

March 28, 1944.

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2,345,235

LIGHTING FIXTURE

Filed Sept. 22, 1941

2 Sheets-Sheet 1

Fig. 1.

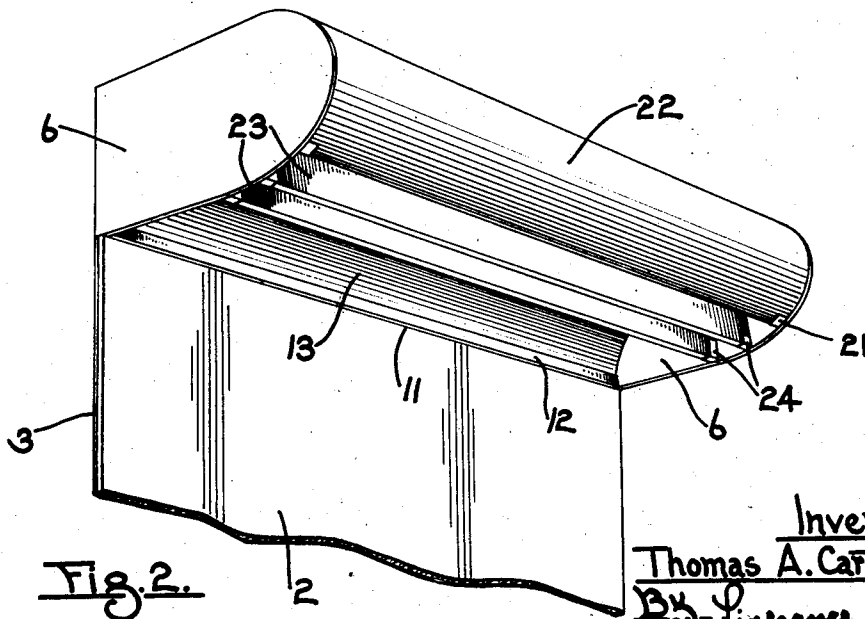
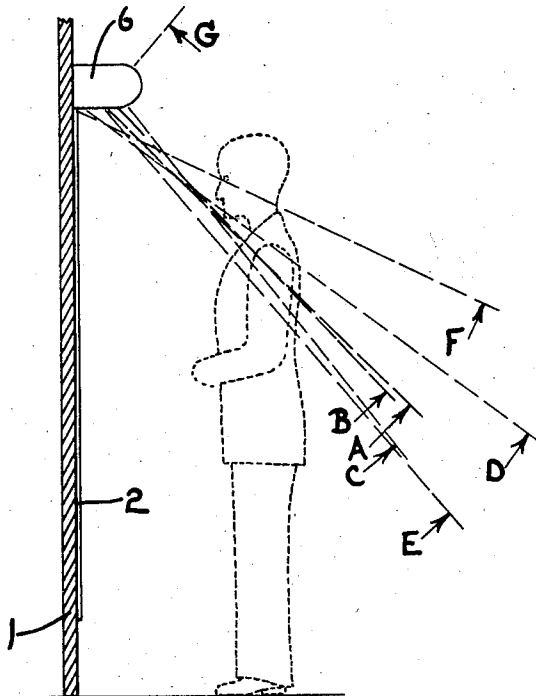


Fig. 2.

