E. M. SMITH.

LIGHTING FIXTURE FOR DISPLAY CASES.

APPLICATION FILED JULY 17, 1914. RENEWED MAY 12, 1917.

1,243,453. Patented Oct. 16, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

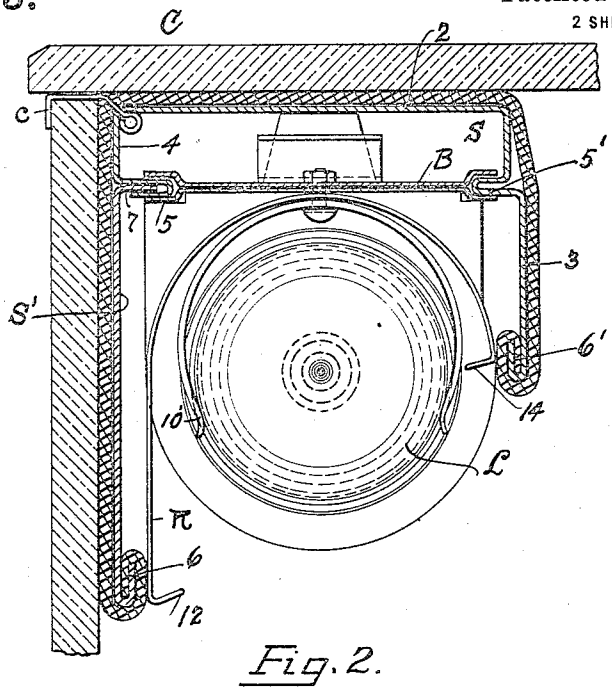


Fig. 2.

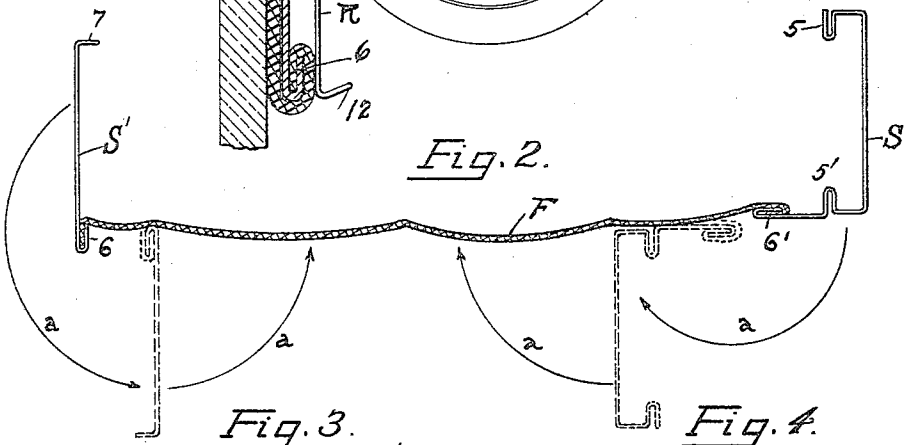


Fig. 3.

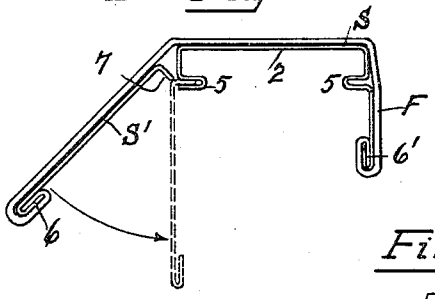


Fig. 4.

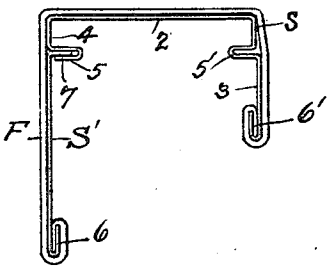
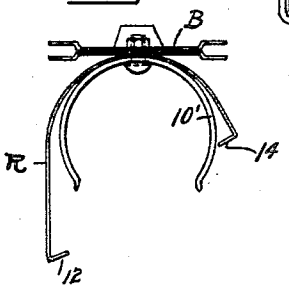


Fig. 5.



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2 SHEETS—SHEET 2.

