

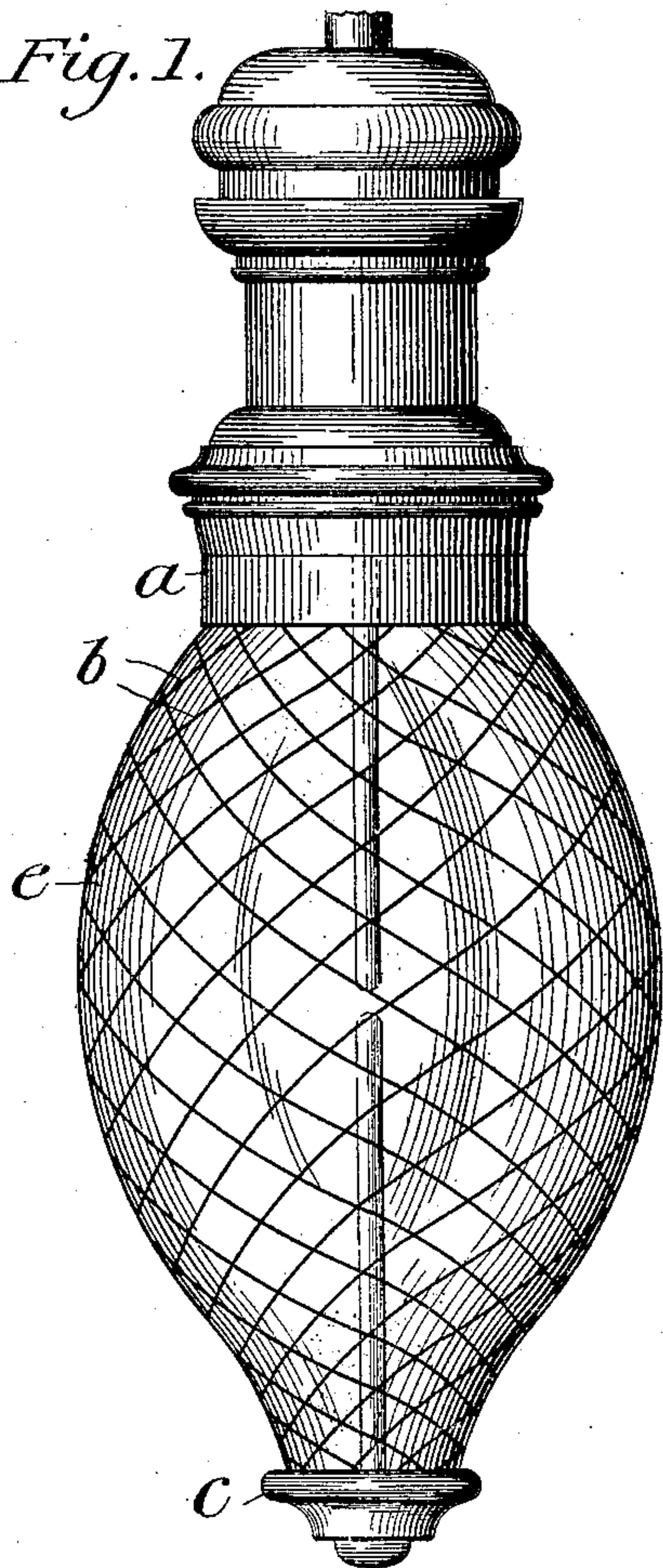
No. 699,196.

Patented May 6, 1902.

