

P. C. AVERY.
REFLECTOR FOR AUTOMOBILE LAMPS.
APPLICATION FILED APR. 29, 1910.

986,668.

Patented Mar. 14, 1911.

2 SHEETS-SHEET 1.

Fig. 1.

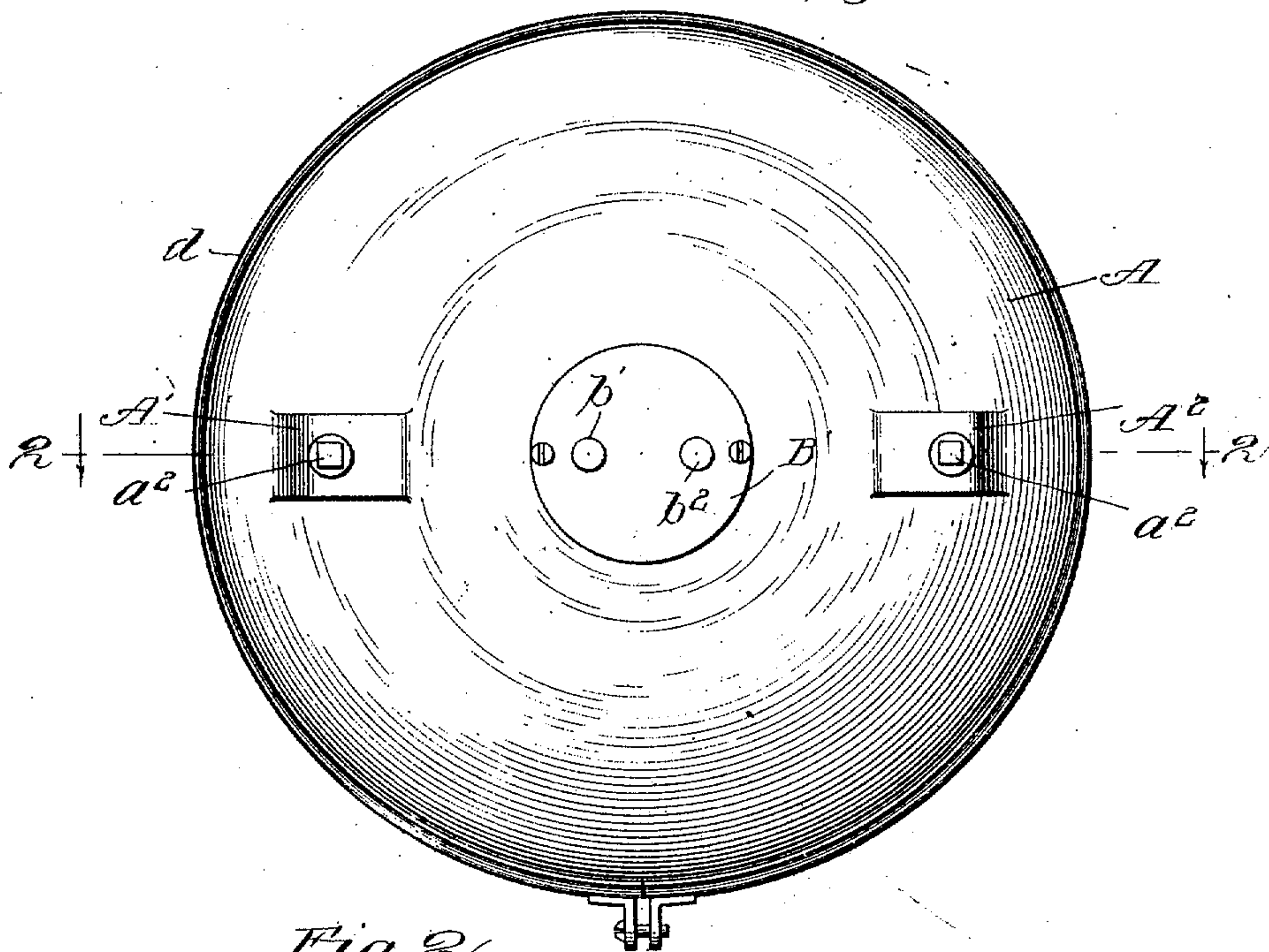
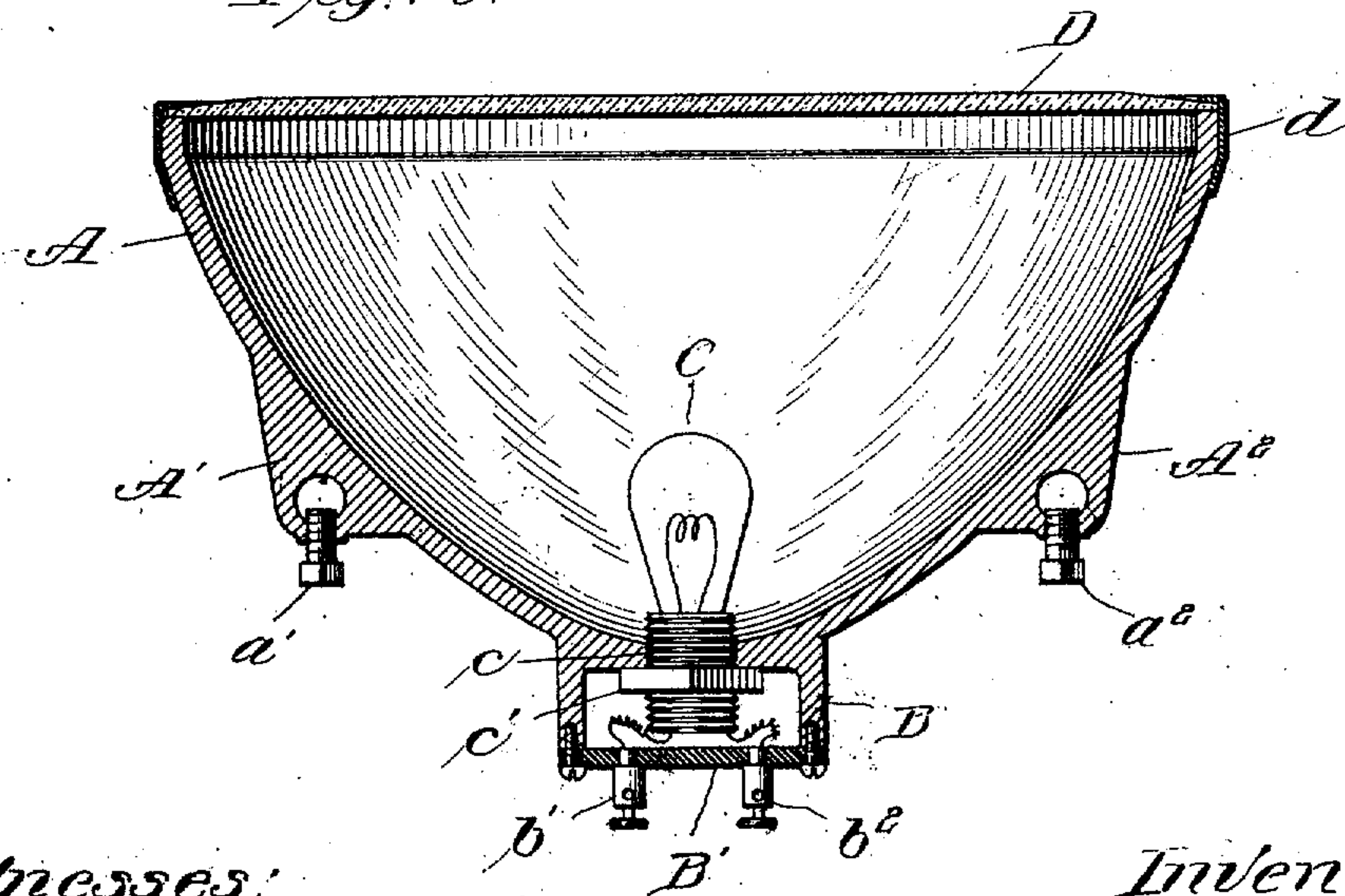


