Jan. 1, 1929. 1,697,405

H. F. REICHENBACH

PORTABLE ELECTRIC HAND LAMP

Filed Aug. 26, 1927

Fig. 1.

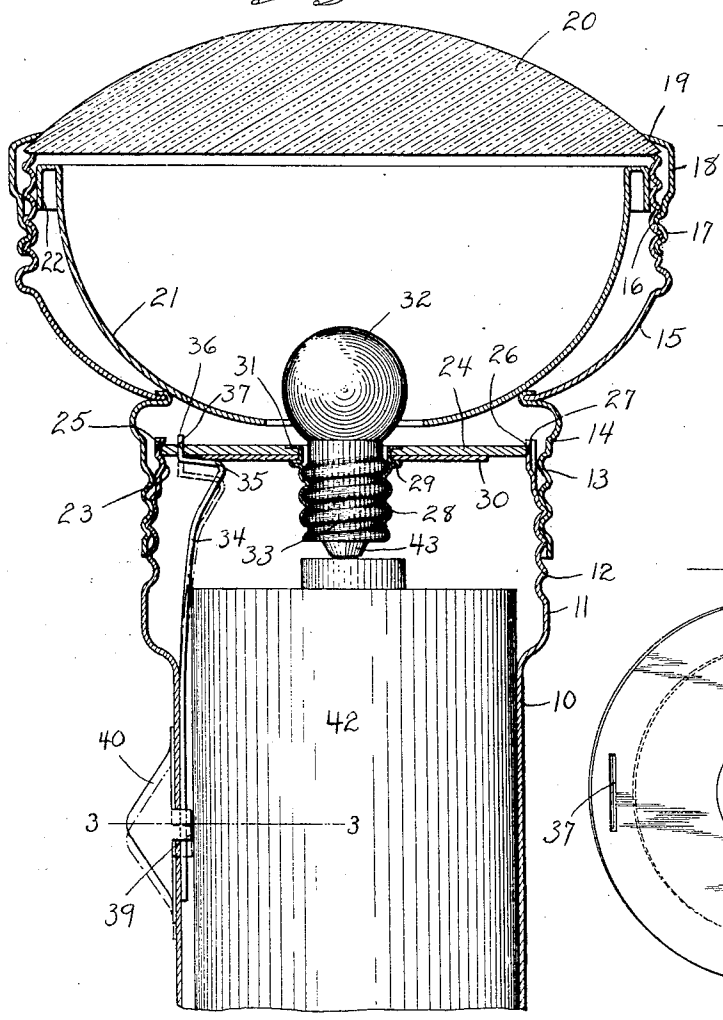


Fig. 4.

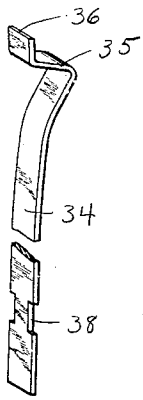


Fig. 5.

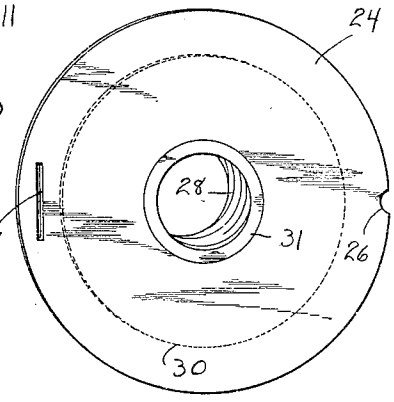


Fig. 2.

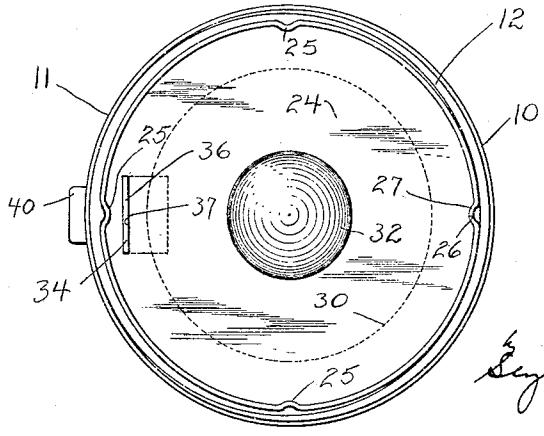
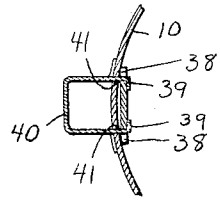


Fig. 3.



Inventor.
Howard F. Reichenbach
by Seymour Earle Nichols
Atty

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UNITED STATES PATENT OFFICE.

HOWARD F. REICHENBACH, OF WOLCOTT, CONNECTICUT, ASSIGNOR TO CHASE COMPANIES, INCORPORATED, OF WATERBURY, CONNECTICUT, A CORPORATION.

PORTABLE ELECTRIC HAND LAMP.

Application filed August 26, 1927. Serial No. 215,650.

This invention relates to an improvement in portable electric handlamps and particularly to an improvement in switch-mechanisms therefor and mode of mounting same.

The object of this invention is to provide at a low cost of manufacture, a simple, convenient and reliable, portable electric handlamp, constructed with particular reference to preventing the derangement of its switch-mechanisms.

With this object in view my invention consists in a portable electric handlamp characterized by its provision with a bridge-plate mounted near one end of its casing and provided with a bearing for the reception and guidance of one end of the switch-bar, the opposite end of which is secured to the casing for reciprocation therein to make and break the circuit.

My invention further consists in a portable electric handlamp characterized as above and having certain other details of construction and combination of parts as will be hereinafter described and particularly recited in the claims.

