June 12, 1928.

1,673,665

D. C. CRUSE

COLLAPSIBLE LAMP SHADE

Filed June 6, 1927

3 Sheets-Sheet 1

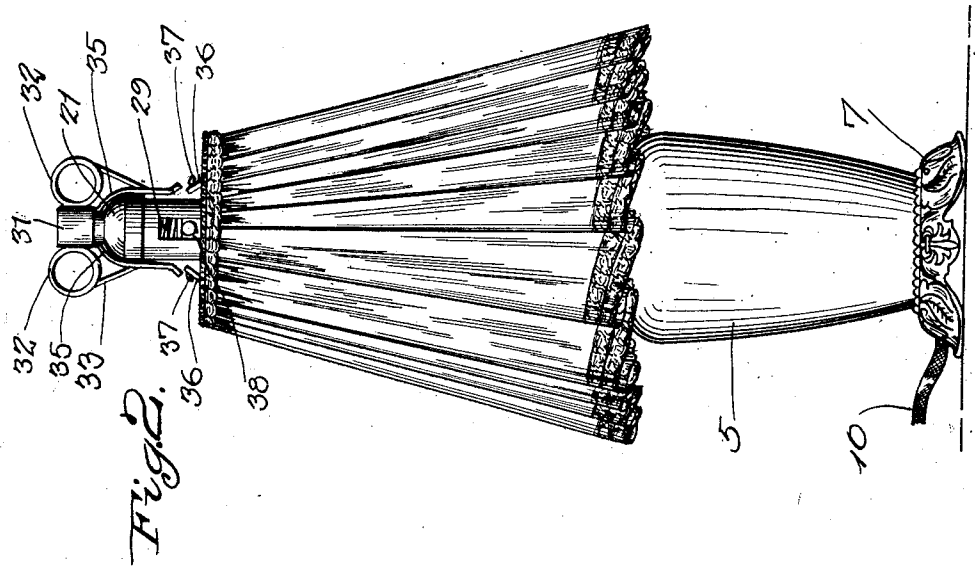


Fig. 2.

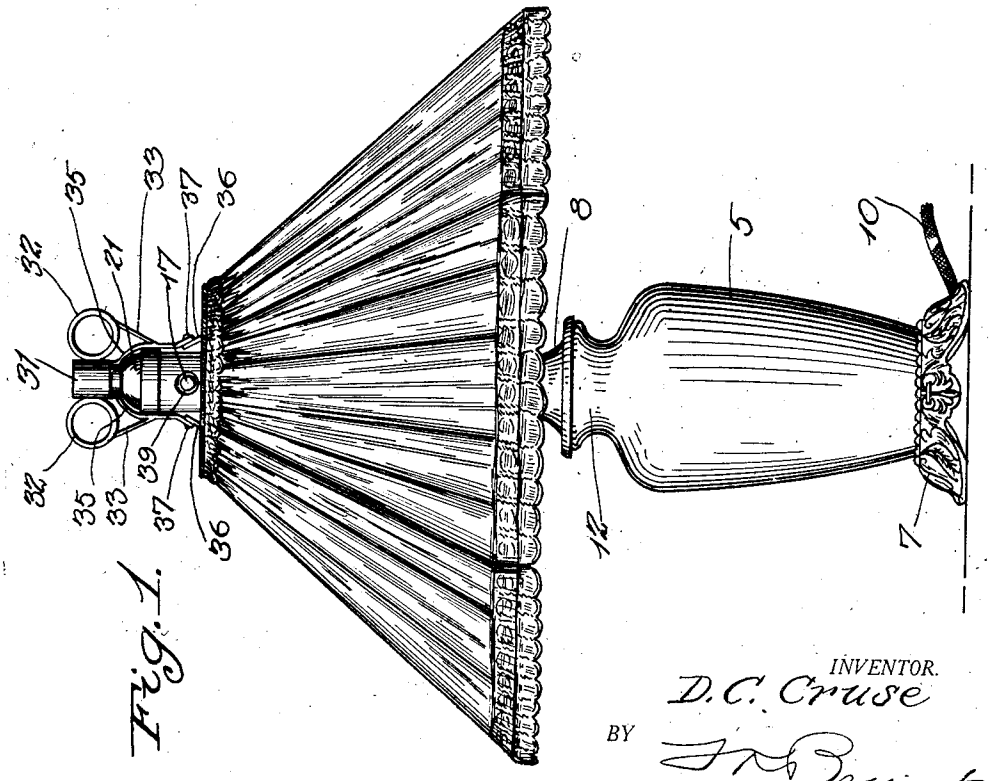


Fig. 1.

