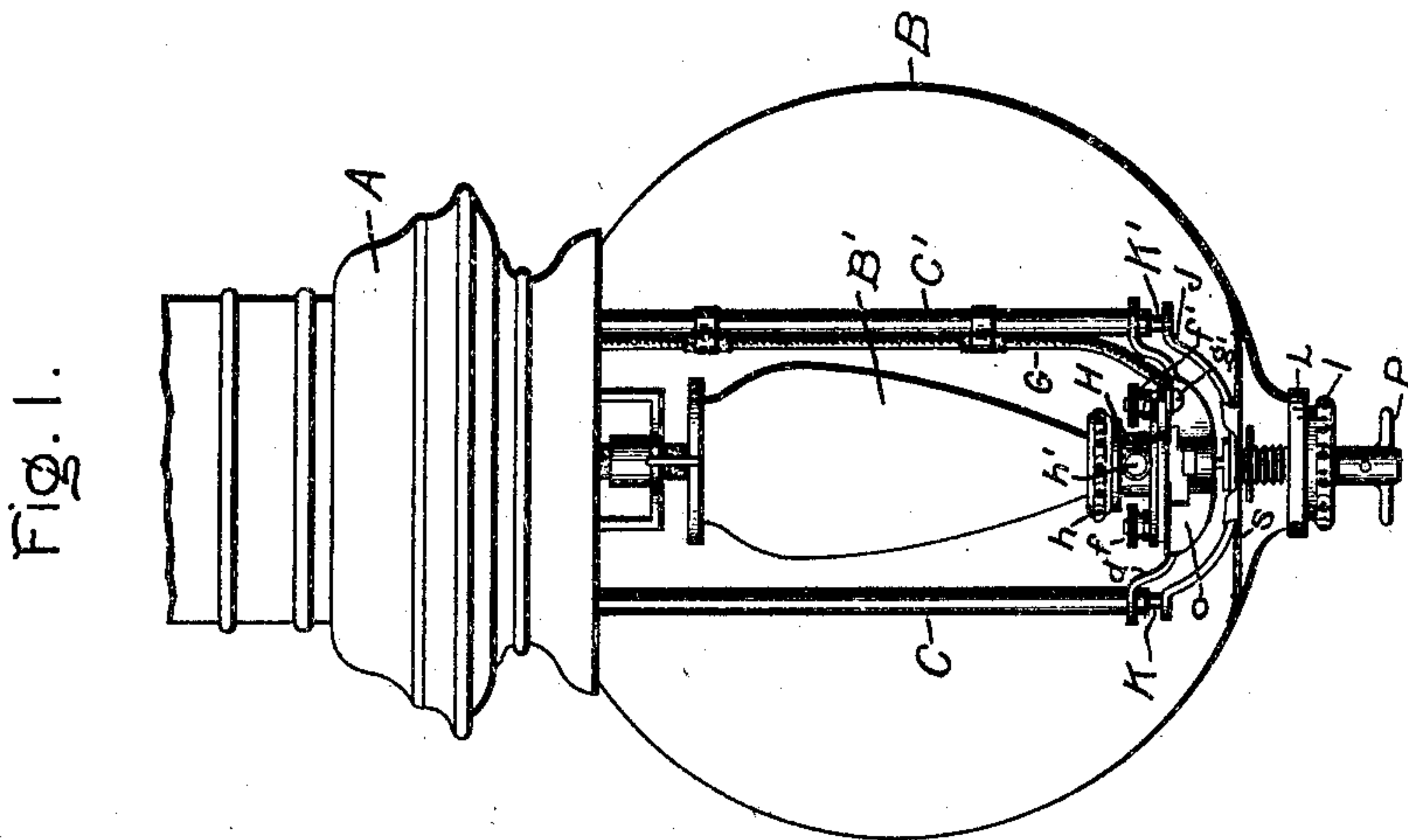
