(No Model.) 2 Sheets—Sheet 1.

E. BLACKMAN.

SHADE OR REFLECTOR.

No. 428,369. Patented May 20, 1890.

Fig. 1

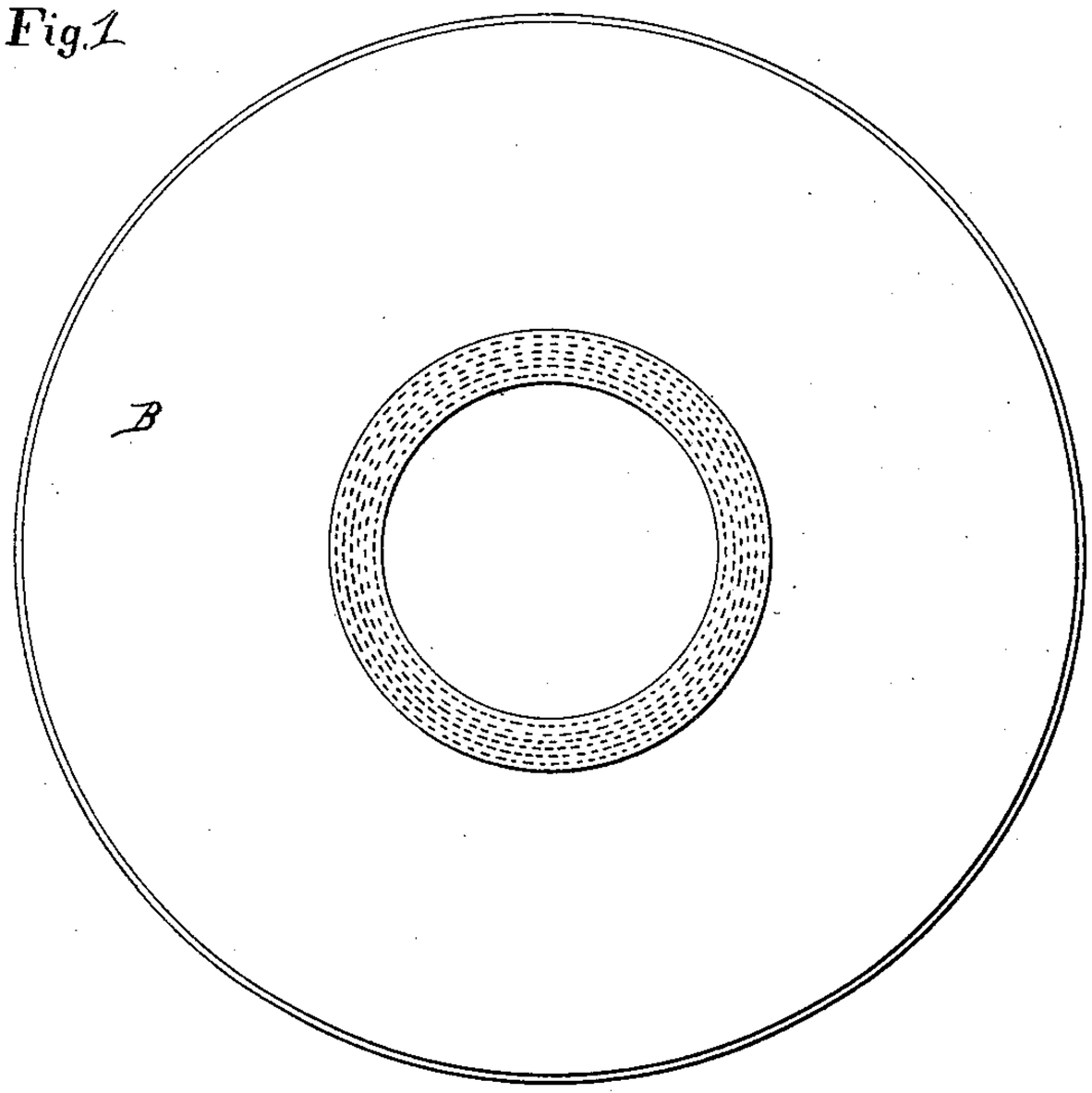
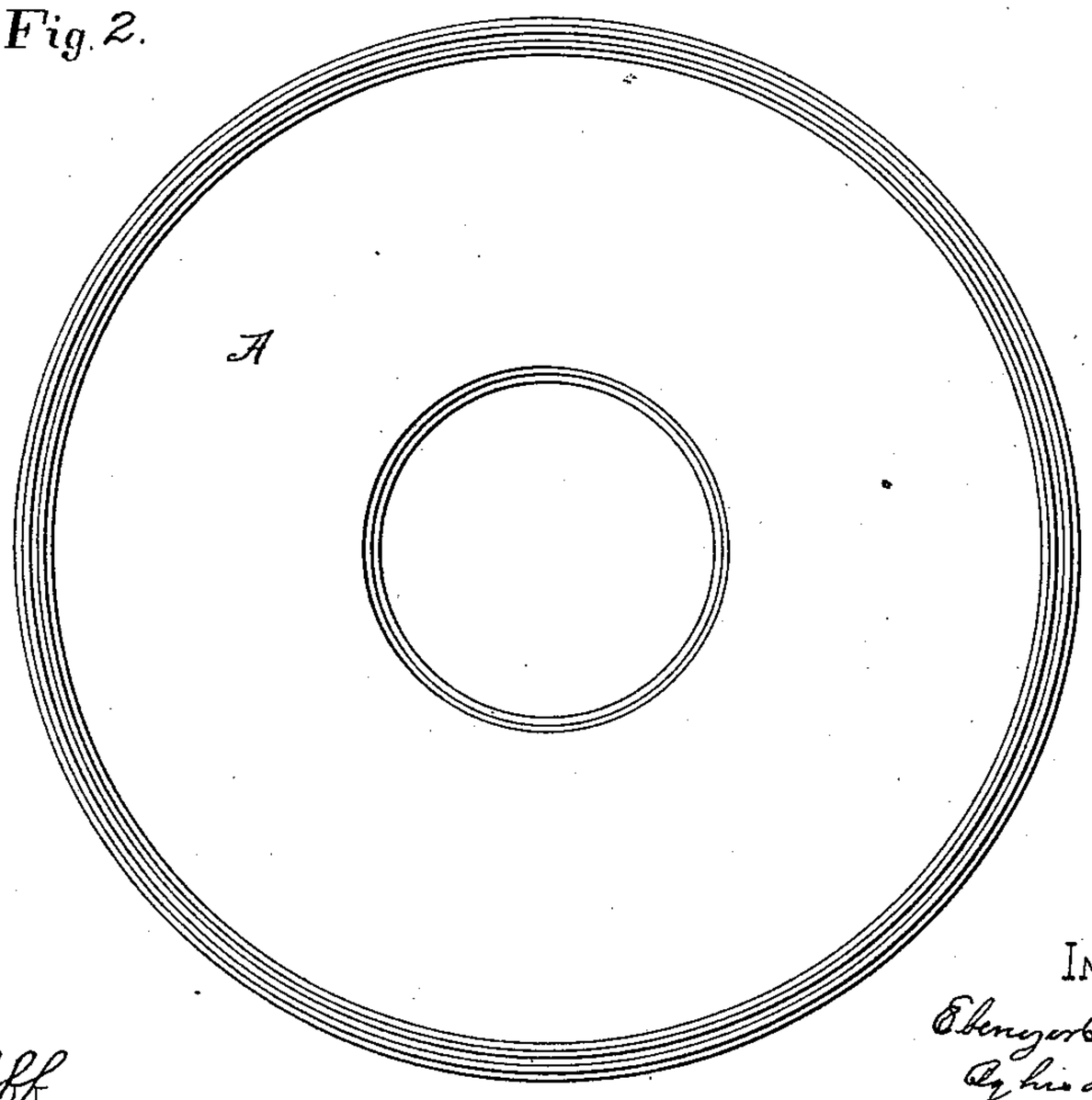


