No. 758,716. PATENTED MAY 3, 1904.

A. P. STORRS.

MICA LAMP GLOBE OR SHADE.

APPLICATION FILED MAY 12, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1

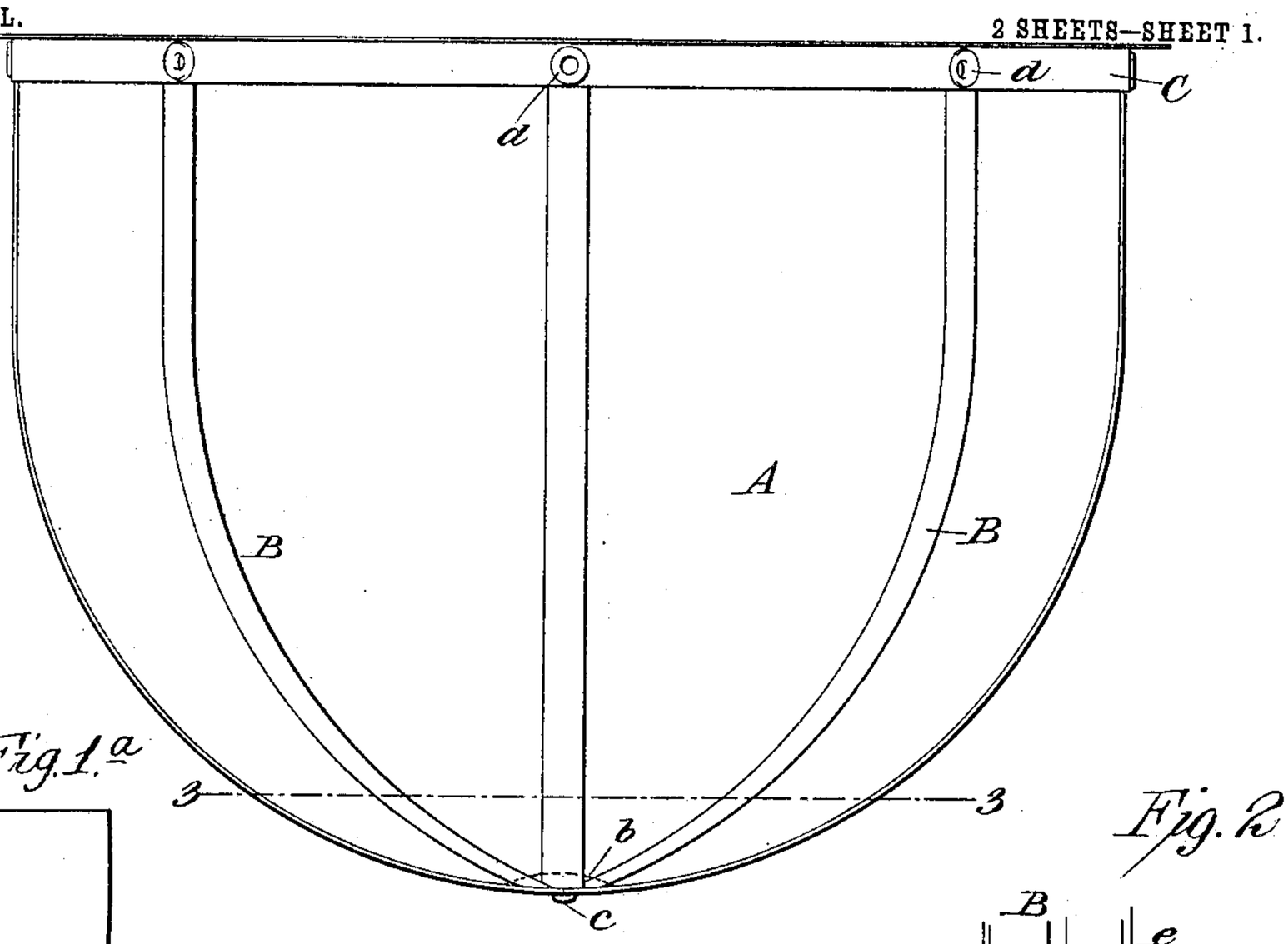


Fig. 1a

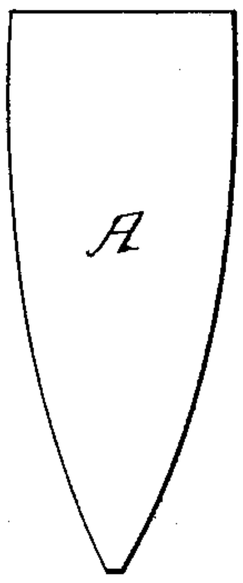


Fig. 2

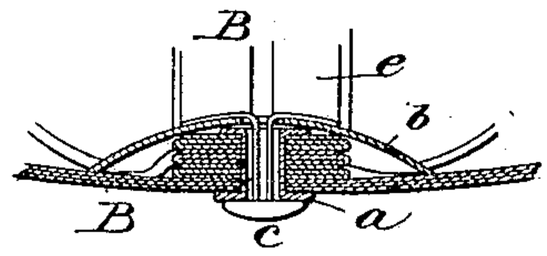


Fig. 3

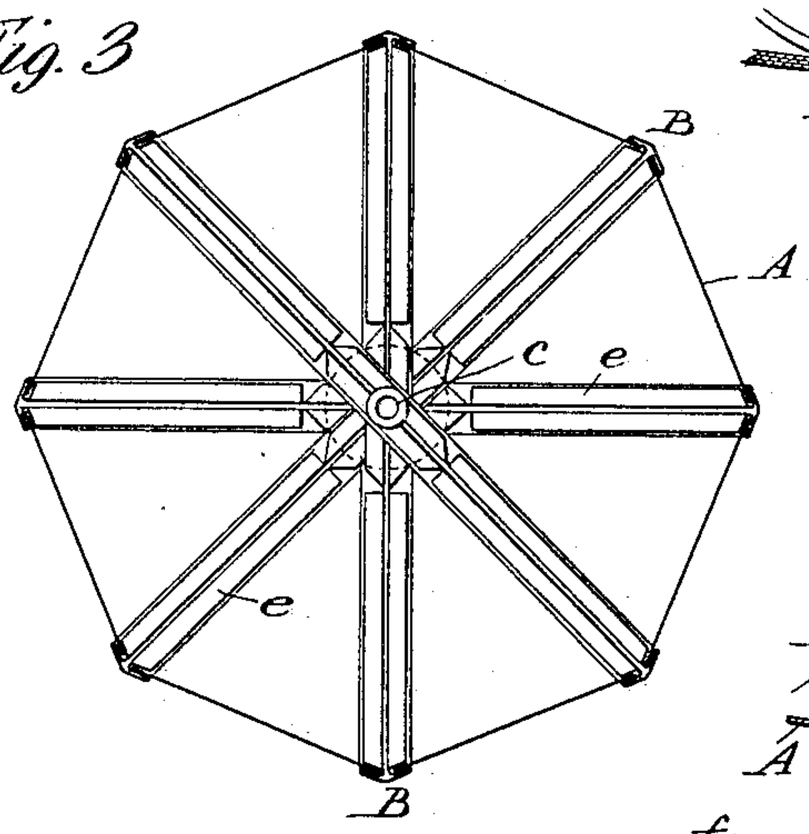


Fig. 4

