

No. 612,049.

Patented Oct. 11, 1898.

H. G. MILLS.
ARC LAMP GLOBE.

(Application filed May 10, 1897.)

(No Model.)

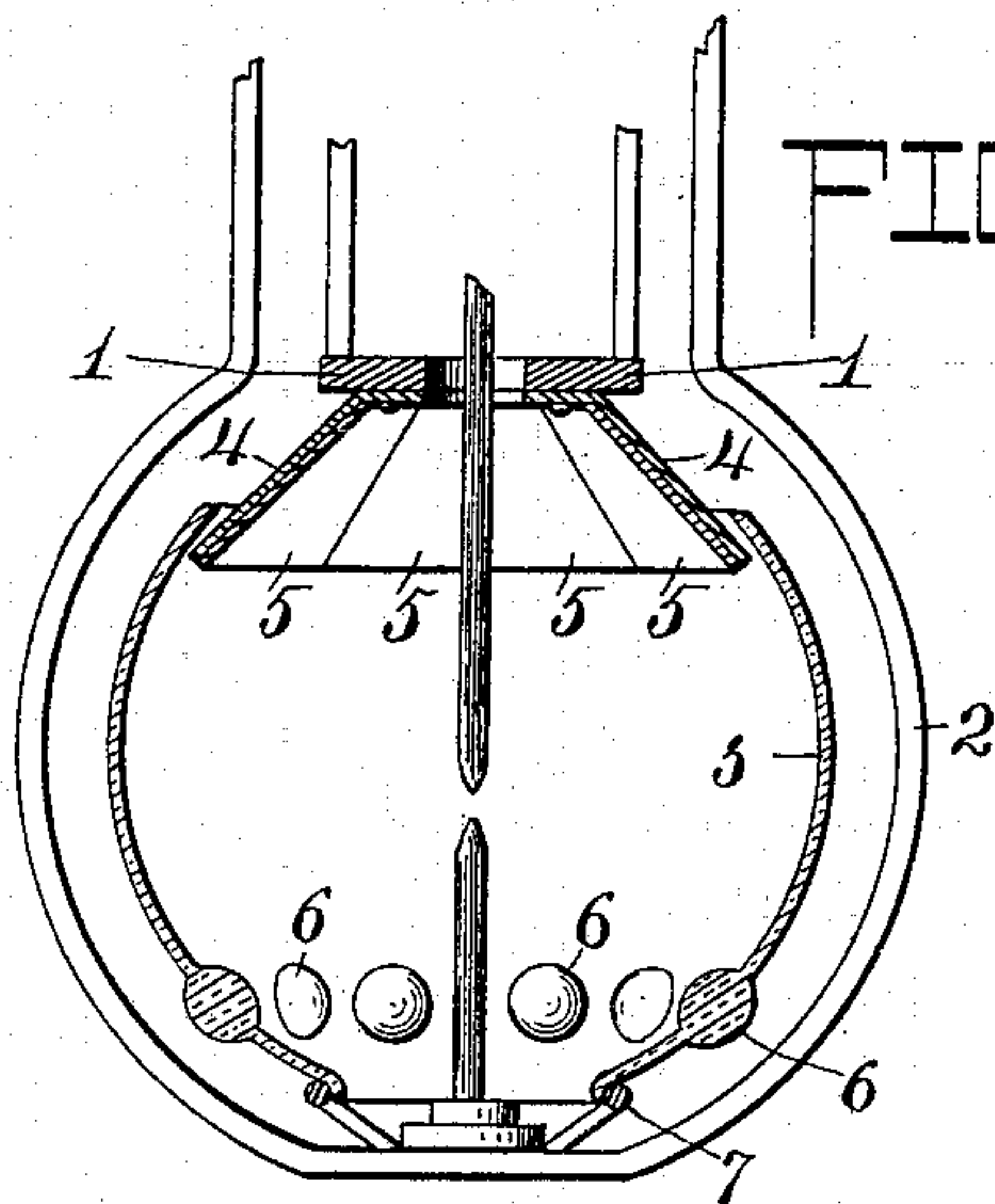


FIG. 1.

