G. H. RICKE.

LAMP REFRACTOR AND SHADE.

APPLICATION FILED MAR. 7, 1908.

916,372. Patented Mar. 23, 1909.

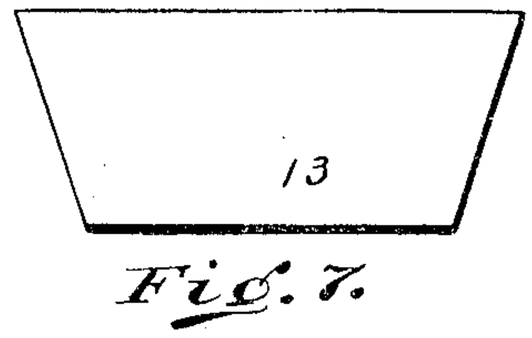

Fig. 7.

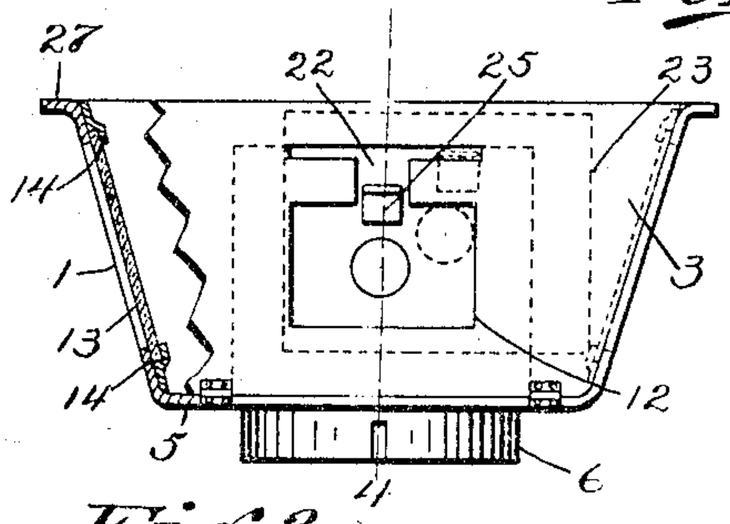

Fig. 3.

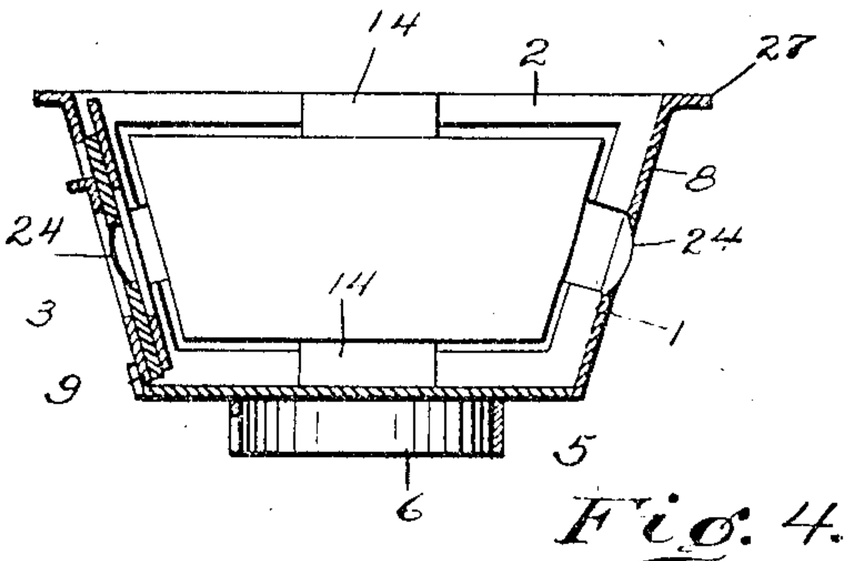

Fig. 4.