INVENTOR.
D. C. Cruse
BY
Bryant,
ATTORNEY.

June 12, 1928.

D. C. CRUSE

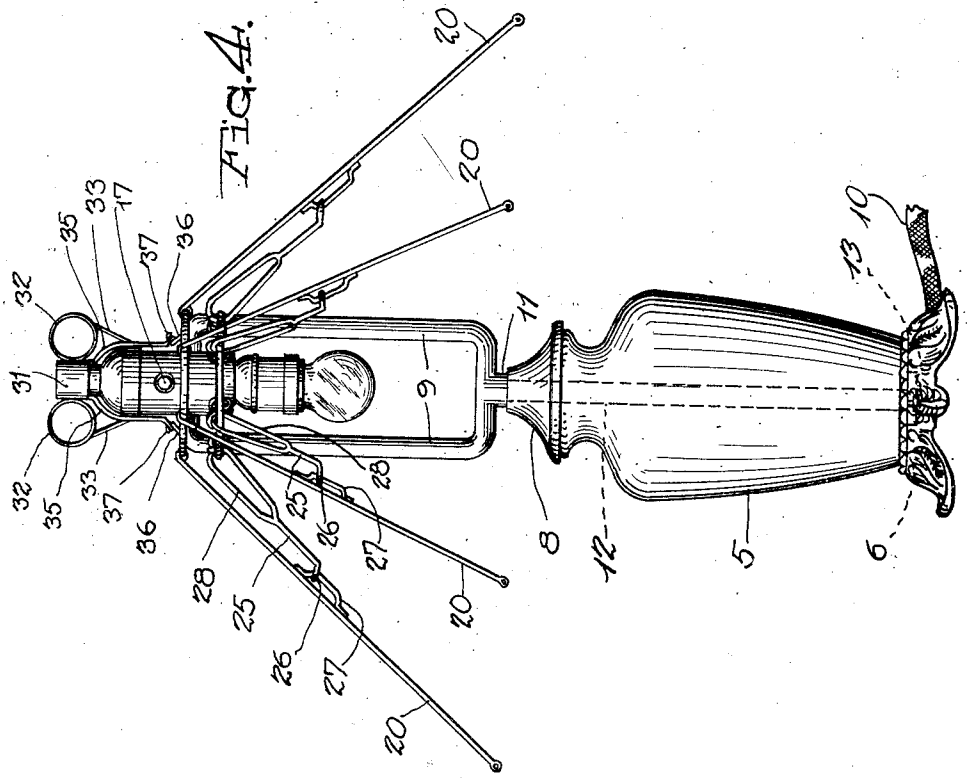
1,673,665

COLLAPSIBLE LAMP SHADE

Filed June 6, 1927

3 Sheets-Sheet 2

Fig. 4.