Fig. 1 is a broken view in vertical central section of the upper end of a portable electric handlamp embodying my invention;

Fig. 2 is a top or plan view thereof with the cap unit removed;

Fig. 3 is a broken detail sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a detached perspective view of the switch-bar;

Fig. 5 is a corresponding view of the bridge-plate assembly.

In carrying out my invention as herein shown, I employ a tubular sheet metal casing 10 expanded at its upper end to form a collar 11 provided with rolled-in threads 12 which coact with similar threads 13 formed upon a skirt 14 depending from the cap-member proper 15. The upper end of the cap-member 15, just mentionel, is formed with rolled-in threads 16 coacting with similar threads 17 formed upon a removable bezel-ring 18. Between the extreme upper end of the cap-member 15 and the inwardly projecting annular flange 19 of the bezel-ring aforesaid, is a plano-convex lens 20 of usual form.

The skirt 14, cap-member 15 and bezel-ring 18 together constitute what I may for convenience term, a cap-unit which houses a reflector 21 having at its upper end a downwardly turned annular flange 22 which is adapted to snugly fit the interior of the threaded upper end of the cap-member 15 aforesaid.

Immediately below the extreme upper end of the collar 11 of the casing 10 I form an inwardly projecting annular bead 23 upon which rests a disc-like bridge-plate 24 of insulating material which is held in place thereon against upward displacement by three corresponding indents 25 inwardly struck from the extreme upper end of the collar 11. To prevent the bridge-plate 24 from having rotary movement with respect to the casing, it is formed in its periphery, as shown, with a locking notch 26 which receives a short vertically arranged rib 27 also struck inwardly from the said collar 11 as clearly shown in Figs. 1 and 2.

The bridge-plate 24 is centrally perforated for the reception of a threaded sheet-metal lamp-socket 28 which is formed with an outwardly extending annular stop-shoulder 29 engaged at its upper face with a contact-disc 30 to hold the same in place against the underface of said bridge-plate; the upper end of said lamp-socket 28 being outwardly turned to form a mounting-flange 31, whereby the said bridge-plate and contact-disc are clamped between the same and the stop-shoulder 29 aforesaid, and the socket itself is mounted in place in the said bridge-plate.

To control the flow of current to the incandescent electric-lamp 32 which has its externally threaded stem 33 mounted in the socket 28 aforesaid, I provide a flexible reciprocating switch-bar 34 which is bent as shown to form a laterally offsetting contact-shoulder 35 and an upwardly extending guide-finger 36 which latter is entered into and guided by a bearing slot 37 in the bridge-plate 24 aforesaid. Near its lower end the said switch-bar is formed upon its opposite edges with aligned coupling-notches 38 each of which receives one of the two fingers 39 respectively projecting inwardly from the side walls of a sheet-metal finger-button 40 located upon the outer surface of the casing 10 as clearly shown in Figs. 1 and 2. The casing 10 is formed with two vertically arranged parallel slots 41 through which the fingers 39 aforesaid project and in which they have limited reciprocating movement. The inner ends of the said fingers are bent inwardly towards each other over the inner-face of the switch-bar 34, as shown in Fig. 3,

so as to firmly couple the finger-button 40 with the switch-bar 34 for concurrent reciprocating movement therewith.

As is usual in portable electric handlamps one terminal of an electro-chemical cell 42 is electrically connected to the casing 10 while its complementary terminal is in electrical engagement with the center-contact 43 of the lamp 32, the other terminal of the lamp being formed as usual by the threaded stem 33 which is in electrical engagement with the socket 28 which latter in turn is electrically connected to the contact-disc 30. By moving the contact-shoulder 35 of the switch-bar 34 into engagement with the contact-disc 30 as shown by full lines in Fig. 1 of the drawings, the circuit is closed through the lamp 32. Conversely, by moving the said contact-shoulder out of engagement with the contact-disc, as shown by broken lines in the same figure, the circuit is broken.

As thus constructed and arranged the switch-mechanism of my improved portable electric handlamp is of simple and inexpensive design and by virtue of the fact that the switch-bar is supported at its upper end in the bridge-plate 24, in addition to being supported at its lower end by the fingers 39 of the finger-button 40 the said switch-bar is rendered practically immune to derangement from ordinary rough handling.

I claim:

1. In a portable electric handlamp, the combination with the casing, electro-chemical cell and lamp thereof; of a bridge-plate of insulating material mounted in the said casing near one end thereof and formed with a bearing-passage spaced inward from its edge and having inner and outer walls; a lamp-socket carried by the said bridge-plate for the reception of the said lamp; a contact-plate positioned upon the inner face of the said bridge-plate and laterally-offsetting from the said lamp-socket; and a switch-bar provided with a laterally and inwardly offset contact-shoulder coacting with the said contact-plate for controlling the flow of current to the said lamp and formed with an upstanding guide-finger reciprocatable in the said bearing-passage; whereby the outer end of the said switch-bar is positioned against inward or outward radial displacement by the inner and outer walls respectively of the said bearing-passages.

2. In a portable electric hand-lamp, the combination with the casing, electro-chemical cell and lamp thereof; of a bridge-plate of insulating material mounted in the said casing near one end thereof and formed with a bearing-passage spaced inward from its edge and having inner and outer walls; a lamp-socket carried by the said bridge-plate for the reception of the said lamp; a contact-plate positioned upon the inner face of the said bridge-plate and laterally-offsetting from the said lamp-socket; and a switch-bar having its outer end reversely-folded radially inwardly and then outward to form a contact-shoulder for engagement with the said contact-plate and finally bent outward in substantial parallelism with the axis of the handlamp structure to form a guide-finger reciprocatable in the said bearing-passage; whereby the outer end of the said switch-bar is positioned against inward or outward radial displacement by the inner and outer walls respectively of the said bearing-passages.

In testimony whereof, I have signed this specification.

HOWARD F. REICHENBACH.