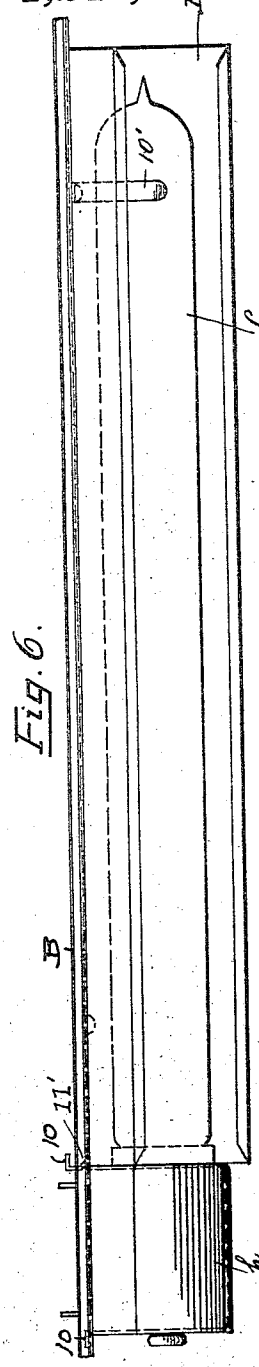


Fig. 6.

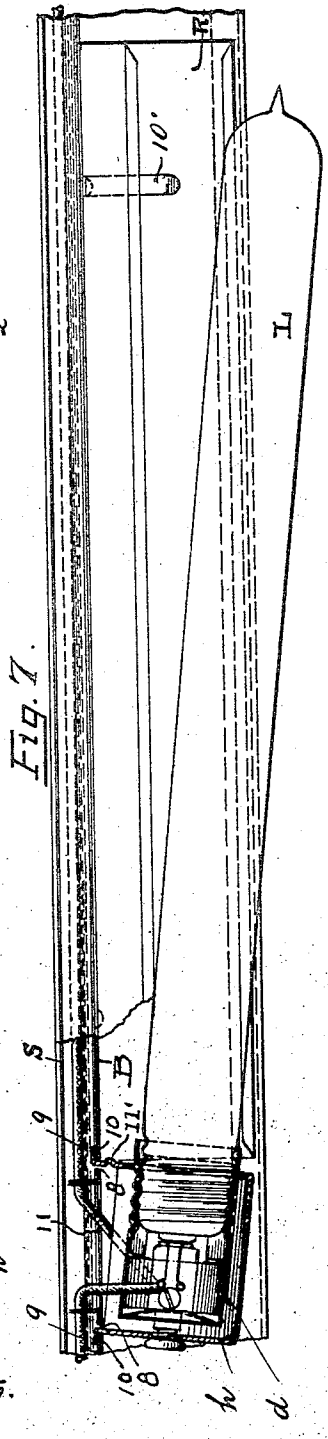


Fig. 7.

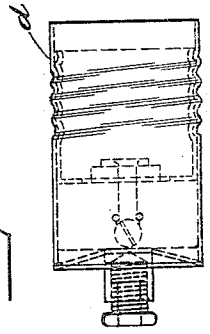


Fig. 8.

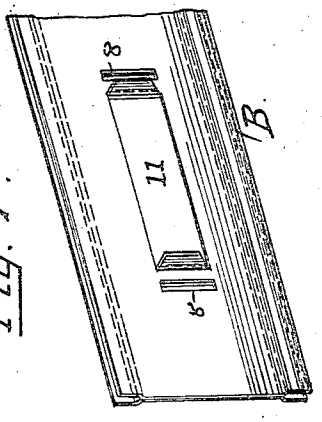


Fig. 9.

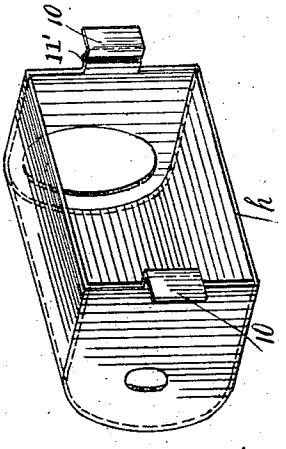


Fig. 10.

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Attys

UNITED STATES PATENT OFFICE.

ESMOND M. SMITH, OF CLEVELAND, OHIO, ASSIGNOR TO THE MULTI-LUX ILLUMINATING COMPANY, OF CLEVELAND, OHIO, A CORPORATION.

LIGHTING-FIXTURE FOR DISPLAY-CASES.

1,243,453. Specification of Letters Patent. Patented Oct. 16, 1917.

Application filed July 17, 1914, Serial No. 851,452. Renewed May 12, 1917. Serial No. 168,311.

To all whom it may concern:

Be it known that I, ESMOND M. SMITH, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Lighting-Fixtures for Display-Cases, of which the following is a specification.

