Nov. 18, 1924.

1,515,897

H. J. WALSER

REFLECTOR

Filed Jan. 12. 1922

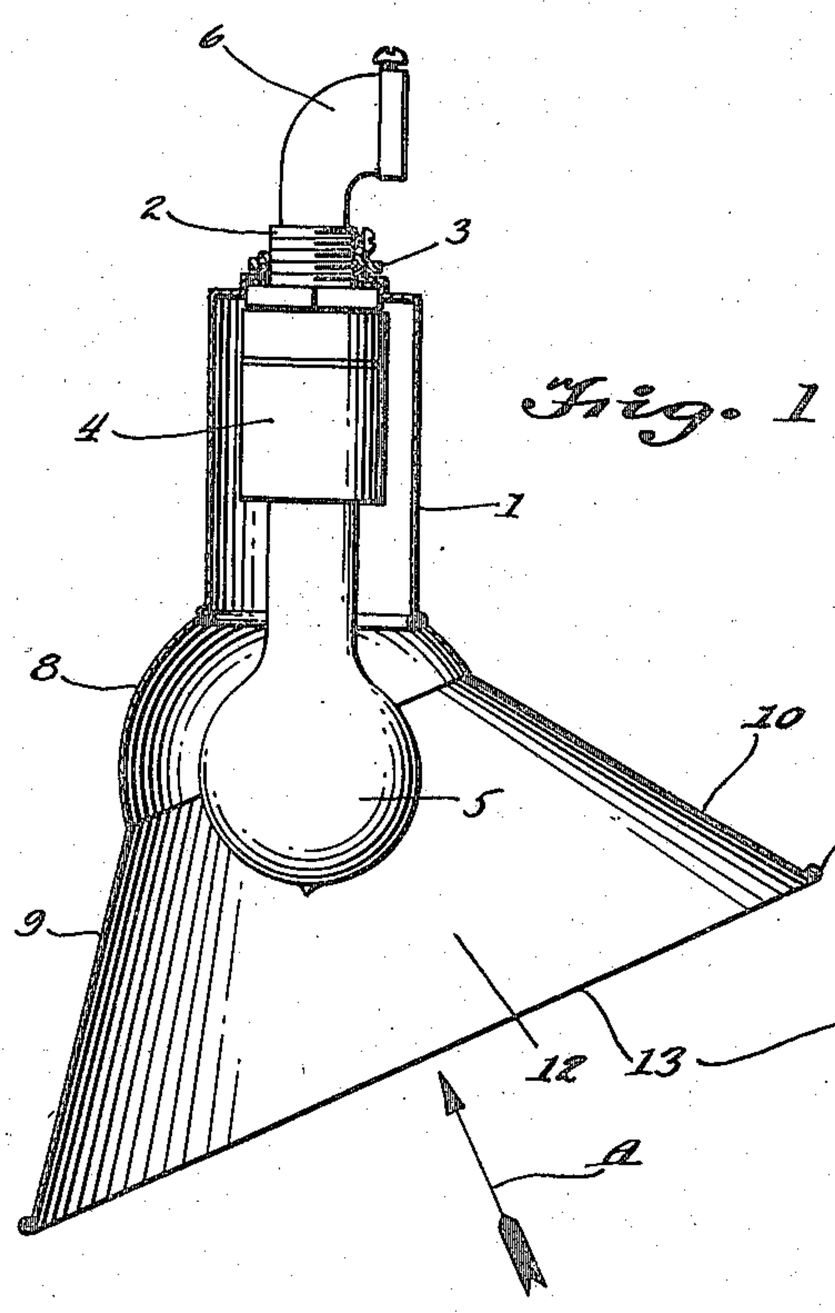


Fig. 1

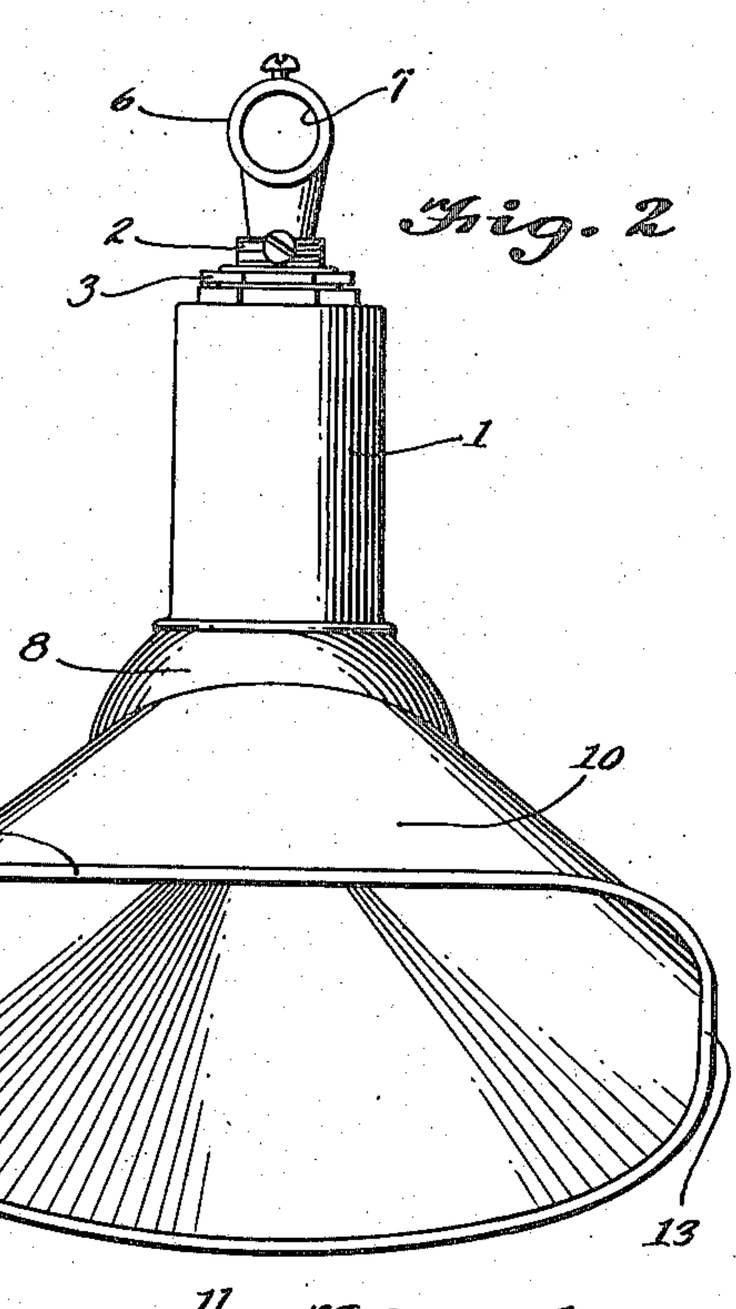