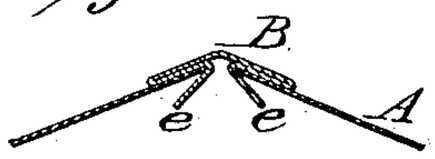


Fig. 5

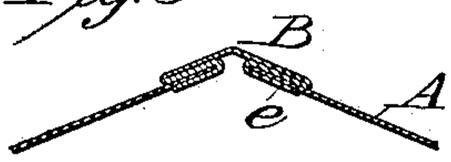


Fig. 6

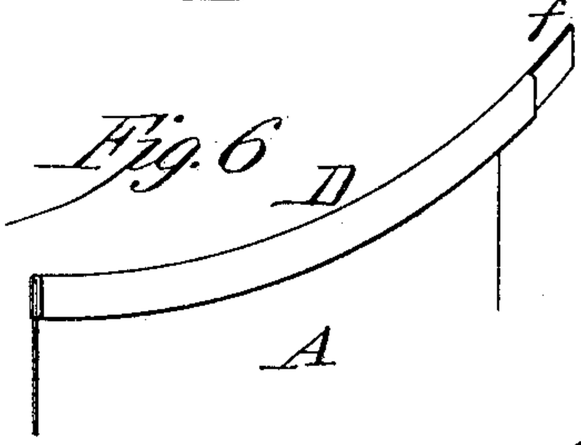


Fig. 7

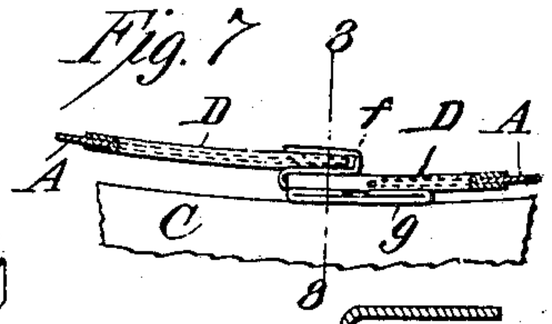
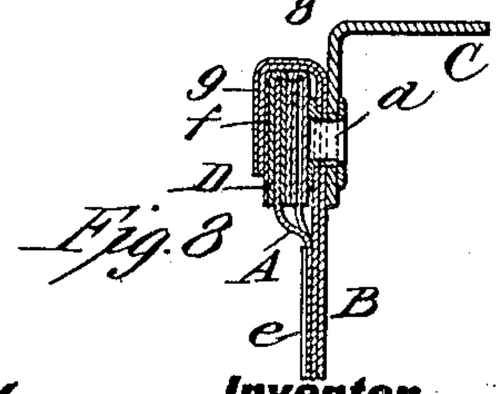


Fig. 8



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MICA LAMP GLOBE OR SHADE.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 9