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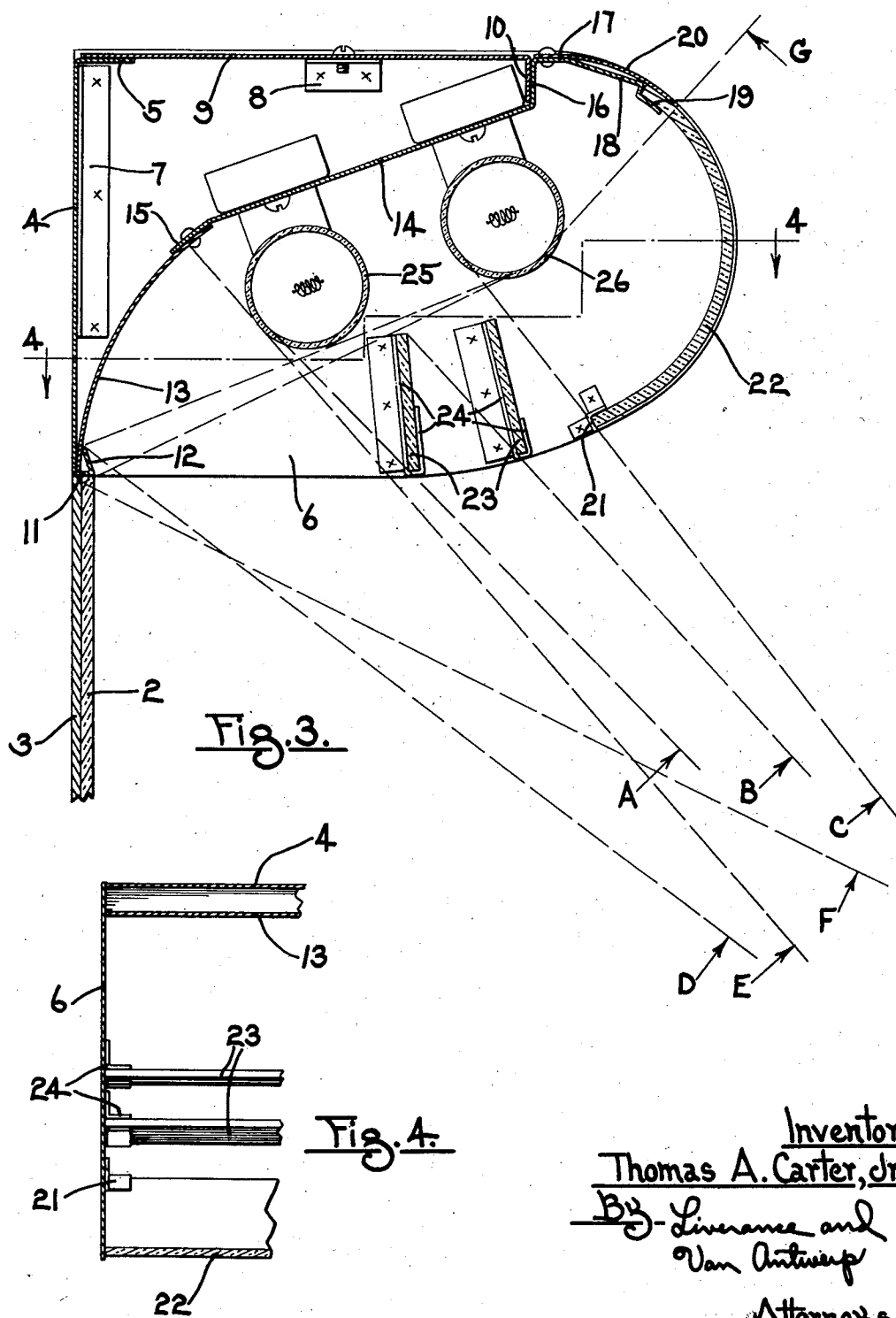
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,345,235

LIGHTING FIXTURE

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10 Claims. (Cl. 240-4.2)

This invention relates in general to lighting fixtures which are particularly designed for use above a mirror in clothing stores and the like where a customer may view himself.

The fixture is designed as an improvement over the recently issued patent to Welch, No. 2,254,718. In general the device comprises one or more lighting sources preferably of an elongated form of the fluorescent type and so located with respect to the mirror that light rays reflected therefrom will fall only below the eyes of a person of average height standing before the mirror in a position to conveniently view himself therein. A specular reflector is provided to intensify the light rays falling upon the body of such person which are reflected from the mirror. A diffused reflector is also provided for general illumination and to reduce shadows to a minimum. Means are also provided at the front of the device and below the lighting sources to prevent the person from viewing directly the light sources and at the same time these means are translucent and are preferably tinted a flesh color in actual practice to enhance the appearance of and flatter the observer, such tinted light falling on the face of the observer and on his entire body.

The light sources are also so located with respect to the mirror that when a person stands in the usual position before it he will be unable to see the reflection of the light sources therein. A certain amount of direct light will be passed downwardly, but the various parts are so associated that the direct light will fall on the person below the shoulders only.