Fig. 2

Fig. 3

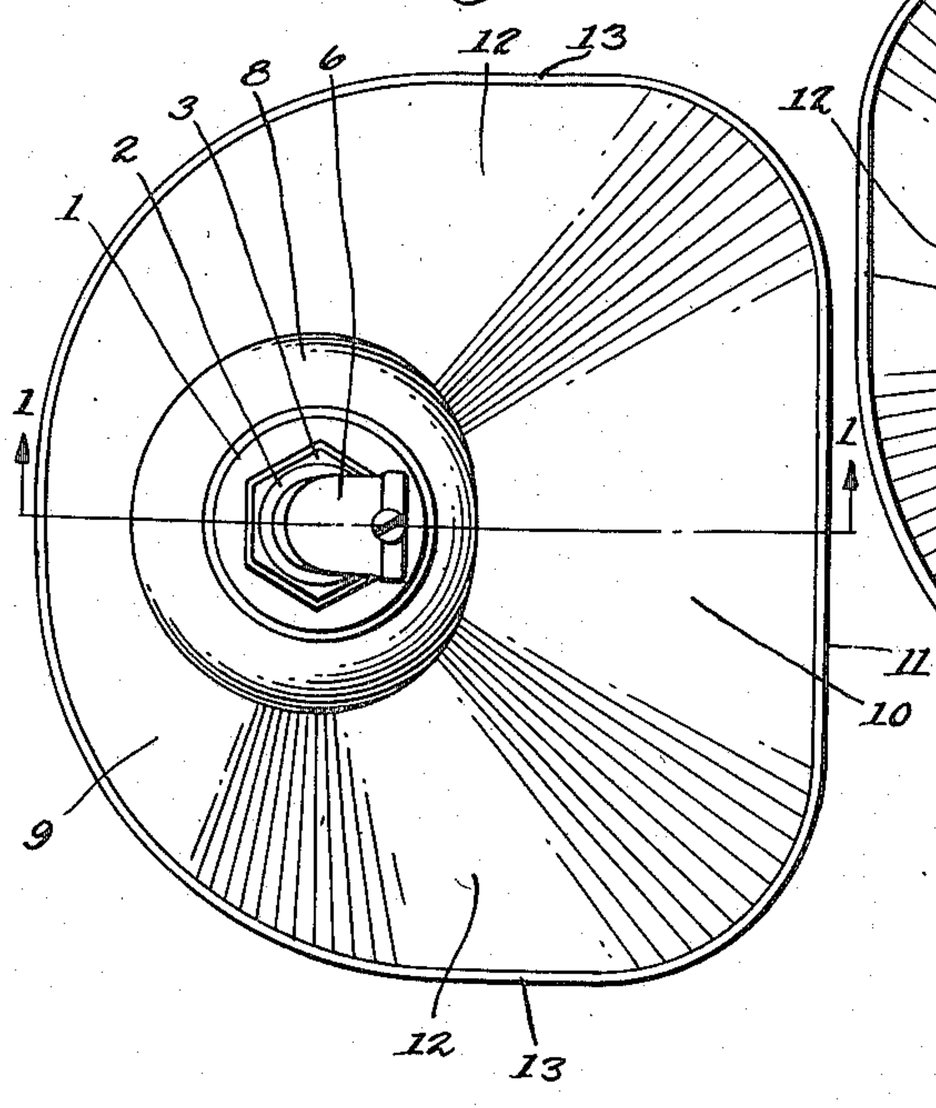
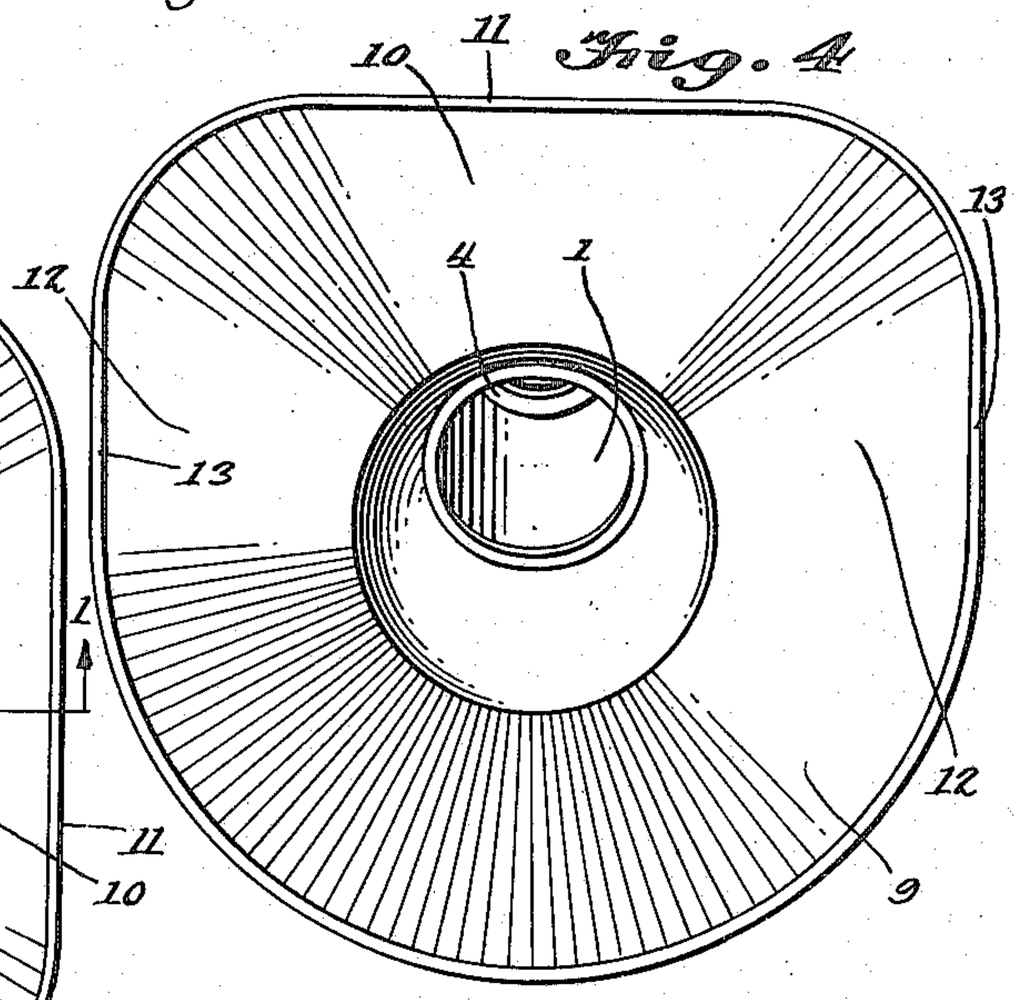


Fig. 4



Inventor

Henry J. Walser

By Brockett & Hyde

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Patented Nov. 18, 1924. 1,515,897

UNITED STATES PATENT OFFICE.