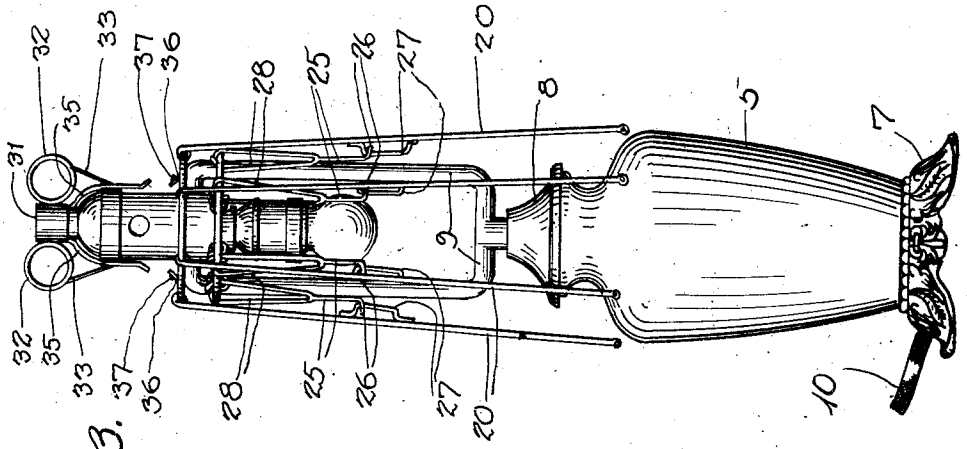


Fig. 5.

INVENTOR.

D. C. Cruse.

BY.

ATTORNEY.

June 12, 1928.

D. C. CRUSE

1,673,665

COLLAPSIBLE LAMP SHADE

Filed June 6, 1927

3 Sheets-Sheet 3

Fig. 6.

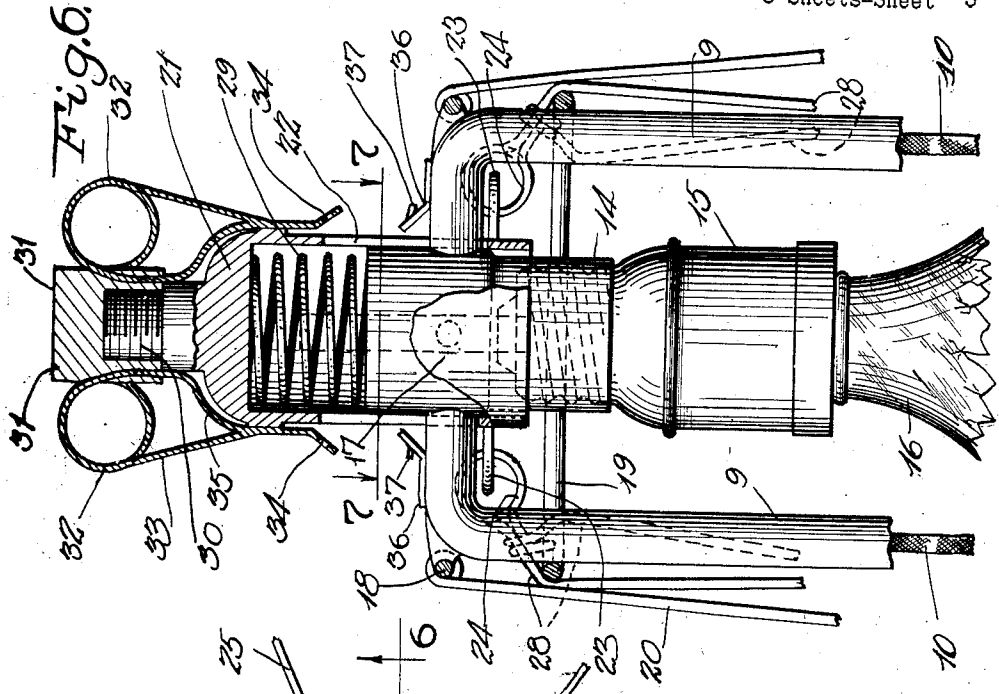


Fig. 5.