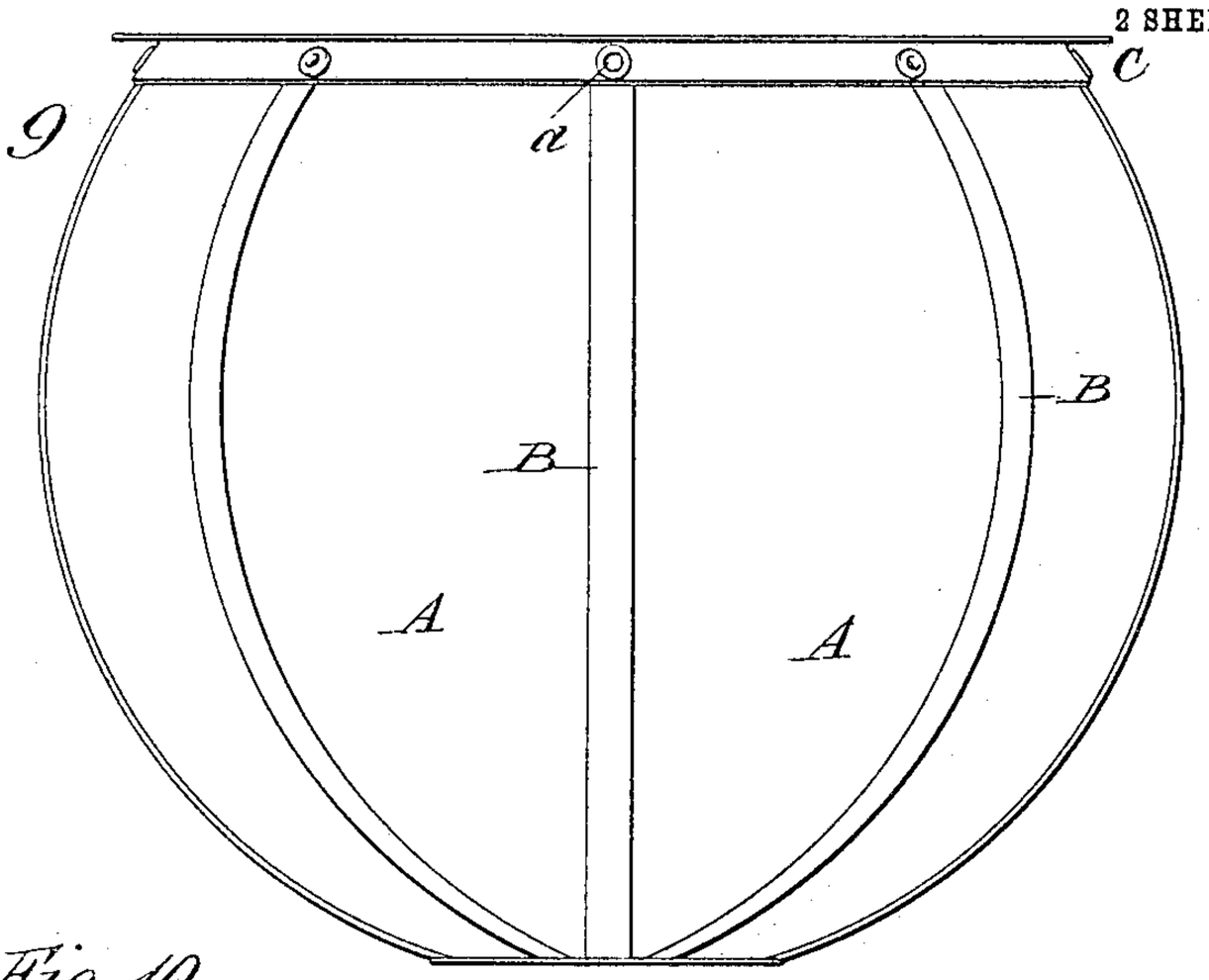


Fig. 10

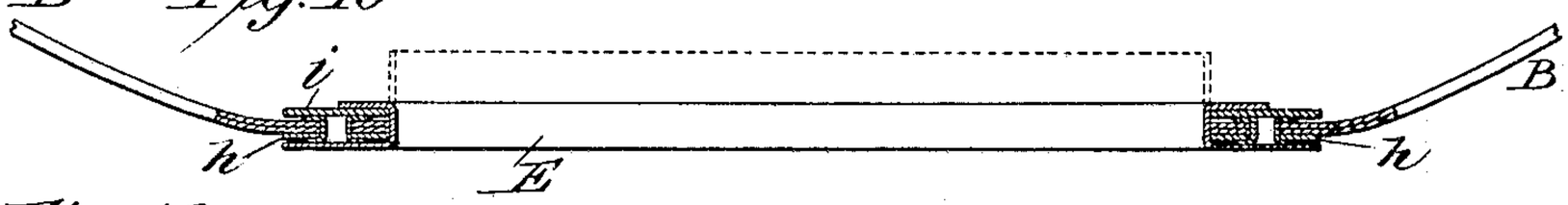


Fig. 12

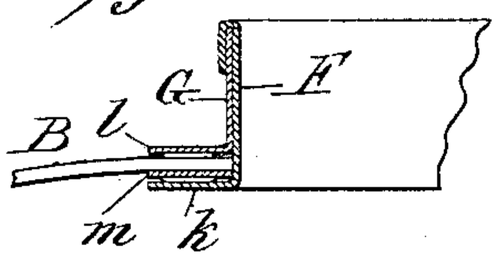
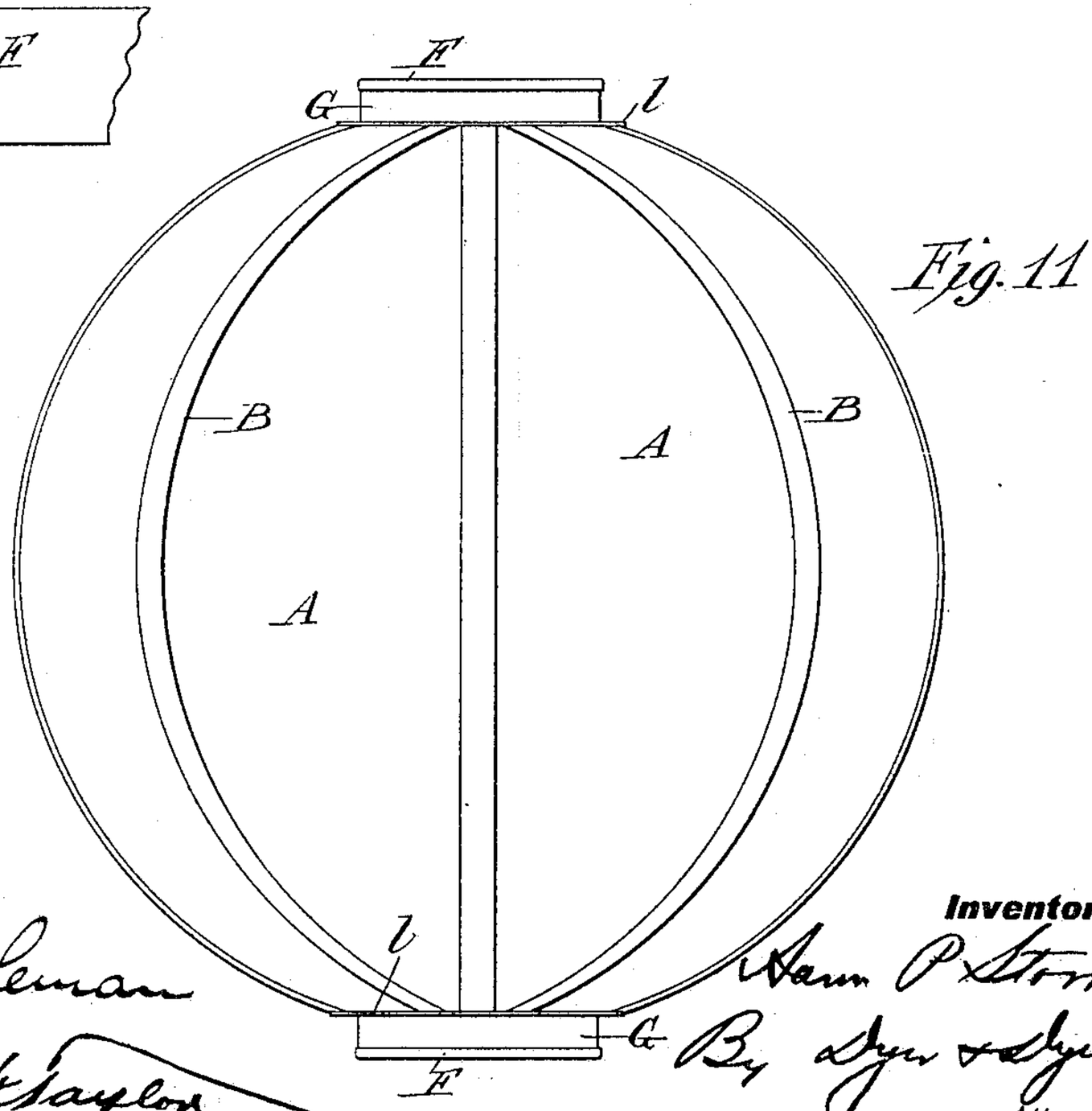


Fig. 11



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No. 758,716. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

AARON P. STORRS, OF OWEGO, NEW YORK, ASSIGNOR TO STORRS MICA COMPANY, OF OWEGO, NEW YORK, A CORPORATION OF NEW YORK.

MICA LAMP GLOBE OR SHADE.

SPECIFICATION forming part of Letters Patent No. 758,716, dated May 3, 1904.

Application filed May 12, 1903. Serial No. 156,751. (No model.)

To all whom it may concern:

Be it known that I, AARON P. STORRS, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented a certain new and useful Improvement in Mica Lamp Globes or Shades, of which the following is a specification.

The object I have in view is to produce a lamp globe or shade of spheroidal form of mica, which will be light in construction, can be cheaply made, and will be durable and not easily broken in use.