This invention relates to a lighting fixture for display cases, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a cross section of a corner of a display case with the fixture and a lamp supported therein, the view being considerably enlarged as compared with the other views, which are approximately full size. Fig. 2 is an end view of the sheet metal strips and their connecting strip of fabric which comprise the guard or housing for the fixture, the full lines showing the parts unfolded and the dotted lines and arrows showing an advanced fold, and Fig. 3 is an end elevation of the said guard or housing parts more completely folded, and Fig. 4 is a similar view with said parts affixed together, the fabric of felt being stretched and covering the housing ready for use. Fig. 5 is an end elevation of the reflector, the immediate support therefor, and the clamp for the lamp, and Fig. 6, sheet 2, is a longitudinal side elevation of a short section of the parts shown in Fig. 5 including a lamp and its socket support. Fig. 7 is a longitudinal sectional elevation of the fixture parts assembled as in Fig. 1, but showing the lamp released from its clamp and in an inclined projected relation to the reflector so that it may be easily removed from its socket. Figs. 8, 9 and 10 are detail views of the parts immediately supporting the lamp.

This construction or arrangement of parts as thus shown contemplates the installation in display or show cases of a single lamp or a series of lamps which will afford a brilliant distribution of light across or throughout the case while the source of light and even the reflectors therefor are completely hidden from view and invisible to any one who is observing the goods from the front side of the case, the direct rays of light being also screened to the salesman who is usually located at the rear and opposite side of the case. The said equipment furthermore, is a complete and separate article of manufacture and sale, designed to be made into any length and sold by the linear foot for installation in display cases of various and different shapes and sizes and subject to such modifications as different cases may require. The fixture is also constructed and adapted to use what has become known as a straight line filament or lamp.

To these several ends I construct a fixture which is made up for the most part of sheet metal and so fashioned that it can occupy a longitudinal angle or corner in the front and top of a glass case C with or without a border frame, so as not to be particularly noticeable from the outside and yet be in position to throw a flood of light downward upon the goods within the case. The fixture comprises a shell made of two strips of sheet metal S and S′ bent to shape as seen separate in Fig. 2 and assembled in Figs. 1 and 4, and in a different stage of development in Fig. 3. This shell constitutes the base of the so-called housing or guard to conceal the source of light as well as to serve as a support for the lamp L, and the strip S′ is shaped with a flat top portion 2 through which it can be secured to the casing C by a clip *c*, see Fig. 1, or by a bolt or other means of attachment. Strip S is also trough-shape, that is, it is provided with relatively long and short flanges or depending portions 3 and 4 respectively bent at right angles to their connecting portion 2. Ledges or ribs 5 and 5′ are formed oppositely in the depending portions 3 and 4 by bending the sheet inward at right angles and lapping the same back upon itself to provide ways on which the immediate support B for the lamp can be slid lengthwise thereon in assembling and removing the fixture parts. Support B is made of two plates riveted or bolted together and are spread at their edges to form channels adapted to engage over and slide upon the said ledges, and in this instance the ledge 5 at the front of the fixture is the terminal end of the sheet S at this side while the corresponding ledge 5′ at the rear is formed at an intermediate point in the depending portion 3 which is relatively longer than the front flange 4 so that it may

serve as a light shield for the glass top of the case and the eyes of the clerk at the rear of the case.

The plate or strip S is supplemented at the front by a relatively wide strip or plate S′, having a lip 7 at its upper edge bent inward at right angles for detachable gripping engagement with the walls of the ledge 5, which is a reversely-bent or doubled portion slightly separated and open at its front to receive said lip when the two strips are brought together in the relations shown in Fig. 3. This front plate or strip depends about twice the depth of the rear portion 3 and the lower edges of both the strip S′ and flange 3 of strip S are doubled back inwardly at 6 and 6′ to clamp the edges of the strip of fabric F, which preferably consists of felt of a dark color and is stretched tightly over the shell S, S′, when properly assembled. This is done when the edges of the felt cloth are clamped within the edges 6 and 6′ and the strips S and S′ are turned toward each other in the direction of the arrows *a* in Fig. 2, until the upper edge 7 is in position to be pressed inward into the open side of ledge 5, see Fig. 3, wherein the plate S′ is shown as in a disengaged but stretching position for the felt. That is, by making a fulcrum for the plate S′ on said edge 7 in the ledge 5 and drawing the plate down from the inclined position Fig. 3 to a perpendicular position Fig. 4 it stretches the felt over the assembled parts which also helps to hold the said plate in place.