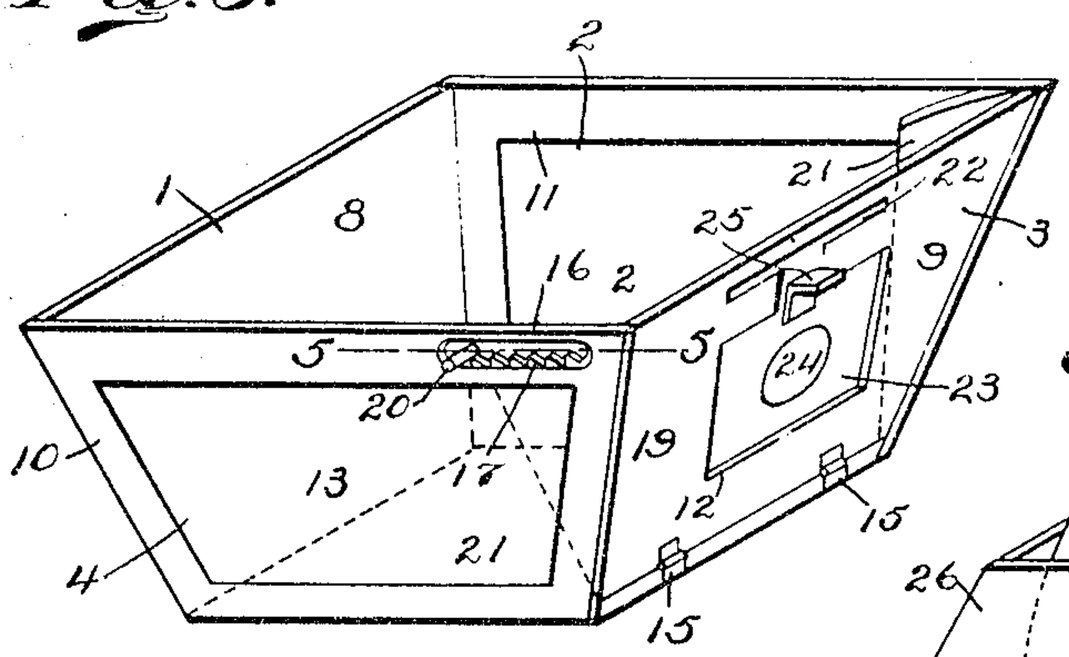

Fig. 2

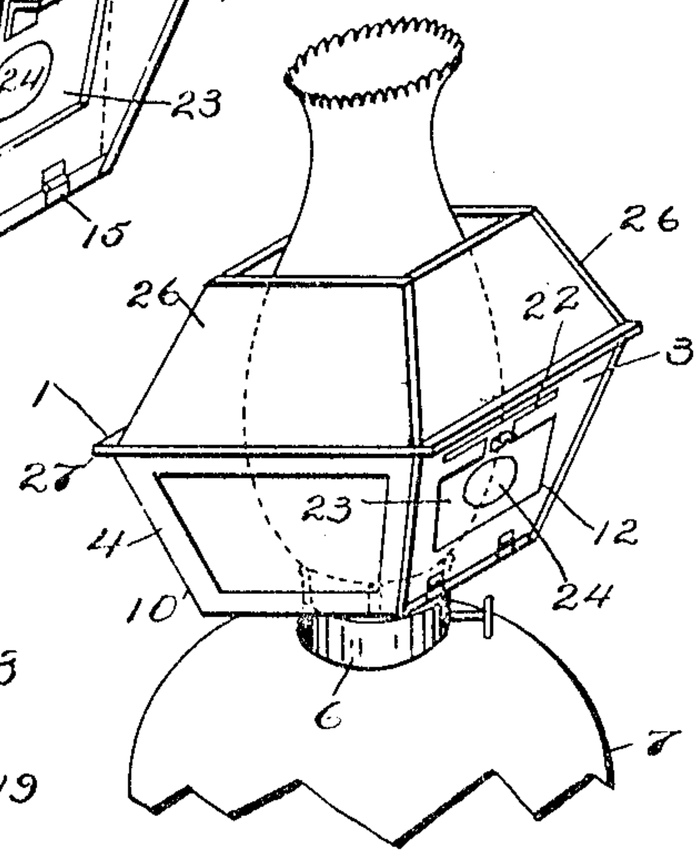

Fig. 1.