In carrying out my invention the globe or shade is made up of mica panels, the mica being either plain or etched, which panels are cut with outwardly-curved side edges, so that when bent or bowed lengthwise into a curved form the edges of adjoining panels will be parallel. These mica panels while curved lengthwise or in planes passing vertically through the globe are straight crosswise or in planes passing horizontally through the globe. The panels are supported at their edges and joined together by curved metal ribs formed of folded sheet metal, which ribs are secured together at the top and bottom of the globe. The ribs have an angular cross-section, so as to accommodate the edges of the mica panels without bending the mica crosswise. The result is a globe or shade which has a curved outline in vertical section and a polygonal outline in horizontal section. For use with the Pintsch light and other lights requiring a globe substantially of semispherical form and closed at the bottom the globe will be provided with a top ring or band of metal to which the ribs will be secured, these ribs crossing and being secured together at the bottom of the globe and being secured at their ends to the top band. For the "new-process" light and similar lights requiring a globe of the same shape, but open at the bottom, the bottom of the globe will be open and provided with a metal ring or band to which the ribs will be secured and at which they will terminate. This form of globe may also be used as a lamp-shade in a reversed position with a suitable holder having arms extending out to the ring or band at the large opening in the globe, or the globe can be for this purpose given a more completely spherical form, terminating in openings of the same size at both ends.

In the drawings, Figure 1 is an elevation showing one form of globe. Fig. 1ª is an elevation, on a reduced scale, of a single mica panel. Fig. 2 is an enlarged vertical section of the lower part of the same. Fig. 3 is a horizontal section on the line 3 3 in Fig. 1 looking downwardly and with the button covering the intersection of the ribs removed. Fig. 4 is a sectional view, on an enlarged scale, across one of the ribs before the inner edges of the rib are turned down to clamp the mica panels. Fig. 5 is a view similar to Fig. 4, the inner edges of the rib being rolled down upon the mica panels. Fig. 6 is a perspective view showing the folded strip clamping the upper edge of one of the mica panels. Fig. 7 is a top view, on an enlarged scale, showing the joint between the meeting ends of the strips clamping the upper edges of adjacent mica panels, the upper end of the rib not being turned down. Fig. 8 is a vertical section on line 8 8 in Fig. 7 with the end of the rib turned down, showing the method of fastening one of the ribs to the top band of the globe and of securing the mica holding-strips thereto. Fig. 9 is an elevation of a modified form of globe which may also be used as a lamp-shade. Fig. 10 is a vertical section through the lower end of the globe of Fig. 9, on an enlarged scale, showing the method of securing the ribs to the lower ring or band. Fig. 11 is an elevation of another modification of the form of the lamp globe or shade, and Fig. 12 is a sectional view showing the method of securing the ends of the ribs to the band or ring at each end of the globe of Fig. 11.

Referring particularly to Figs. 1 to 8, A represents the mica panels, which are cut with outwardly-curved side edges, and B represents metal ribs between which the mica panels are held. These ribs are given a curved form which may be in outline the section of a hemisphere extended more or less into the form of