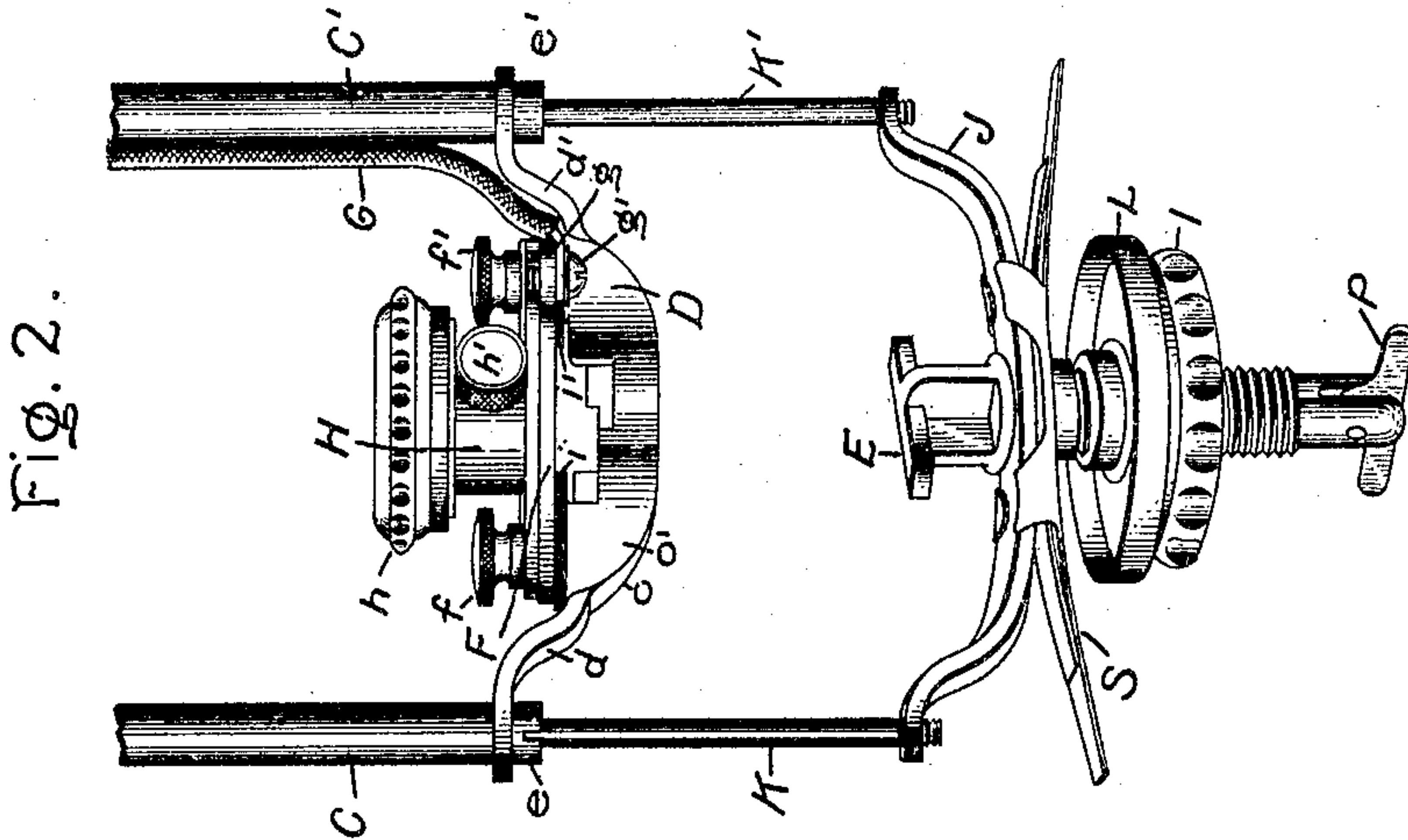