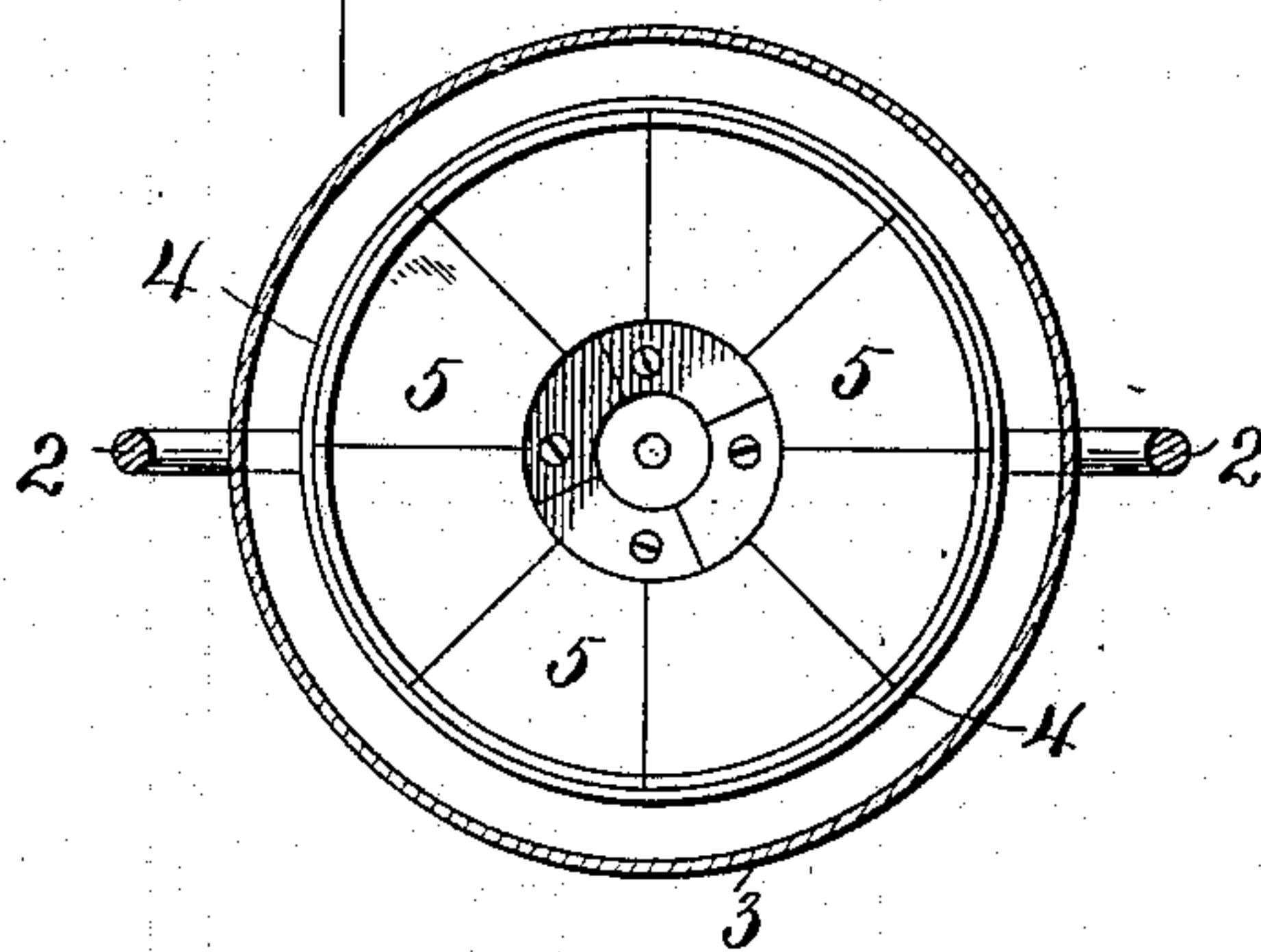


FIG. 2.