a cylinder, as shown in Fig. 1. The ribs are grouped together symmetrically, intersecting at their centers so as to form a basket-like object of substantially hemispherical form. At the point of intersection the ribs are secured together by a hollow rivet or eyelet *a*. They may also be covered at their intersection on the interior of the globe by a washer *b*, which will be secured by a fastener *c* passing through the eyelet. C is a metal band or ring at the upper or open end of the globe, which metal band has vertical and horizontal flanges. The upper ends of the ribs B are secured to the inner side of the vertical flange of this metal band or ring by hollow rivets or eyelets *d*, the ends of the ribs extending upwardly beyond the points of fastening, so as to form tongues *g*, which can be bent downwardly over the strips, holding the upper edges of the mica panels at the meeting ends of such strips so as to hold these strips in place against the inner side of the band C. The ribs B are made of thin sheet metal formed by doubling the side edges back toward each other and then outwardly to form flaps *e* for holding the edges of the mica panels. The ribs are rolled or formed so as to have an angular cross-section, as shown particularly in Figs. 4 and 5, in order that the side edges of the mica panels may be held without bending the mica laterally or in horizontal planes. The flaps *e* are cut away from the body of the ribs where the ribs intersect as well, as at the ends of the ribs, to permit the ribs to be secured together at their intersection and to the band C at their ends, while the flaps *e* still project at an angle from the body of the ribs, as shown in Fig. 4, to permit the mica panels to be placed in position. The ribs being secured together at their intersection and being secured at their ends to the top band, the mica panels are then placed in position between the ribs, the edges of the panels projecting into the angles formed between the body of the ribs and the flaps *e*. The flaps *e* are then turned down onto the edges of the mica panels, as shown in Fig. 5. Before the mica panels are placed in position, however, the upper edge of each panel is provided with a metal strip D, which is formed of a strip of metal folded crosswise upon itself. The edge of the mica panel is inserted in the fold of the strip and the strip rolled down upon the mica, so as to clamp the mica thereto. One end of the strip D has a tongue *f* extending beyond the mica panel and made of one thickness of metal. When the mica panels are inserted in position between the ribs, the strips D at the upper edges of the mica panels will be in line and overlapping on the inner side of the band C, the end of each strip which extends beyond the mica panel and is provided with a tongue *f* being under the end of the adjoining strip and the tongue being bent backwardly upon the body of the strip. Each tongue *f* is then bent forward over the end of the adjoining strip, the strips at the same time being forced outwardly against the band C, as shown on an enlarged scale and somewhat distorted for clearness of illustration in Fig. 7. The upper ends of the ribs B, which are extended beyond the eyelet *d* to form the tongues *g*, are then bent downwardly over the joints between the strips D to hold such strips against the band C, as shown in Fig. 8. Since the vertical flange of the band C is a circle, it is necessary to bow or bend the mica panels crosswise at their upper ends sufficiently to fit the curve of the flange, which would not have to be done if this flange was given a polygonal shape. This lateral bow of the mica panels extends, however, only a small portion of the length of the panels. The globe illustrated by Figs. 1 to 8 has a form suitable for use with the Pintsch light or other lights requiring a globe closed at its bottom.