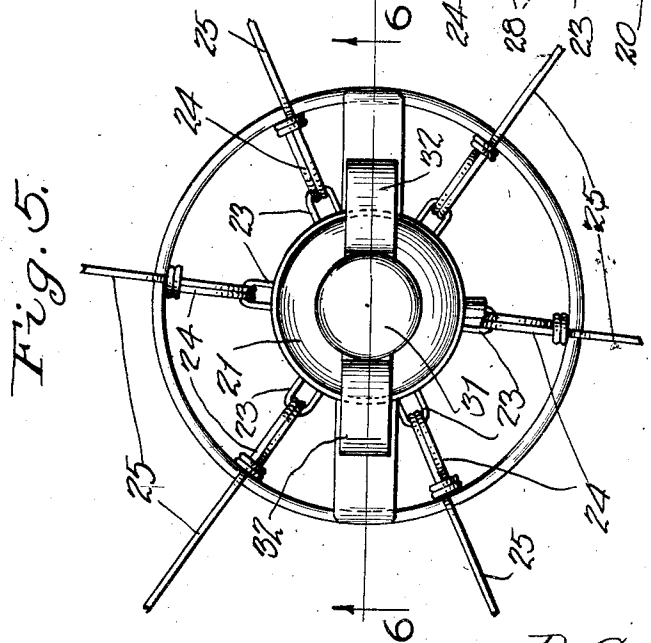
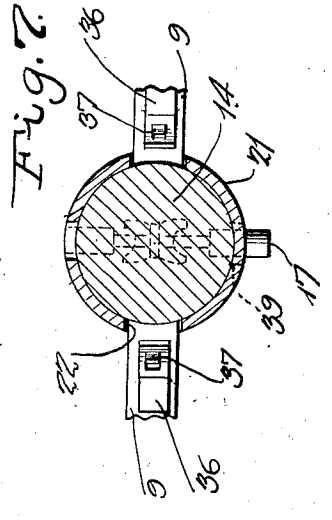


Fig. 7.



D. C. Cruse

INVENTOR.

BY

F. R. Bryant

ATTORNEY.

Patented June 12, 1928.

1,673,665

UNITED STATES PATENT OFFICE.

DELLA C. CRUSE, OF HODGENVILLE, KENTUCKY.

COLLAPSIBLE LAMP SHADE.

Application filed June 6, 1927. Serial No. 196,759.

This invention relates to that class of devices known as electric table or floor lamps, and has more particular reference to an improved collapsible shade for lamps of this kind.

The primary object of the invention is to provide a collapsible shade which, when opened and in use, will present a symmetrical and attractive appearance, and which, when closed and not in use, will occupy a very small space so that it may be set aside and out of the way without liability of being turned over and broken by contact therewith.

Other objects are to provide a collapsible lamp shade of the above character consisting of two parts compactly arranged in cooperative relation to each other, and which shall be simple in construction, inexpensive in manufacture, and efficient and durable in practical use.

Still another object is to provide yieldable means normally acting to collapse the shade, readily accessible manually operable means for readily permitting the shade to be expanded or opened, and manually releasable means to automatically latch the shade in expanded condition when manually expanded.

Still another object is to provide means for necessitating the lamp to be turned out before the shade may be collapsed and for preventing the lamp from being turned on or lighted when the shade is collapsed.

Other objects will become apparent as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views,

Figure 1 is an elevational view of an electric table lamp having a collapsible shade constructed in accordance with the present invention, the shade being in expanded condition;

Figure 2 is a view similar to Figure 1 with the shade collapsed;

Figure 3 is a view similar to Figure 2 with the shade covering removed;

Figure 4 is a view similar to Figure 1 with the shade covering removed;

Figure 5 is an enlarged fragmentary top plan view showing details of the shade with its covering removed;

Figure 6 is an enlarged fragmentary view partly in elevation and partly in section on line 6—6 of Figure 5, with the parts adjusted to the position wherein the shade is collapsed; and

Figure 7 is a fragmentary horizontal section taken substantially upon line 7—7 of Figure 6.

The invention is illustrated by way of example in connection with an electric lamp embodying an ornamental hollow standard or post in the form of a vase 5, the bottom of which is closed by means of the top wall 6 of a hollow ornamental supporting base 7, and the upper end or mouth of which is closed by means of a sheet metal bell-shaped cap 8.