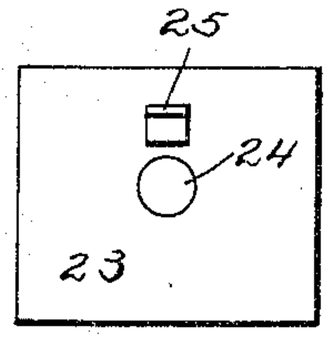

Fig. 6.

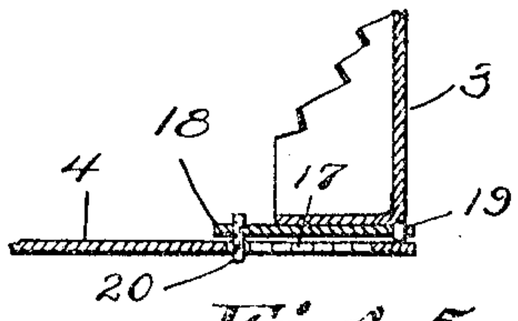

Fig. 5.

Witnesses

C. M. Schnestack

A. M. Adamczyk

Inventor

George H. Ricke.

by Jno. W. Strehl

Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. RICKE, OF CINCINNATI; OHIO, ASSIGNOR OF FIFTY-ONE ONE-HUNDREDTHS TO ALBERT MORSBACH, OF CINCINNATI, OHIO.

LAMP REFRACTOR AND SHADE.

No. 916,372. Specification of Letters Patent. Patented March 23, 1909.

Application filed March 7, 1908. Serial No. 419,645.

To all whom it may concern:

Be it known that I, GEORGE H. RICKE, a citizen of the United States, residing at the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lamp Refractors and Shades, of which the following is a specification.

My invention has for its object the provision of a lamp shade and refractor which shall be adjustable so that the rays of light can be concentrated and thrown with increased power to any certain point; so that by this adjustment any point can be reached by adjusting the refractor parts to throw the light in various directions.

The attachment may be applied to coal oil, gas or electric lamps or lights.

By my invention I may use the lamp shade in the ordinary way, or use it as an ornament or illuminated shade, or as a refractor for concentrating the light, the parts all being interchangeable. I employ a bull's eye lens to throw the light to the desired point and the bull's eye lens can be moved to assume varying inclined positions and also can be adjusted horizontally and vertically.

The shade consists of a framework, so made that slides can be slid in and out thereof, the slides consisting of plates of tin or metal or glass, plain or ornamental, one side being formed to hold a bull's eye lens, which is held in an auxiliary plate which can be adjusted vertically or laterally. By means of this vertical and lateral adjustment the bull's eye lens can be adjusted so that the rays of light will be thrown at varying angles to reach positions or objects. Thus in reading by a lamp the bull's eye can be adjusted to the reader's wants or for instance if it were used to throw the light on a door or window it could be adjusted for such purpose. This adjustment is further more accurately attained as the side of the shade in which the bull's eye is located is hinged and can be let up and down. The device can be used on a lamp as an ornament, as a shade, as a refractor, for throwing the light, for reading purposes, for a dark lantern, for chandeliers, for bed room and hall light to throw the rays to one particular point and analogous purposes, on account of the interchangeable and adjustable nature of its parts.

In the accompanying drawing forming part of this specification: Figure 1 is an isometric view of a lamp with my invention attached thereto, the body of the lamp being broken away. Fig. 2 is a perspective view of the lower part of the shade showing the refractor proper. Fig. 3 is an end or side view of the refractor broken away at one side to show construction. Fig. 4 is a sectional view taken at line 4—4 of Fig. 3. Fig. 5 is a sectional view taken at line 5—5 of Fig. 2. Fig. 6 is a view in elevation of the bull's eye lens shifter. Fig. 7 is a view in elevation of one of the panes of glass used in the device to fill the side framework.