The various elements which go to make up the device and their relationship to each other are such that no direct or reflected light will fall upon the eyes of an observer standing before the mirror, and not only direct light rays but also light rays reflected by the mirror and intensified by the specular reflector will flood the entire area in front of the mirror below the shoulders of such person. The only light rays reaching the person's face above the eyes are those passing through the tinted translucent means.

To the accomplishment of the foregoing and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and following description set forth in detail certain means and one mode of carrying out my invention, said means constituting, however, but one of various ways in which the principle of the invention may be employed.

In said annexed drawings, wherein like reference numerals refer to like parts throughout the various views:

Fig. 1 is a side elevational view of the device showing a person of average height standing a distance in front of the mirror to view himself.

Fig. 2 is an enlarged fragmentary perspective view of the mirror with the lighting fixture attached thereto.

Fig. 3 is a still further enlarged vertical section from the rear toward the front through the device of Fig. 2, and

Fig. 4 is a fragmentary horizontal section taken substantially on the plane of line 4-4 in Fig. 3.

For purposes of illustration it has been assumed that the eyes of a person of average height will be located substantially 5'3" above the floor. The bottom of the lighting fixture is presumed to be substantially 9" above the eye line and the eyes are presumed to be substantially 18" from the mirror. It will be obvious that some of these dimensions may be altered to suit definite purposes and the location of the various elements in the device be changed accordingly without in any way departing from the spirit of the invention, the device and dimensions shown being for purposes of illustration for the average person.

Referring now more particularly to the drawings, a substantially vertical support 1 is indicated which has attached thereto a vertical mirror 2 which may have the usual backing 3 thereon. The lighting fixture itself includes a back plate 4 which is located above the mirror and extends vertically upwardly therefrom, terminating at its upper edge in a forwardly turned substantially horizontal flange 5. At each end of the device plates 6, having substantially the configuration shown in Figs. 2 and 3, are located and are secured by means of vertically positioned angles 7, one leg of each angle being secured by means of welding or other desired means to the back plate 4 and the other leg of each being similarly secured at the rear of each end plate 6.

Adjacent the upper edge and spaced a distance forwardly from the rear end of each plate 6 a bracket 8 in the form of an angle is secured having the upper leg thereof extending inwardly from each end in substantially a horizontal plane. A removable cover plate 9 is adapted then to be secured at each side thereof to the brackets 8, the rear end thereof extending over and resting on the flange 5 and the forward end thereof being turned downwardly into a substantially vertical flange 10. This cover plate is remov-

able; as will be subsequently evident, for the purpose of gaining access to the interior of the device and the light sources therein.

The bottom edge of the back plate 4 extends forwardly a short distance as at 11 and then terminates in an upwardly and rearwardly extending flange 12. The space between the flange 12 and the back plate 4 provides a recess for the reception of the lower edge of an upwardly and forwardly curved specular reflector 13. From adjacent the upper edge of the specular reflector a plate 14 extends forwardly and upwardly having at its rear edge a slightly downturned portion 15 which may receive fastening means therethrough in order to secure the plate to the specular reflector 13. The forward edge of the plate is then bent upwardly for a short distance as at 16, then forwardly in a substantially horizontal plane as at 17, and then forwardly and downwardly for a short distance as at 18. This last named portion is then offset slightly downwardly and terminates in a forwardly and downwardly extending flange 19. Immediately above this forward portion of the plate 14 a spring clip in the form of a plate 20 is secured at its rear edge to the horizontal portion 17 and is curved forwardly and downwardly and terminates in spaced relation to the terminal flange 19.

The vertical flanges 10 of the top 9 and 16 of the plate 14 abut against one another and the forward edge of the plate 14 forms a resting place for the flange 10. The top then will be supported at its rear edge on the flange 5, in the center by the angle 8, and at its front edge by the plate 14.

Each of the end plates 6 have secured at their inner sides and near the front end thereof a bracket 21 substantially of the form shown, which brackets are adapted to receive the lower edge of a curved translucent face 22, the upper edge of which is received between the flange 19 and the clip 20.