The lamp includes a vertical elongated substantially rectangular open frame 9 for supporting a lamp socket and shade, said frame 9 being composed of suitably joined pipe sections to form a conduit for the conductors 10 through which the necessary current is supplied to the lamp socket. As shown, the lower horizontal member of the frame 9 is provided with a central depending nipple 11 which rests upon the top of the cap 8 and which has the upper end of a hollow stem or pipe section 12 threaded into the same, the stem 12 extending through the center of the cap 9, the standard 5 and the top wall 6 of the base 7, and having a nut 13 threaded upon the lower end thereof against the under surface of the wall 6 whereby the cap 8 and base 7 are firmly bolted against the top and bottom ends of the standard or vase 5. In this way the conductors 10 may be led under the base 7 upwardly through the stem 12, and then separated to each extend up through one side portion of the frame 9 as indicated in Figure 6.

Rigidly carried by and centrally interposed in the upper horizontal member of the frame 9 is an inverted lamp socket 14, of conventional form, into the lower end of which is adapted to be threaded the base 15 of a conventional incandescent electric lamp 16 whereby the lamp 16 is effectively supported in a depending inverted position within the frame 9. As shown, the lamp

socket 14 is preferably of the switch type including a transversely sliding push button 17 adapted to be pressed in the well known manner, in one direction, to light the lamp 16, and in the other direction, to turn the lamp 16 out.

Rigidly secured to and encircling the upper end of the frame 9 in spaced superimposed relation, are horizontal rings 18 and 19, and pivotally mounted at regular intervals upon the upper ring 18 are the inner ends of a circular series of radiating ribs 20 upon which a suitable shade covering 21 is suitably secured, the ribs being mounted for vertical swinging movement so as to be capable of assuming an outwardly and downwardly inclined position as shown in Figure 4 to set the covering 21 and present a shade in expanded or open condition, or to depend in a substantially vertical position for permitting the covering 21 to fold and present a collapsed shade as indicated in Figures 2 and 3.

Manually operable means is provided for facilitating swinging of the ribs 20 to expanded or collapsed position, and such means includes an inverted cup-shaped shell 21 slidably telescoped onto the upper end portion of the socket 14 and having longitudinally elongated side slots 22 through which the adjacent portions of the upper member of the frame 9 project, whereby the desired vertical sliding movement of said shell 21 is permitted. Rigid with and radiating from the lower end of the shell 21 are a plurality of horizontal elongated loops 23 in which are loosely engaged the relatively large eyes 24 provided upon the inner ends of braces 25 whose outer ends are suitably slidably and pivotally associated with the ribs 20 as at 26, preferably by means of eyes upon the outer ends of the braces 25, slidably engaging longitudinal loops 27 fixed to the inner sides of the ribs 20 intermediate the ends of the latter. It will be understood that a brace 25 is provided for each rib, and each brace includes an intermediate elongated loop portion 28 loosely engaged with the lower ring 19 whereby the braces 25 are fulcrumed on the ring 19 for vertical swinging movement. Thus, the braces 25 form levers swinging about the stationary ring 19 and operatively connected at their inner ends to the vertically sliding shell 21 so that when the latter is depressed, the outer ends of the braces or levers 25 will be swung outwardly and upwardly to correspondingly swing the ribs 20 and thereby expand the shade, and so that when the shell 21 is raised the braces or levers 25 will be swung in the opposite direction for swinging the ribs 20 downwardly and inwardly to collapsed position. A helical compression spring 29 is placed within the shell 21 and interposed between the top of the latter and the upper end of the socket 14 for normally raising the shell 21 and collapsing the shade.

The shell 21 preferably has an upstanding threaded stem 30 upon its upper end upon which is threaded a cap nut 31, and resiliently attached to opposite sides of the cap nut 31 are a pair of ring-shaped finger pieces 32 from each of which depends a resilient catch strip 33 having a keeper opening 34 in the lower end thereof and normally tensioned or sprung inwardly by spring members 35, the lower apertured ends of the catch strips 33 being directed outwardly at an inclination as shown best in Figure 6. Fixed upon the portions of the upper horizontal member of the frame 9 at opposite sides of the shell 21 are catch members 36 having outwardly directed catch lugs 37 upon the upwardly and inwardly inclined inner end portions thereof. These catches 36 are so arranged that when the shell 21 is depressed the inclined lower ends of the catch strip 30 will engage the inclined inner ends of the catches 36 and be spread slightly until they snap over the lugs 37, thus automatically latching the shell 21 in lowered position to retain the shade in expanded condition. By pressing downwardly slightly on the shell 21 and simultaneously lifting upwardly on the finger pieces 22, the latter may be flexed relative to the cap nut 31 for disengaging the lower ends of the catch strips 33 from the lugs 37 of the catches 36, thereby permitting the spring 29 to return the shell 21 to elevated position for collapsing the shade.