The device or attachment is in the form of a truncated pyramid, having four sides, 1, 2, 3 and 4, and a bottom 5, extending downward to form an annular collar or ring 6, which rests the device on the lamp 7. The refractor sides 1 and 3 are made up of tin walls 8 and 9 and the sides 2 and 4 of frames 10 and 11. The side 3 has a rectangular slot 12 cut therein and in the framework 10 and 11 of sides 2 and 4 I slide glass panes 13. Cleats 14 hold the panes 13 in place (see Fig. 3). They may be held in place in any other way. The wall 9 on side 3 is in the form of a hinged hood which moves in and out on hinges 15 (see Fig. 2). In the framework 10 on side 4 in the top crosspiece I cut a slot 16, serrated or notched at 17. On the hinged hood or side piece 3 I fasten a lever or arm 18 at a point 19 and at its loose end this arm 18 carries a pin or finger 20 (see Figs. 2 and 5). In moving the hood or side 3 in and out the arm 18 is raised and the pin 20 released from the notches 17 and when the desired inclination of the hinged side or hood 3 is attained the lever arm 18 is dropped and the finger 20 rests in one of the notches 17 and thus the hinged side is held in proper position, the ends 21 of the side or hood 3 keeping in the light.

In the side 3, I provide a "T" shaped slot 22. A shifter 23 is provided and fits over the rectangular slot 12 on the inside, and this shifter 23 carries a bull's eye lens 24 and a finger or handle 25. This finger or handle 25 works up and down in the "T" slot 22 carrying the shifter 23 with it, the bottom of the shifter 23 resting on the bottom 5 (see Fig. 3) except when it is desired to shift or move the shifter 23 up and sidewise; in that case the finger 25 is moved up in the "T" slot 22 and the shifter 23 assumes a new position (see dotted lines in Fig. 3); in this manner the bull's eye

lens can throw the rays into varying positions. The shade itself is a truncated pyramid in form and is marked 26 (see Fig. 1); it rests on the refractor part of the lamp just described and its parts can be made to slide and interchange in the same manner, if desired.

It will readily be seen that by moving the hood or side 3, carrying the bull's eye lens, the bull's eye lens will be made to concentrate the light at varying distances from the light or lamp, and this adjustment can be carried on to a greater extent by sliding or moving the shifter 23, to which the bull's eye lens is fastened, up or down or sidewise (see dotted lines Fig. 3). It will thus be seen that almost any point desired can be reached by these adjustable features.

The panes of glass 13 may be plain or colored and are of the contour shown by Fig. 7. On the side 2 in Fig. 3 the pane 13 is shown removed.

I may adjust the hood or side 3 in any other specific manner, as well as the shifter 23.

At its top edge the frame of the refractor extends out in the form of a flange 27 and the purpose of this flange is to keep any light from escaping at this meeting edge, between the shade and refractor. Instead of using glass panes as part of the refractor I may use opaque slides or walls. The shade may be made of any other form or contour and out of any suitable material.

What I claim as new and of my invention and desire to secure by Letters Patent is:

1. In a lamp shade and refractor, a frame work, said frame work being partly made up of sides, some of the sides being capable of being slid in and out of the frame work, one of the sides being movable, a bull's eye lens, said bull's eye lens being attached to said movable side and means for adjusting the bull's eye lens to varying inclinations, in combination with means for shifting the bull's eye lens vertically and horizontally as set forth.

2. In a lamp shade and refractor, a truncated pyramid made up of a frame work and sides, some of the sides being removable from the frame work, a hinged hood comprising one of the sides of the pyramid, the hinged hood being provided with a slot, a shifter plate, a bull's eye lens, said bull's eye lens being attached to said shifter plate and said shifter plate being attached to said movable hood, and a finger on said shifter, said bull's eye lens being capable of being moved with said shifter, to assume varying positions in the hinged side, as set forth.

Cincinnati, Hamilton county, State of Ohio, March 2nd, A. D. 1908.

GEORGE H. RICKE.

Witnesses:
W. A. RINCKHOFF,
JNO. W. STREHLI.