Fig. 2.



Witnesses:

Harry S. Gaither
Arthur L. Walton

Inventor

Percy C. Avery

Charles H. Williams & Son, Attorneys

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2 SHEETS—SHEET 2.



Inventor:

Percy C. Avery
G. Sherman Willkison, Esq. & William
attys.

UNITED STATES PATENT OFFICE.

PERCY C. AVERY, OF MILWAUKEE, WISCONSIN.

REFLECTOR FOR AUTOMOBILE-LAMPS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PERCY C. AVERY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Reflectors for Automobile-Lamps, of which the following is a specification.

My invention relates in general to lamps, and more particularly to an improved reflector.

The reflectors in common use for projecting the light some distance, as, for instance, for automobile lamps, are made of sheet metal, usually copper, stamped to approximately the desired parabolic shape, and then plated with silver or nickel. A true parabolic surface cannot, however, be imparted to stamped sheet metal, as the thin metal is injured by the heat, is easily bent and dented, and will not retain the desired shape. The result of these objections is that the reflectors now in use do not project the light in a thoroughly efficient manner.

The primary object of my invention is to provide a reflector for lamps, such, for instance, as those commonly used on automobiles, which cannot be bent or dented, which may have imparted thereto a true parabolic surface, which will retain such surface in usage, and which will be non-corrosive, being durable and efficient in usage.

My invention will be more fully described hereinafter with reference to the accompanying drawings, in which the same is illustrated as embodied in a convenient and practical form, and in which—

Figure 1 is a rear elevational view; Fig. 2, a horizontal section on line 2, 2 of Fig. 1; Fig. 3, a horizontal section through the reflector, showing the same in position upon a lathe; and Fig. 4, a view similar to Fig. 3, showing the polishing tool in position.

Similar reference characters are used to designate similar parts in the several figures of the drawings.

Reference letter A indicates my improved reflector, which is made of a cast metal, such, for instance, as aluminum, capable of having imparted thereto a polished reflecting surface. The reflector is made of a sufficient thickness to avoid danger of injury by being bent or dented. Lugs A' and A² are cast integrally with the reflector and are provided with vertical holes there-

through for receiving the usual bifurcated portions of a supporting bracket.

a' and a² indicate set screws for clamping the portions of the bracket within the lugs A' and A².

A collar or circular flange B is cast integrally with the reflector on the outer surface thereof and surrounding its axis. The collar B serves to support the reflector while it is being ground and polished, as will be hereinafter described, and also serves as a chamber to inclose the electrical connections leading to an incandescent light, such as C. A screw threaded opening b extends through the reflector concentrically with respect to the circular flange B. An exteriorly screw threaded plug c adjustably extends through the opening b and is provided with a socket within which is received an incandescent lamp C. A lock nut c' surrounds the plug c to retain the same in any desired adjusted position. The chamber within the flange B is closed by a circular cover B' having thereon binding posts b' and b² with which are connected the leads of the battery circuit.

D indicates the glass front of the lamp which is secured to the outer circular edge of the reflector in any suitable manner, as by means of a flanged band d.

In the manufacture of my improved reflector, the metal is first cast into the form desired for the reflector, the mold being such as to impart a parabolic curve to the inner surface of the reflector. The reflector is then supported by means of the circular flange B in the lathe so that its inner surface may be ground to a true parabolic surface and subsequently polished.

In Figs. 3 and 4 I have illustrated, at E, a lathe chuck of any suitable form, which is provided with radially adjustable jaws E', which tightly surround the flange B of the reflector. A flat tool F, having a curved edge conforming to the surface at the center of the reflector, is supported upon a tool-post G on a table G' of a lathe of any ordinary construction. The tool F is preferably provided with a reduced end f which extends through the opening b in the reflector, and thereby centers the tool while the reflector is rotated around the same by means of the lathe chuck. After the tool F has trued the surface at the center of the reflector, a polishing tool H is supported upon

the tool-post of the lathe. The polishing tool is of a shape conforming to the parabolic surface of the reflector, and is preferably made of wood having emery glued thereon. The tool H is supported upon a shaft *h* which is journaled in a bracket K mounted upon the tool-post of the lathe. Any suitable means may be provided for rotating the tool H, such, for instance, as a belt pulley H' fixed upon the shaft *h*. The surface of the reflector is finally buffed to impart thereto the desired polish, in order that it may be an efficient light reflector.

From the foregoing it will be observed that I have invented an improved reflector which avoids the objections to the stamped sheet metal reflectors in common use, inasmuch as it is free from any danger of being bent or dented, and is capable of having im-

parted thereto a true parabolic surface, and which will retain such surface.

I claim:

1. A cast metal reflector for lamps having a circular flange concentrically cast on the outer surface thereof, and having an integral polished reflecting surface.

2. A cast metal reflector for lamps having attaching lugs cast integral therewith, said reflector having a circular flange concentrically cast on the rear outer surface thereof and having an integral polished reflecting surface.

In testimony whereof I have subscribed my name.

PERCY C. AVERY.

Witnesses:

CHAS. L. BURNHAM,
A. M. STETTEN.