This invention relates to new and useful improvements in a reflector for show windows and the like.

The invention has for an object the construction of a reflector associated with a lamp, and the parts having a specific relation so as to obtain the maximum reflection possible.

Still further the invention particularly proposes to arrange the reflector of hollow frusto pyramidal form with the lamp adjustably mounted axially thereof, so that the lamp may be adjusted to a specific position within the reflector. It is particularly proposed to adjust the position of the lamp so that the images of the lamp when viewed from an area of concentration of the reflection, is such that the images are in edge contact with each other. This gives the maximum degree of reflection.

Still further the invention proposes a novel means for the adjustable mounting of the lamp.

Another object of the invention is the giving of a specific example of reflector and size of lamp wherein the reflector has nine sides.

Still further the invention proposes the construction of a device as mentioned which is simple and durable and which can be manufactured at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

- Fig. 1 is a bottom elevational view of a reflector and lamp constructed according to this invention and viewed from the point of concentration of the reflector as illustrated in Fig. 2.
- Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1 with a schematic showing of an eye viewing the reflector.
- Fig. 3 is a view similar to Fig. 2 but illustrating another embodiment of the invention.
- Fig. 4 is a fragmentary elevational view looking in the direction of the line 4—4 of Fig. 3. This reflector is for show windows and the like, according to this invention, comprises a hollow frusto pyramidal reflector associated with a member which is axially longitudinally frictionally adjustably mounted on a cap on said reflector. A frosted lamp is axially mounted upon the member and is located within the reflector. The reflector is formed with a top flange portion on which the cap is mounted and through which several set screws threadedly engage and act against the surface of the flange portion for holding the latter element in position. A socket is mounted upon the inner end of the member in which the lamp is arranged. The socket connects with a cable which may be connected with a conventional lighting circuit.

A feature of the invention resides in the possible adjustment of the lamp to the reflector so that a maximum degree of reflection is possible upon an object within a limited distance from the reflector. More particularly, a certain relation exists between the diameter of the lamp and the widths of the sides of the pyramidal form to obtain the maximum degree of reflection on said object. The maximum is obtained when an object upon which the reflector is concentrated is at a distance so that an eye in the position of the object viewing the reflector sees the lamp reflected by reflections in each of the sides of the pyramidal form with the adjacent sides of the reflections contacting with each other. It will be understood that as the lamp is moved axially the reflections may be caused to overlap or may be caused to assume positions in which there are spaces between the adjacent reflections.

The most efficient reflection, that is, the one in which the reflected light will be the brightest, is the one in which the reflections have their sides adjacent each other. The reason for this may be readily understood theoretically in the fact that with the images touching adjacent images the maximum reflection of each of the sides of the pyramidal form will be utilized. If the images are smaller, obviously the amount of reflection will be smaller. If the images overlap then the lamp necessarily must be at a high elevation, so that the diameter of the circle through the centers of the images will be smaller and consequently the linear distance of the area of reflection will be smaller. The lines in Fig. 2 will be the line of vision of the eye. With this line of vision the images must have their sides contacting.

The member is formed with knurings or other roughening elements upon its exterior so as to facilitate the frictional gripping ability with the cap. The reflector is formed from one integral piece of glass shaped, and coated with silvering or other material so as to mirror the interior of the reflector. The slope of the sides of the pyramidal form should be proportioned...
according to the size of the lamp intended to be used in conjunction with the reflector.

For a better understanding of the invention a specific case of design of the reflector will be given. With a pyramidal reflector of nine sides having a bottom width of approximately ten inches and a top width of approximately four inches, a lamp of three inch diameter should be used.

In Figs. 3 and 4 another embodiment of the invention has been disclosed wherein a reflector 10 is shown formed with a scalloped bottom 22 merely for ornamental purposes. The object of showing this form is to bring out the fact that the design of the reflector may be varied. The mirroring is formed by sheet metal material 23 attached upon the outer side of the glass body forming the reflector. The lamp 12 is mounted in a socket 15 arranged in a member 11a which is formed with longitudinal rows of bayonet slots 24 engaged by the screws 14. These bayonet slots are of zig zag formation as shown in Fig. 4 and arranged so that upon slight loosening of the screws 14 the member 11a may be adjusted longitudinally by turning it back and forth and moving it longitudinally to cause the bayonet slots 24 to pass along over the inner ends of the screws 14. This construction is a novel method for the adjustment of the member which holds the lamp 12 relative to the reflector.

While I have illustrated and described the preferred embodiment of my invention, it is to be understood that I do not limit myself to the precise construction herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

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

1. A reflector for show windows and the like, a hollow-frusto-pyramidal reflector having at the top an opening, a vertical flange surrounding said opening, a cap engaging over said opening and having a hole in the center thereof and having downwardly extending flanges which engage the outsides of said first named flanges, a member for supporting a lamp and slidable engaged through said cap and said opening, and fastening means extending through said flanges and engaging said member for holding said member in adjusted position.

2. A reflector for show windows and the like, a hollow-frusto-pyramidal reflector having at the top an opening, a vertical flange surrounding said opening, a cap engaging over said opening and having a hole in the center thereof and having downwardly extending flanges which engage the outsides of said first named flanges, a member for supporting a lamp and slidable engaged through said cap and said opening, said member having several bayonet slots along the length thereof, and fastening means extending through said flanges and engaging said member for holding said member in adjusted position.

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