Fig. 2.



WITNESSES.
C. R. Ingram
Wm. M. Iliff

INVENTOR.
Ebenezer Blackman
by his attorneys
Gifford & Brown

(No Model.) 2 Sheets—Sheet 2.

E. BLACKMAN.

SHADE OR REFLECTOR.

No. 428,369. Patented May 20, 1890.

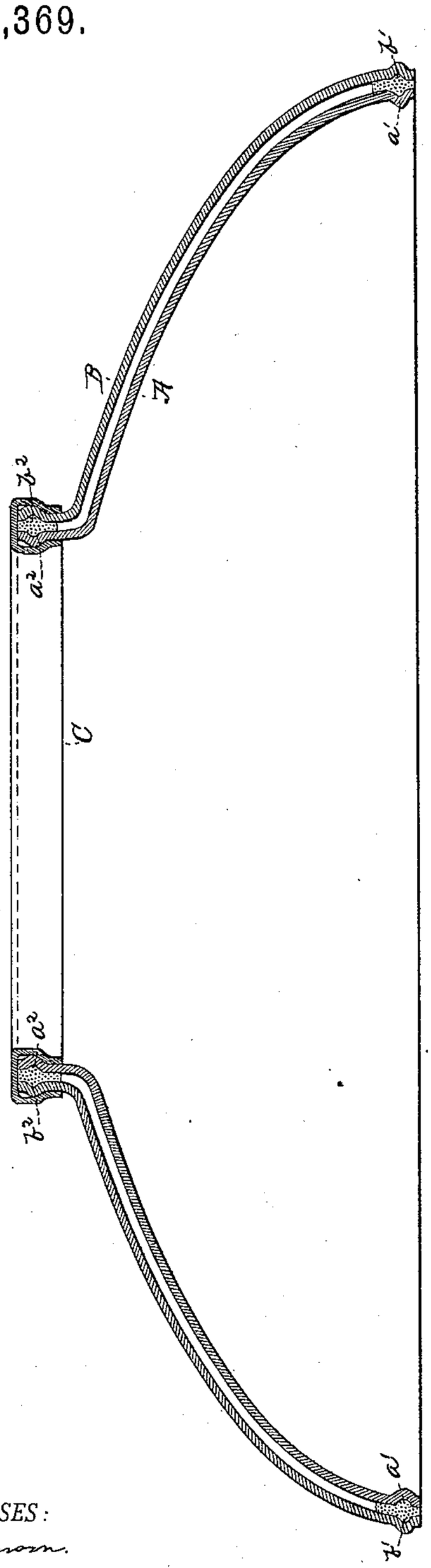


Fig. 3.