HENRY J. WALSER, OF CLEVELAND, OHIO, ASSIGNOR TO THE A & W ELECTRIC SIGN COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

REFLECTOR.

Application filed January 12, 1922. Serial No. 528,805.

To all whom it may concern:

Be it known that I, HENRY J. WALSER, 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 Reflectors, of which the following is a specification.

This invention relates to reflectors, and particularly to such devices for use in the illumination of bulletin and bill-boards and signs or in other places where a vertical surface is to be illuminated.

Reflectors of this kind usually produce a generally circular zone of illumination upon the vertical surface and where a number of reflectors are required, as with a long bill-board, the several reflectors must necessarily be so arranged that their zones of illumination overlap and moreover, part of the light rays must necessarily pass over the upper horizontal edge of the bill-board. The reflectors are also usually located opposite the top edge of the board and considerably more distant from the lower portion of the board than from the upper portion thereof.

The present invention aims to provide an improved reflector so formed that the zones of light produced by neighboring reflectors do not overlap but meet along generally vertical lines and which reflector also prevents any light rays from passing over or beyond the upper edge of the board and also tends to equalize illumination over the entire surface, and, in effect, causes some light rays which otherwise and according to prior practice have been directed upon the upper half of the board to be directed upon its lower half to strengthen the naturally weaker illumination thereof.

Further objects of the invention are in part obvious and in part will appear more in detail hereinafter.

The invention comprises the construction and arrangement of parts hereinafter described and claimed.

In the drawing, which represents one suitable embodiment of the invention, Fig. 1 is a sectional elevation, on the line 1—1, Fig. 3; Fig. 2 is an elevation from the right in Fig. 1; Fig. 3 is a plan view; and Fig. 4 is an inverted plan view in the direction of the arrow A, Fig. 1.

Referring to the drawing, 1 indicates a cylindrical lamp socket container or supporting member, in the upper portion of which is suitably secured, such as by a threaded nipple 2, and a nut 3, a suitable electric lamp socket 4 and lamp 5. A street bell 6 is secured within the upper end of the nipple 2 and is provided at its upper end with a horizontally extending threaded opening 7 for the reception of the usual pipe for supporting the reflector and through which the lead wires extend.

Secured to the lower end of member 1 is a flaring reflecting member, comprising a segmental spherical portion 8 from which extends downwardly a generally conical portion 9, the axis of the cone of which is inclined to the vertical along the line of arrow A, Fig. 1, and intersects the center of the spherical portion 8 and the axis of the cylindrical member 1. The conical portion 9 is of peculiar shape, being flattened along what may be called its upper portion, as at 10, so that said upper portion terminates in a horizontally extending straight edge 11. Also, the side walls of the conical portion 9 are likewise flattened, as at 12, and terminate in straight edge portions 13 which extend along inclined lines toward and away from the surface being illuminated. To more clearly understand the construction of the conical portion 9 it may be stated that Fig. 4 illustrates clearly the configuration of the outer edge of this conical portion as viewed along a line perpendicular to the plane of the edge, to wit, along the line of arrow A, Fig. 1.

The upper portion 10 of the cone, flattened as described, forms a screen or curtain to prevent any rays of light being directed or reflected over the horizontal upper edge of the bill-board or sign. Likewise, the plane side portions of the cone, terminating in the straight edges 13, prevent overlapping of the zones of illumination of neighboring reflectors or, in the case of a reflector at an end of the board, prevent direction or reflection of light rays beyond the end of the board. Again, it has been found by extensive tests that the spherical portion 8 has the effect of equalizing illumination over the entire surface. In other words, this spherical portion transfers some light rays which otherwise would be directed upon the upper half of the vertical surface to the lower half thereof and therefore strengthens the otherwise natu-

rally weak illumination of the lower half of the board.

Having described my invention, I claim:

A reflector for illuminating bill-boards or other vertical surfaces, comprising a lamp socket supporting member, and a reflecting member depending therefrom, said reflecting member being of combined pyramidal and conical form and having an upper portion formed as a plane surface sloping downwardly at an acute angle to the horizontal and terminating in a substantially horizontal straight edge, said surface being adapted to permit illumination of the bill-board uniformly over a wide area up to its upper edge and to prevent light rays from passing over said upper edge, said reflecting member also having its side portions formed as plane surfaces associated in pyramidal form with said upper surface and terminating in substantially straight vertical edges, thereby bounding the zone of illumination by substantially straight vertical parallel lines, and said reflecting member also having its lower portion of substantially conical form to condense the light rays on the lower portion of the surface being illuminated.

In testimony whereof I hereby affix my signature.

HENRY J. WALSER.