No. 793,440.

PATENTED JUNE 27, 1905.

C. E. HARTHAN.
ARC LAMP YOKE.
APPLICATION FILED DEC. 13, 1902.



Witnesses.

George H. Tilden.
Helen Orford

Inventor.

Charles E. Harthan.

by *Allen H. Davis*
Att'y.

UNITED STATES PATENT OFFICE.

CHARLES E. HARTHAN, OF LYNN, MASSACHUSETTS, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ARC-LAMP YOKE.

SPECIFICATION forming part of Letters Patent No. 793,440, dated June 27, 1905.

Application filed December 13, 1902. Serial No. 135,102.

To all whom it may concern:

Be it known that I, CHARLES E. HARTHAN, a citizen of the United States, residing at Lynn, county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Arc-Lamp Yokes, of which the following is a specification.

This invention relates to yokes used to connect the side rods and globe-holder rods of an electric-arc lamp; and its object is to provide a yoke that shall be as strong and as durable as those formerly used at a greatly-reduced cost. Heretofore these yokes have always been castings, and as a double-globe lamp requires two of them, one connecting the side rods and one connecting the globe-holder rods of the lamp, these yokes have been quite an item of expense. My invention contemplates minimizing this expense by making these yokes from punchings of sheet metal instead of casting them. To this end I punch out a piece of sheet-iron having a large body portion and outwardly-extending arms for connecting the yoke to the side rods. I then bend the sides of this body portion downward, so as to form two parallel downwardly-extending flanges. These flanges serve to give the yoke sufficient strength to support the carbon-holder and the two globe-holders and globes and to hold the parts rigidly in position. In this way I obtain a yoke that possesses all the advantages of the yokes formerly used for this purpose at a cost much less than a cast yoke can be made for.

In the accompanying drawings I have shown an embodiment of my invention as used in a double-globe arc-lamp; but it is evident that it can be used as well in any type of lamp employing side rods.

Figure 1 is an elevation of a double-globe arc-lamp having my improved yoke therein, and Fig. 2 is a perspective view of the lamp having the globes removed and the outer-globe holder lowered from the closed position.

In the drawings, A represents a double-globe arc-lamp having an outer globe B, an inner globe B', and hollow side rods C C', in which the globe-holder rods K K' move vertically. The side rods C C' are connected at

their lower extremities by the yoke D, secured to the rods by the hollow screws *ee'*. This yoke has two projecting arms *d d'* for attachment to the side rods and two parallel downwardly-extending flanges *o o'* to give it strength and rigidity. The flanges *o o'* are slotted horizontally to receive projections on the stem E, and thus hold the outer globe in place, and threaded bores to receive screws *ff'*, which secure the plate F and inner-globe and carbon holder H to the yoke, though insulated therefrom by the mica washers *ii'*. The plate F has an extension *g*, to which the wire G is secured by the screw *g'*. The inner-globe and carbon holder H has a hand-nut threaded thereon to hold the inner globe in place and a thumb-screw *h'* to clamp the lower carbon. The globe-holder rods are connected at their lower extremities by the yoke J, which has a central bore in which stem E turns, and at the upper end of the stem E are projections which register with the slots in the frame-yoke D. On the stem E are threaded the outer-globe holder L and the hand-nut *l*, which supports and regulates the position of the globe-holder. The spring S is clamped on the yoke J, and its ends bear on the outer globe, holding it firmly in its seat. In the slotted end of the stem E is pivoted a cross-bar P to prevent accidental falling of a globe and which also answers as a handle for turning the stem E. Current is led to the lower carbon through the wire G, clamped to the side rod C', the plate F, and carbon-holder H.

To open the lamp, the stem E is turned by the cross-bar P until the projections at its upper end are freed from the slots in the frame-yoke D, and the outer globe is then lowered, as shown in Fig. 2, the rods K K' sliding within the hollow rods C C'. The inner globe can then be removed by turning the hand-nut *h* and the carbon removed by loosening the thumb-screw *h'*.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in an arc-lamp, of an inner-globe-supporting yoke made from a punching of sheet metal, having side portions which are bent downward to form strength-

ening-ribs, a horizontal slot in said ribs, an outer-globe holder, and a detent therefor adapted to be located in said slot.

2. The combination in an arc-lamp, of a pair
5 of side rods, an inner-globe-supporting yoke made from a punching of sheet metal having a large body portion and arms extending therefrom for attaching the yoke to said rods, the sides of said body portion being slotted and
10 bent downward to strengthen the yoke, an outer-globe holder, and a detent therefor adapted to be located in said slot.

3. In an arc-lamp, in combination with two hollow side rods and two globe-holder rods
15 vertically movable therein, a yoke connecting the side rods, formed from a sheet-metal blank punched out with side portions which are provided with a slot and bent downward to form

strengthening-ribs, a sheet-metal yoke connecting the globe-holder rods, a globe-holder
20 carried by said yoke, and a detent therefor adapted to be located in said slot.

4. As an article of manufacture, a yoke for connecting the side rods of an electric-arc
25 lamp, formed from a punching of sheet metal having arms for attaching the yoke to the side rods of the lamp, and side portions bent downward to form strengthening-ribs for the yoke, said side portions having openings therein to
30 receive a detent.

In witness whereof I have hereunto set my hand this 11th day of December, 1902.

CHARLES E. HARTMAN.

Witnesses:

DUGALD McK. McKILLOP,
ROBERT SHAUD.