Provided in one side of the shell 21 coincident with the adjacent end of the push button 17 of the switch of socket 14 is an elongated slot 38, and provided in the opposite side of the shell 21 in the same longitudinal plane as the other end of the push button 17 is a circular opening 39 adapted to register with the push button 17 when the shell 21 is depressed and the shade is expanded. It will be noted that the opening 39 will move out of registry with the push button 17 when the shell 21 is elevated, and as the adjacent end of the push button 17 must be projected outwardly of the shell to light the lamp 16, the push button 17 may not be operated to close the switch unless the shade is expanded. The slot 38 permits the necessary movement of the shell 21 relative to the other projecting end of the push button 17 when the switch is turned off, for permitting the shade to be collapsed by elevation of the shell 21. As the shell 21 projects above the upper ring 18 and the shade proper, it is readily accessible for actuation to expand the shade, and this is also true with respect to the finger pieces 32 for effecting release of the shade by means of which the latter may be permitted to col-

lapse. As these parts which are exposed above the shade may be constructed to have a quite ornamental appearance, they will not detract from the beauty of the lamp to a material degree.

While the invention has been exemplified in connection with a table lamp, it will nevertheless be understood that the same may be embodied in a floor or other lamp by proper change in the form or construction of the stand. It will also be apparent that numerous minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:—

1. In a collapsible lamp shade, a pair of stationary horizontal rings disposed in spaced superposed relation, a series of ribs hinged on the upper ring, brace levers fulcrumed intermediate their ends on the lower ring and operatively connected at their outer ends to the ribs, and a vertically slidable shell mounted within the rings and operatively connected to the inner ends of the brace levers.

2. In a collapsible lamp shade, a pair of stationary horizontal rings disposed in spaced superposed relation, a series of ribs hinged on the upper ring, brace levers fulcrumed intermediate their ends on the lower ring and operatively connected at their outer ends to the ribs, a vertically slidable shell mounted within the rings and operatively connected to the inner ends of the brace levers, a vertical supporting frame for said rings, and an inverted lamp socket carried by the top of the frame onto which said shell is slidably telescoped.

3. In a collapsible lamp shade, a pair of stationary horizontal rings disposed in spaced superposed relation, a series of ribs hinged on the upper ring, brace levers fulcrumed intermediate their ends on the lower ring and operatively connected at their outer ends to the ribs, a vertically slidable shell mounted within the rings and operatively connected to the inner ends of the brace levers, a vertical supporting frame for said rings, and an inverted lamp socket carried by the top of the frame onto which said shell is slidably telescoped, said lamp socket embodying a switch, and said shell and switch being cooperatively constructed to prevent the switch from being closed when the shade is collapsed and to require opening of the switch to enable the shade to be collapsed.

4. The combination with a support having a fixed inverted lamp socket, of a collapsible shade mounted on the support, means for expanding the shade including a manually depressible shell slidably telescoped onto the upper end of said lamp socket, cooperating elements carried by the support and the shell for latching the latter in depressed shade expanding position, and yieldable means to automatically raise the shell and collapse the shade when the shell is unlatched.

5. In a collapsible lamp shade, a pair of stationary horizontal rings disposed in spaced superposed relation, a series of ribs hinged on the upper ring, brace levers fulcrumed intermediate their ends on the lower ring and operatively connected at their outer ends to the ribs, a vertically slidable shell mounted within the rings and operatively connected to the inner ends of the brace levers, radial elongated horizontal loops on the lower end of the shell, and relatively large eyes on the inner ends of the brace levers loosely engaged in said loops.

In testimony whereof I affix my signature.

DELLA C. CRUSE.