

(No Model.)

A. SPOHN.
REFLECTOR.

No. 594,495.

Patented Nov. 30, 1897.

Fig.1.

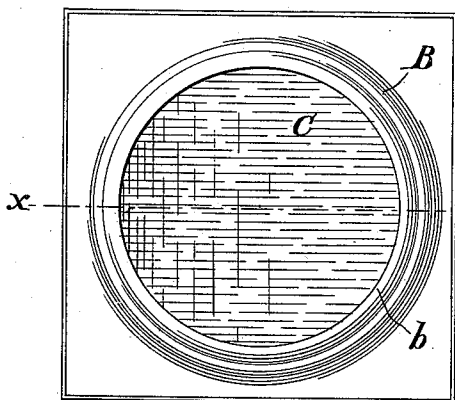


Fig.2.

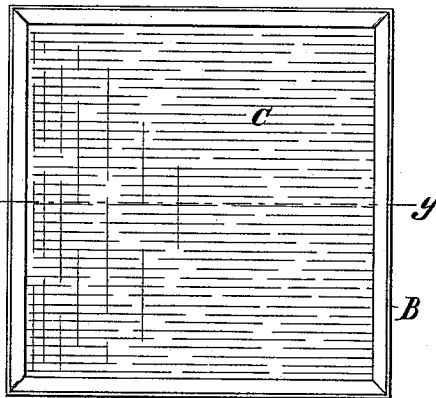


Fig.3.

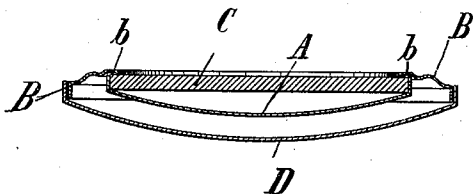


Fig.5.

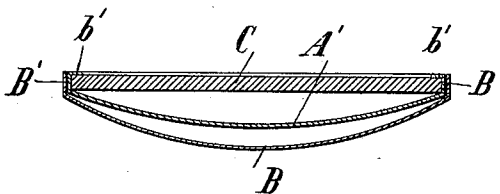


Fig.4.

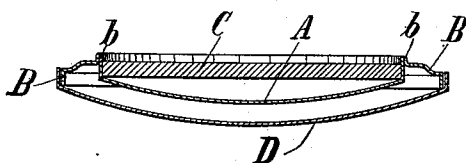
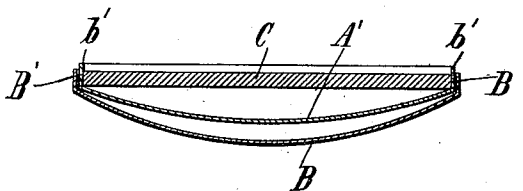


Fig.6.



Witnesses:

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AUGUST SPOHN, OF BARMEN, GERMANY.

REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 594,495, dated November 30, 1897.

Application filed April 30, 1896. Serial No. 589,675. (No model.) Patented in Germany February 11, 1896, No. 89,240, and in Norway May 22, 1896, No. 4,978.

To all whom it may concern:

Be it known that I, AUGUST SPOHN, a citizen of the Kingdom of Prussia, and a resident of Barmen, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Reflectors, (patented in Germany February 11, 1896, No. 89,240, and in Norway May 22, 1896, No. 4,978,) of which the following is a specification.

My invention relates to an improvement in reflectors especially designed for coach-lanterns, car-lamps, locomotives, and like purposes which are exposed to greatly-varying temperatures and extreme conditions of humidity of the atmosphere. This class of reflectors heretofore used will quickly lose their luster, although well gilded or plated when manufactured, through the capillary and thermal action of moisture, steam, and heat, the reflecting power of the plated surface being thereby greatly diminished or practically destroyed.

My invention consists in protecting the reflector at the front by a glass cover-plate and at the back by a metal back plate connected therewith by a rim-plate, providing a space at the front and a space at the back of said reflector-plate, and securely sealing the adjacent edges of said plates, as will hereinafter appear.

In the accompanying drawings, Figure 1 is a face view or front elevation of a circular concave spherical reflector having a glass cover-plate secured thereto; Fig. 2, a front elevation of a plane concave rectangular reflector-plate; Fig. 3, a transverse section in line X X of Fig. 1, showing a cover or face plate applied to a reflector-plate, which latter has a back plate connected therewith by a rim-plate; Fig. 4, a view similar to Fig. 3, showing a reflector made integral with a rim-flange to receive both a face-plate and a back plate; and Figs. 5 and 6 are transverse sections in line Y Y of Fig. 2, illustrating, respectively, a finished and a partly-finished rectangular reflector provided with my improved face-plate and back plate.

The reflector-plate A, Figs. 1, 3, and 4, has a circular molded rim and frame plate B, held sufficiently beyond the margin of the reflector-plate A to provide a receiving-flange b,

into which is snugly fitted and hermetically sealed the rim of a plane glass disk C, to thus protect the concave plated surface of the reflector A, the inner edge of the rim-plate B, as in Fig. 3, being bent or turned in to rest against and hold the glass securely in place, while the outer edge of said rim-plate B is flanged to fit into a corresponding upturned flange upon a back plate D, which is held, as shown, a suitable distance from the back of the reflector-plate to provide a complete protection therefor, the flanges of said plates being soldered, brazed, or folded one upon the other in any well-known or preferred manner.

In Fig. 4 the reflector-plate A and rim frame-plate B are all struck or spun up from a single piece of sheet metal, and the back plate D is flanged and secured at the outer edges thereof by brazing, soldering, or folding the edges together.

In Figs. 5 and 6 the reflector-plate A has an upturned rim-flange b, turned up, as shown in Fig. 6, to receive the glass C, and turned down, as shown in Fig. 5, to cover the edge of said outer glass face-plate and hold it securely upon the reflector-plate, the adjacent or bearing edges of the glass plate and the reflector-plate being securely and hermetically sealed one upon the other.

The back protecting-plate B in this instance has a simple upturned flange B', which closely surrounds the rim of the reflector-plate and is securely soldered, brazed, or otherwise secured thereto.

It is evident that the method of securing the plates together may be varied without departing from my invention.

The several plates herein described are preferably joined together as shown in the several sectional views, thus providing a hollow space a back of the face-plate and a similar space d back of the reflector-plate, which will not hold or transmit moisture by capillary or sweating processes from the outer surface of the glass.

The reflector, with the back protecting-cap secured thereto, may be removed at any time from its base or case and stored, packed, or shipped without damage or exposure to accident or extreme thermal or other climatic conditions, and when formed as described pro-

vides an article of manufacture having novel and desirable qualities.

I claim as my invention and desire to secure by Letters Patent—

- 5 A reflector comprising a reflecting-plate, a glass cover-plate, a back plate and a rim-plate all hermetically sealed at their adjacent peripheral edges, the said reflecting-plate and back plate being concave and connected to
10 the cover-plate and to the rim-plate as shown

to provide an air-tight space, both in front of and behind the reflector-plate, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

AUGUST SPOHN.

Witnesses:

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