At spaced apart points along the lower edge of each end plate 6 and rearwardly of the lower edge of the face 22 a plurality of brackets 24 are located and support louvres 23 which are also of a translucent material. For the purposes of the present invention it has been found that two of these louvres are sufficient to prevent the observer from seeing the light sources, but it is to be understood that one or more of these may be used and still come within the scope of the invention. The brackets 21 and 24 are flanged as shown so that they may be welded or otherwise secured to the end plates 6.

Above and slightly in back of the rearmost louvre 23 is located one of the elongated light sources 25, while the other light source 26 is located forwardly thereof and more nearly above the foremost louvre 23. The plate 14 has at its underside preferably a diffused reflecting surface so that light will be reflected therefrom in all directions, generally downwardly for the purpose of general illumination and to reduce shadows to a minimum. The light sources 25 and 26 are secured by any desired means to the plate 14 and extend downwardly therefrom as shown.

The translucent face 22 and louvres 23 are preferably tinted a flesh color so that all of the light rays passing therethrough will illuminate the entire person including his face to thereby give him a flattering appearance which might be prevented if these translucent parts

were of any different color or pure white. Very few of the light rays emanating from the light source 26 will be reflected from either the mirror or the specular reflector, it being utilized mostly for general illumination from the surface 14 and through the translucent face and louvres. The greater amount of illumination on the body by reflected light rays will come from the rear light source 25. Some direct light from each light source will be obtainable through the spaces between the louvres and between the frontmost louvre and the bottom edge of the face, but in no case does any of the direct light fall directly on the face of the observer.

As a further explanation of the light zones reference may be had particularly to Figs. 1 and 3. In Fig. 3 it will be evident that the upper limit of direct light rays falling onto the person is indicated by the line A which will emanate from the rearmost light source 25. The line indicated at B also emanates from the light source 25 and is the upper limit for the direct light rays passing between the louvres 23, while the line at C indicates the upper limit of the direct light rays emanating from the forward light source 26. Numerous rays of light will reach the observer below these various points and cover the entire area between such observer and the mirror, but the uppermost line of all three of these direct light rays is indicated at A and, from Fig. 1 it will be noted that no direct light will therefore fall on the observer above his shoulders.

The uppermost line or limit of light rays reflected from the specular reflector 13 is indicated by the line D. This particular upper limit is reflected from the forward light source 26, but most of the reflected light from the specular reflector comes from the light source 25. All of the light rays however, reflected from this light source will be below the upper limit line indicated at D which, incidentally, it will be noted from Fig. 1 reaches the chin of the observer. The uppermost limit of the light rays reflected from the specular reflector and emanating from the light source 25 is indicated by the line E which, it will be noted in Fig. 1, falls a considerable distance below the line D but will intensify all of the reflected light from the front light source 26 below that point.

The upper limit of light reflected from the mirror also emanates from the front light source 26 and is indicated by the line F which, from Fig. 1, it will be noted passes just below the eyes of the observer. All other light reflected from the mirror regardless from which light source it emanates will be below the upper limit as indicated by the line E. It will therefore be evident that the observer will be illuminated not only by direct light, the upper limit of which is indicated by the line A, but also by the intensifying light rays reflected from the specular reflector 13 which has an upper limit indicated by the line D. All of these light rays will then be further intensified by light rays being reflected from the mirror which will have an upper limit as indicated by the line F. Direct light rays being intensified in this manner by the reflected light will sufficiently illuminate the observer so that he may view himself clearly in the mirror. All of the light rays being reflected downwardly from the diffused reflecting surface 14 will reduce any shadows to a minimum and form a clear-cut image of the observer in the mirror.

The line indicated at G shows the upper limit

of light rays which pass through the translucent surfaces and indicates the upper limit of the tinted or flesh colored light. This tinted light, by passing through the entire face 22 and by passing in both directions through the louvres 23 will illuminate the entire figure of the observer and all of the area in front of the mirror, but since it is the only light which reaches the observer above his eyes it will have a more or less pleasing effect and will avoid any eye strain.

