made therein without departure from the scope of the following claims.

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

1. A hand portable lamp construction comprising an elongated handle and a lamp socket and lamp guard mounted thereon, said guard comprising a plurality of longitudinally extending flat bars surrounding said lamp and lying substantially edgewise with respect to the source of light, said handle being provided with an annular flange, the ends of said bars being brought together in pairs adjacent said flange, and means for securing said bars to said flange comprising a plurality of clamping members, one for each pair of bars, and radially extending rivets extending through said flange and clamping members between the bars of each pair, said clamping members and bars being provided with inter-engaging notches and being of insulating material.

2. A hand portable lamp construction comprising an elongated handle and a lamp socket and lamp guard mounted thereon, said guard comprising a plurality of longitudinally extending flat bars surrounding said lamp and lying substantially edgewise with respect to the source of light, said handle being provided with an annular flange, the ends of said bars being brought together in pairs adjacent said flange, and means for securing said bars to said flange comprising a plurality of clamping members, one for each pair of bars, and radially extending rivets extending through said flange and clamping members between the bars of each pair, said clamping members and bars being provided with inter-engaging notches and being of insulating material, a retaining ring into which the ends of said bars are hooked.

3. A hand portable lamp construction comprising an elongated handle and a lamp socket and lamp guard mounted thereon, said guard comprising a plurality of longitudinally extending flat bars surrounding said lamp and lying substantially edgewise with respect to the source of light, said handle being provided with an annular flange, the ends of said bars being brought together in pairs adjacent said flange, and means for securing said bars to said flange comprising a plurality of clamping members, one for each pair of bars, and radially extending rivets extending through said flange and clamping members between the bars of each pair, said clamping members and bars being provided with inter-engaging notches and being of insulating material, a retaining ring into which the ends of said bars are hooked and spring lamp bulb engaging fingers clamped by said rivets between said flange and bars.

4. A hand portable lamp construction comprising an elongated handle and a switch socket and a lamp guard mounted thereon, said handle having a recess therein to receive said switch socket, said switch socket comprising an insulating base, a shell contact and a reciprocable push bar extending through said socket from one side to the other thereof, said handle having apertures in its side through which the ends of said push bar extend whereby the push bar holds the switch socket in place in said handle.

5. A hand portable lamp construction comprising an elongated handle and a switch socket and a lamp guard mounted thereon, said handle having a recess therein to receive said switch socket, said switch socket comprising an insulating base, a shell contact and a reciprocable push bar extending through said socket from one side to the other thereof, said handle having apertures in its side through which the ends of said push bar extend whereby the push bar holds the switch socket in place in said handle, said push bar being removable from said handle laterally through one of said openings to permit the removal of said switch socket from said handle.

6. A hand portable lamp construction comprising an elongated handle, and a lamp socket and lamp guard mounted thereon,

said lamp guard comprising a plurality of longitudinally extending fingers of insulating material surrounding the lamp, and a glare shield of insulating material shielding one side of said lamp and embraced by said fingers.

7. A hand portable lamp construction comprising an elongated handle and a switch socket and a lamp guard mounted thereon, said handle having a recess therein to receive said switch socket, said switch socket comprising an insulating base, a shell contact and a reciprocable push bar extending through said socket from one side to the other thereof, said handle having apertures in its side through which the ends of said push bar extend whereby the push bar holds the switch socket in place in said handle, and spring means for engaging the bulb and pressing it outwardly against the holding action of the push bar on the switch socket.

In witness whereof, I have hereunto subscribed my name.

REUBEN B. BENJAMIN.