Fig. 4.

WITNESSES:

C. R. Ingwersen.

Wm W. Iliff

INVENTOR

Ebenezer Blackman

BY Gifford & Brown

HIS ATTORNEYS

UNITED STATES PATENT OFFICE.

EBENEZER BLACKMAN, OF BROOKLYN, NEW YORK.

SHADE OR REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 428,369, dated May 20, 1890.

Application filed July 3, 1889. Serial No. 316,467. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER BLACKMAN, of Brooklyn, Kings county, and State of New York, have invented a certain new and useful Improvement in Shades or Reflectors, of which the following is a specification.

My improvement relates to shades or reflectors of that kind which are commonly made of glass and provided with a silver coating.

The common method of manufacturing such shades or reflectors is to make them hollow, or, in other words, of two thicknesses, to flow into the hollow or cavity the material for the coating and then empty it out, so as to leave only a thin film upon the surface, and, finally, to seal the cavity, so as to protect the coating from the injurious effects of the atmosphere.

The object of my improvement is to make an annular shade or reflector of this character by the ordinary method of manufacture.

My improvement consists in an annular shade or reflector composed of two thicknesses of material placed one within the other, providing a space between them, and each having an annular groove and rib at the ends, and a plastic material filling the space at the ends and engaging in the grooves; and it further consists in applying a metal band to one end, the edges of said band engaging over the ribs.

In the accompanying drawings, Figure 1 is a top view of a shade embodying my improvement. Fig. 2 is a bottom view. Fig. 3 is a transverse section. Fig. 4 is a transverse section of a band which is applied to the upper end of the shade.

Similar letters of reference designate corresponding parts in all the figures.

A B designate two thicknesses of material forming the shade or reflector. They may be made of any suitable material. Translucent or transparent glass will be the most desirable material for the inner thickness or part A. The outer thickness or part B may be of opal glass or of any other decorative material.

I have shown the two thicknesses or parts A B as made of substantially the same form, each one differing but slightly from the other and that for the purpose of enabling them to fit one outside the other with a substantially uniform space, hollow, or cavity between them. It will be seen that the opposite faces of these two thicknesses or parts A B have grooves a' b' near the bottom edge and opposite grooves a^2 b^2 near the top edge. Either end of the space, hollow, or cavity between the two thicknesses or parts A B will be closed. When the shade or reflector is made as illustrated, the closure may be effected by filling the space between the grooves at the end which is to be closed with plastic material—such, for instance, as plaster of-paris. A yielding material which is not plastic may be used—as, for instance, a band of india-rubber, if it is sufficiently soft and the grooves of the two thicknesses or parts are narrow enough to enable the rubber to enter the grooves and make a tight closure of the space between them. The space, hollow, or cavity between the two thicknesses or parts having been closed at one end, the material which is to be employed for silvering the inner thickness or part will be introduced at the opening of the space, hollow, or cavity and made to flow over the inner surface of the inner thickness or part A. Then it will be allowed to flow out of the cavity at the open end. A thin film, however, will remain upon the inner thickness or part A. Then the open end of the space, hollow or cavity will be closed. This may be done by means of plastic material—such as plaster-of-paris—or by means of a yielding material. When a plastic material is used, the shade or reflector, with the open end of its space, hollow, or cavity downward, may be rotated upon a table or other support having the plastic material spread upon it.

A band of metal may be engaged with each end of the shade or reflector. I have shown a band of sheet metal C applied to the upper end and extending over the inner surface of the thickness or part A and the outer surface of the thickness or part B. It may be retained in place by plaster-of-paris or by having its edges bent inwardly below the ribs, which result from the forming of the grooves a^2 b^2.

By my improvement I am enabled to produce an annular shade or reflector very cheaply.

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

1. In an annular shade or reflector, the combination of the inner part or thickness hav-

ing the annular groove at its lower end and the annular groove at its upper end, the outer part or thickness conforming substantially to the form of the inner part and having grooves opposite the grooves of the inner part, the said two parts having a space between them extending to the extreme ends thereof, and a plastic material filling the spaces at the extreme end and engaging in the grooves, substantially as specified.

2. In an annular shade or reflector, the combination of an inner part or thickness having grooves and ribs at its ends, an outer part or thickness having grooves and ribs opposite the grooves of the inner thickness, a plastic material between said grooves at each end, and a metal band applied to the upper end and having its edges bent inwardly below the ribs of the upper end, substantially as specified.

EBENEZER BLACKMAN.

Witnesses:
C. R. FERGUSON,
WM. M. ILIFF.