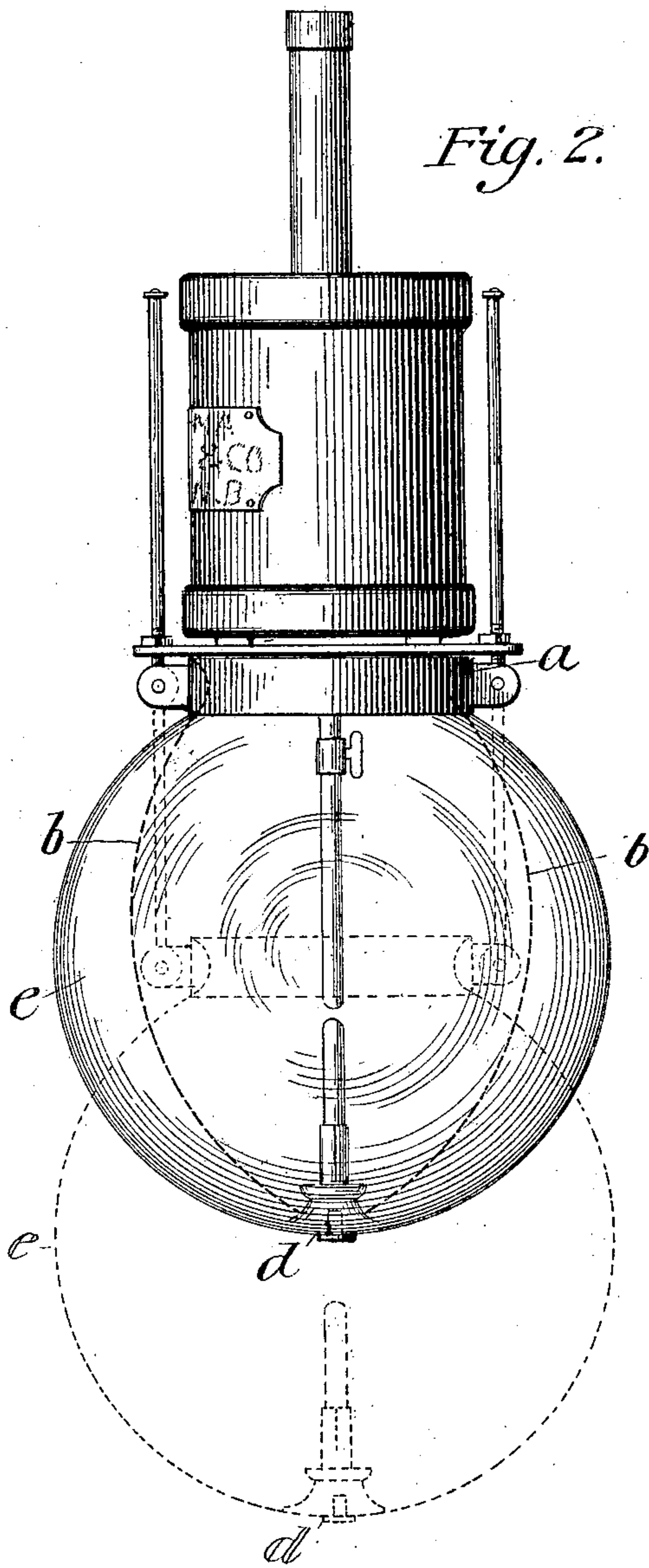
A. LEES.  
ELECTRIC ARC LAMP.  
(Application filed Dec. 6, 1900.)

(No Model.)

*Fig. 1.*



*Fig. 2.*



Witnesses,  
H. V. Davis  
E. S. Moon

Inventor,  
Albert Lees.  
by Henry W. Maslow.  
att.



# UNITED STATES PATENT OFFICE.

ALBERT LEES, OF NEW BEDFORD, MASSACHUSETTS.

## ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 699,196, dated May 6, 1902.

Application filed December 6, 1900. Serial No. 38,981. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT LEES, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Electric-Arc Lamps, of which the following is a specification.

The object of my invention is to provide an electric-arc lamp in which the rays of light shall not be obstructed to such a degree as to cause a shadow by the conductor of the electricity to the lower carbon.

To this end my invention consists in providing a series of wires as a conductor of the electricity to the lower carbon of a diameter so much smaller than the electric arc that the rays of light from the arc lap by them and practically cast no shadow.

The accompanying drawings illustrate my invention, in which—

Figure 1 is a side elevation of one style of my improved lamp, and Fig. 2 is a side elevation of another style of construction.

Similar letters refer to like parts in both views.

The letter *a* represents a metallic collar which serves to support the globe *e* of the lamp and which is electrically connected with that portion of the mechanism which serves to convey the electricity to the lower carbon. To the collar *a* are electrically secured a series of wires *b*, Fig. 1, which wires form a guard for the globe *e* and which also serve to convey the electricity to the lower carbon through the metallic base *c*, in which said carbon is supported and to which said wires are electrically connected. In Fig. 2 a large globe to the lamp is shown, with the conducting-wires *b* extending from the collar *a* downward on the inside of the globe, as shown in dotted lines, to the metallic socket of the lower carbon, which is supported on a projection *d* of the globe. In either case the conducting-wires are of a diameter so much smaller than the arc that practically no shadow is cast by them. If the globe *e* should break and fall away, the conducting-wires *b* still support the socket of the lower carbon.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An arc-lamp having its lower-carbon holder supported by a multiplicity of filamentary conductors distributed around the arc.

2. An arc-lamp having its lower carbon supported by a network of thin wires forming a current-lead for the negative electrode.

3. An arc-lamp having its lower carbon suspended by a network of wires in circuit with the lamp and terminating in metal contacts to facilitate connection and disconnection with the lamp parts.

4. The combination with a lamp operated by electricity, of a multiplicity of filamentary conductors carrying a current to an electrode of said lamp.

5. The combination with a lamp operated by electricity, of a network of wires supporting the lower carbon and carrying current thereto.

6. In an electric-arc lamp, an inclosing globe suspended by a network of wires inclosing the same, an electrical connection from said wires to a terminal of the circuit, and an electrical connection from said wires to an electrode of the lamp, whereby the network of wires carries current to the lamp and at the same time mechanically supports the inclosing globe.

7. In an electric-arc lamp the combination with an inclosing globe, of a series of filamentary conductors inclosing and supporting the globe, and adapted to carry current to the negative electrode, said filamentary conductors having a diameter less than the electric arc, whereby the irradiations from the arc lap by the conductors and cast no shadow.

8. In an electric-arc lamp the combination with an inclosing globe, of a network of conducting-wires for the lower carbon of such a diameter that practically no shadows are cast by them from the light of the lamp.

ALBERT LEES.

Witnesses:

EDWARD P. HASSELL,  
HENRY W. MASON.