The slidable and removable lamp support or double plate B, in this instance, is of the same length as the shell or housing therefor, but it may be of any desired length corresponding to the length of the show-case, or the said support and housing may be only slightly longer than the lamp L if a single lamp is employed. Lamp L is adapted to make electrical connection with a screw socket *d* which is seated and suitably secured in the hollow metallic head or box *h* affixed in hinged engagement with the plate B by the ears or lugs 10 on the bottom thereof engaging in or through slots 8 in said support B, see Figs. 7 to 9. The electrical wires 9 leading to the socket *d* pass through an elongated opening 11 in plate B and extend longitudinally through the conduit formed by strip S and plate B, and are therefore concealed and protected, and any number of lamps may be electrically connected in this way. One of the ears or lugs 10 is longer than the other and has a hump 11′ adapted to spring-engage the edge of its opening 8 to lock the box in place when pressed inward and adapting the box to be released and to swing outward so that the lamp may be inserted and removed from its socket *d*. A spring clamp 10′ secured to plate B opposite the outer end of the lamp is adapted to grip the lamp and hold it in place when pressed inward into parallel position with the reflector R represented by a highly-polished aluminum or equivalent bowed plate which is fastened to plate B and has straight and curved drop sides conforming in the main to the drop sides of the front plate S′ and the rear extension 3, and both extremities 12 and 14 of said reflector are bent inward more or less to provide flanges to intercept radiation of light from the lamp at those points, the flange 12 being especially of utility in preventing a sheen or line of light from showing on the front glass of the show-case immediately beneath the lower edge of the front strip S′.

Practically, the attachment shown is three sided, or, to be accurate, has a closed top and sides of different depth its full length and is open at the bottom to shed the light downward and to radiate the same within limits from the reflector R. The walls of the fixture are intended not only to be opaque or light proof but to be actually dark and unobtrusive, an effect enhanced by the felt covering.

The housing as shown herein is of a strip like form, being of considerable length compared with its width and depth, or definitely, its total width is not exceeding two inches and generally not more than one and a half inches and the depth is greatest at the front but usually is not exceeding an inch and a half, while the rear wall is say an inch in depth, so that the housing will not really be noticeable in a show case while it serves as a complete shield and support for the lamp. The lamp itself is of a slender tubular pattern, say twelve inches in length by about an inch in cross section, and the length of the fixture will depend on the size of the show-case, somewhat, and one or more of the lamps can be placed at intervals in a single strip, as may be needed.

Show-cases having wooden border frames usually embody a small holding in the angle or corner within the case, and this condition is met in my fixture by merely increasing the width of the flange 7 on strip S′ to offset said strip relatively to side flange 4 of strip S.

The fabric or felt covering F conceals all the metal parts and connections of the housing when in place within the show case, viewing the fixture from the front; and it also makes a dirt and dust proof lining between the glass of the case and the housing, thereby avoiding removal of the fixture when the show case needs cleaning. Vibration and rattling is also prevented by the cushioning effect of the felt lining; and the housing being of resilient metal a close and flush fit of the housing within the angle or corner of the case is also assured. The fix-

ture can be readily attached to the ordinary show case without modification or alteration of the case, and the assembly of the parts including the wiring of the sockets for the lamps is accomplished before the fixture is installed and fastened within the case. Wiring of the lamp sockets is expedited and easily performed as the plate B is a removable part of the housing. The conduit formed within the housing by plate B when in place therein serves to hold the electric wires and also provides an elongated air chamber which protects the glass wall of the case from the direct heat of the lamp or lamps L; and the felt covering F supplements this protection.

What I claim is:

1. A fixture for display cases as described, having a housing strip constructed of two parts lengthwise and one of said parts constituting the front of said strip and having separable connection with the other part, and a fabric covering over the outside of said strip and overlapping the connection between said parts.

2. A fixture as described having a housing strip and a plate slidably mounted in the sides thereof, and a felt cover stretched over said strip and having its edges connected with the edges of both sides of said strip.

3. A fixture as described having a housing made of two pieces of sheet metal separably connected and a fabric stretched over the same, in combination with a plate slidably supported upon the sides of said housing, a reflector fixed to said plate, a box and an electric lamp socket supported by said plate, and spring fingers carried by said plate to engage one end of said lamp.

4. In a lighting fixture, a lamp housing comprising separate metal strips and a fabric connection therefor adapted to fold and cover the said strips when joined together.

5. In a lighting fixture, a metal housing comprising two strips of sheet metal separably engaged and a fabric covering secured at its edges to said strips and adapted to be stretched thereover under tension when said strips are assembled.

6. A show-case having glass plates fixed together in angular relations, in combination with an electric lamp, an open housing for said lamp having angularly-related walls, and a cushioning and dirt and dust-proof lining interposed between and in contact with said walls and the glass plates.

7. A show-case having glass plates fixed together in angular relations, in combination with a lamp housing for a corner of said case having a lining of fabric of dark color stretched thereover and seated in cushioning and dust-tight sealing relations with said glass plates.

In testimony whereof I affix my signature in presence of two witnesses.

ESMOND M. SMITH.

Witnesses:
L. C. MURDOCK,
R. B. MOSER.