For use with the new-process lights or other lights requiring a similar globe, but open at the bottom, the form shown in Figs. 9 and 10 may be employed. In this form the ribs B are secured to the upper band C and the panels are secured to the ribs in the same manner as described in connection with Figs. 1 to 8. The ribs do not, however, extend across the bottom of the globe, but terminate at a ring *h*, to which they are secured by eyelets. On top of the ribs is placed another ring *i*, and the two rings are secured together by a band E, which is bent over them and forms a finish at the opening. The form of globe shown in Figs. 9 and 10 may also be used as a lamp-shade, being placed, preferably, for this purpose in a reversed position and the ring C being supported by arms extending from the shade-holding ring of the lamp. The globe may, however, be made in a more spherical form, as illustrated in Fig. 11, having an opening at both top and bottom of approximately the same size as the bottom opening of Fig. 9. These openings may have outwardly-extending metal bands F G, which will be formed of parts *k l*, bent to proper shape and overlapped and inclosing between them a metal ring *m*, to which the ends of the ribs will be secured by eyelets.

What I claim is—

1. A lamp shade or globe of spheroidal form having in combination, mica panels, provided with outwardly-curved side edges, and curved ribs between which the panels are held, such panels being curved lengthwise and being straight crosswise, substantially as set forth.

2. A lamp shade or globe of spheroidal form having in combination, mica panels, provided with outwardly-curved side edges, and curved ribs made of folded metal strips and having an angular cross-section, the mica panels being held at their edges between the folds of

the ribs, such panels being curved lengthwise and being straight crosswise, substantially as set forth.

3. A lamp shade or globe of spheroidal form having in combination, mica panels provided with outwardly-curved side edges, curved metal ribs between which the panels are held, the said ribs having an angular cross-section and a top metal ring to which the ribs are secured, substantially as set forth.

4. In a spheroidal lamp globe or shade, the combination with the curved mica panels and curved ribs, of the metal ring or band C to which the ribs are secured, the strips D binding the top edges of the mica panels and the tongues *f g* for holding the strips together and to the band C, substantially as set forth.

5. A lamp shade or globe of spheroidal form having in combination, mica panels, provided with outwardly-curved side edges, and curved ribs between which the panels are held, the said ribs crossing at the center or apex of the shade and being joined together by a rivet, substantially as described.

6. A lamp shade or globe of spheroidal form having in combination, mica panels, provided with outwardly-curved side edges, and curved ribs between which the panels are held, the said ribs having flaps *e* for holding the panels together and to the ribs, substantially as set forth.

This specification signed and witnessed this 20th day of April, 1903.

AARON P. STORRS.

Witnesses:
JNO. ROBT. TAYLOR,
JOHN LOUIS LOTSCH.