From the foregoing it will be evident that a simple and economical device has been produced for adequately illuminating an observer before a mirror, yet the light sources themselves cannot be seen by the observer, and the lights and shadows are so blended as to avoid glare and create a pleasing appearance on the part of the observer.

Other modes of applying the principle of my invention may be used instead of the one here explained, change being made as regards the mechanism herein disclosed, provided, however, that the means stated by any of the following claims, or the equivalent of such means, be employed.

I, therefore, particularly point out and distinctly claim, as my invention:

1. A device of the class described including a mirror, a forwardly and upwardly curved specular reflector above said mirror, a flat diffused reflector extending forwardly and upwardly from the forward edge of said specular reflector, two elongated light sources located adjacent said diffused reflector in substantial parallelism and one in front of the other, two translucent louvres located below and between said light sources, and a translucent face in front of said louvres and light sources having its lower edge terminating adjacent the frontmost louvre, as specified.

2. A device of the class described comprising, a mirror, a specular reflector extending forwardly and upwardly above said mirror, a diffused reflector extending forwardly and upwardly from the forward edge of said specular reflector, two elongated substantially parallel light sources located below said diffused reflector, two translucent louvres located below and between said light sources, and a translucent face extending from a point above said light sources downwardly and terminating adjacent one of said louvres, as specified.

3. A device of the class described comprising, a mirror, two elongated substantially parallel light sources located above and in front of said mirror in such position that light rays reflected from the mirror will fall below the eyes of a person viewing himself therein, a specular reflector above said mirror and behind said light sources to intensify the light rays on said person reflected from said mirror, two louvres below and between said light sources in position to prevent direct light rays from reaching said person at the eye level or thereabove, and a face in front of and covering said light sources to prevent their being seen by said person.

4. The combination of elements defined in claim 3, wherein said louvres and face are translucent and tinted flesh color, the light rays passing therethrough onto the face of said person.

5. The combination of elements defined in

claim 3, combined with a diffused reflector above said light sources to reduce shadows to a minimum.

6. A device of the class described comprising, a mirror, two elongated light sources located above and in front of said mirror extending transversely thereof and so positioned with respect thereto that light rays reflected therefrom will fall below the eyes only of a person viewing himself therein, a translucent face in front of said light sources, a diffused reflector above said light sources for general illumination and to reduce shadows to a minimum, louvres below and between said light sources, said face and louvres located to hide the light sources from the view of said person, but permitting direct light rays to pass therebetween and fall on the person below the shoulders only thereof.

7. A device of the class described comprising, a mirror, two elongated light sources located above and in front of said mirror extending transversely thereof and so positioned with respect thereto that light rays reflected therefrom will fall below the eyes only of a person viewing himself therein, a translucent face in front of said light sources, a specular reflector above said mirror and behind said light sources to intensify the light rays reflected from said mirror, a diffused reflector above said light sources to reduce shadows to a minimum, louvres below and between said light sources, said face and louvres located to hide the light sources from the view of said person, but permitting direct light rays to pass therebetween and fall on the person below the shoulders only thereof.

8. A device of the class described comprising a mirror, a light source located above and in front of said mirror so that the upper limit of light rays reflected therefrom will be below the eyes of a person standing before the mirror, a translucent face in front of said light source and extending therebelow, and a translucent louvre below said light source, said face and louvre preventing direct light rays from reaching the face of said person, said face and louvre being both tinted a flesh color.

9. A device of the class described comprising a mirror, a light source located above and in front of said mirror so that the upper limit of light rays reflected therefrom will be below the eyes of a person standing before the mirror, a specular reflector above said mirror to intensify the light rays reflected from said mirror, and a diffused reflector above said light source to reduce shadows to a minimum, a translucent face in front of said light source and extending therebelow, and a louvre below said light source, said face and louvre preventing direct light rays from reaching the face of said person.

10. A device of the class described comprising a mirror, a light source located above and in front of said mirror so that the upper limit of light rays reflected therefrom will be below the eyes of a person standing before the mirror, a diffused reflector above said light source to reduce shadows to a minimum, a translucent face in front of said light source and extending therebelow, and a translucent louvre below said light source, said face and louvre preventing direct light rays from reaching the face of said person.

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