FIG. 3.

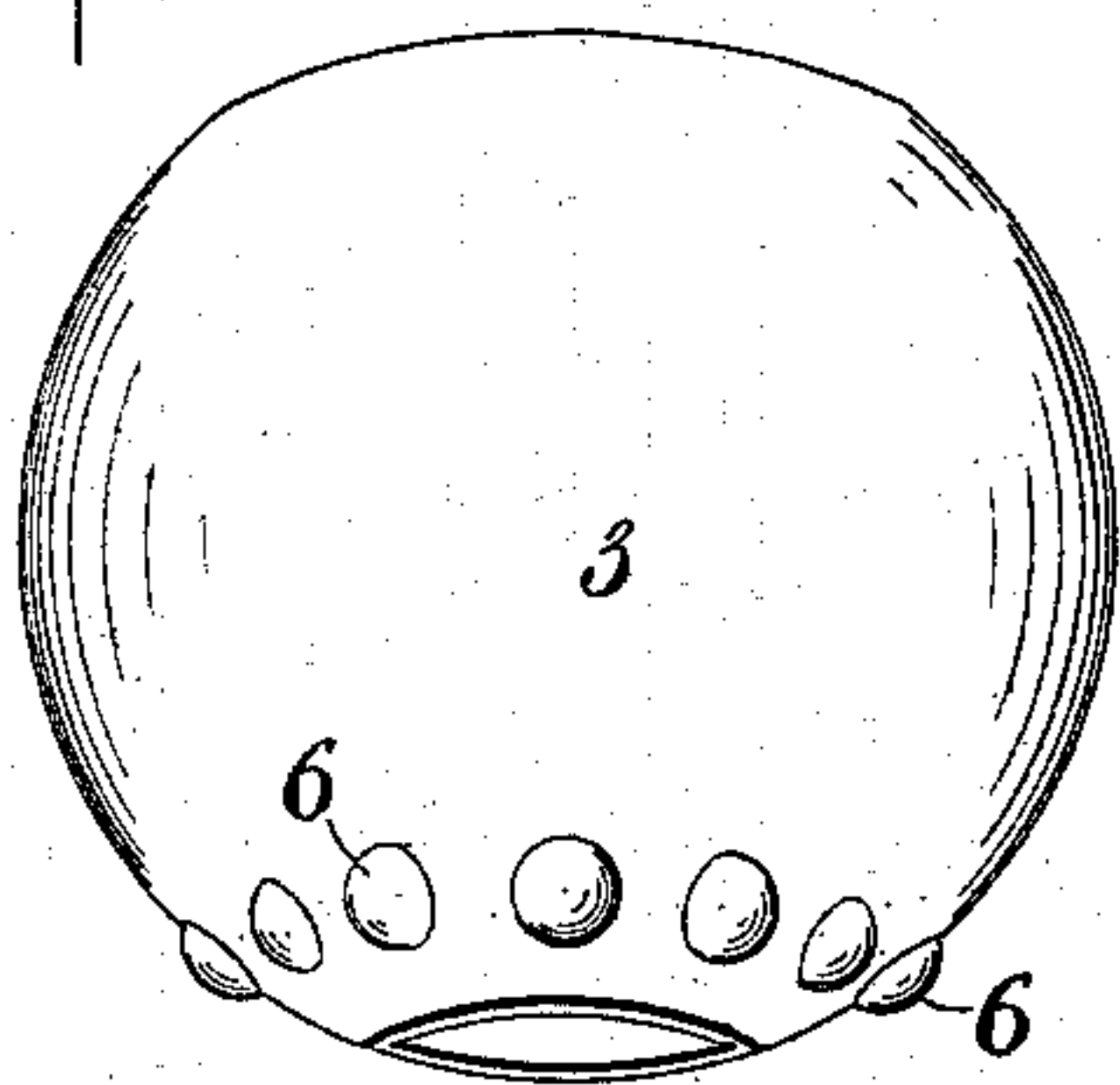
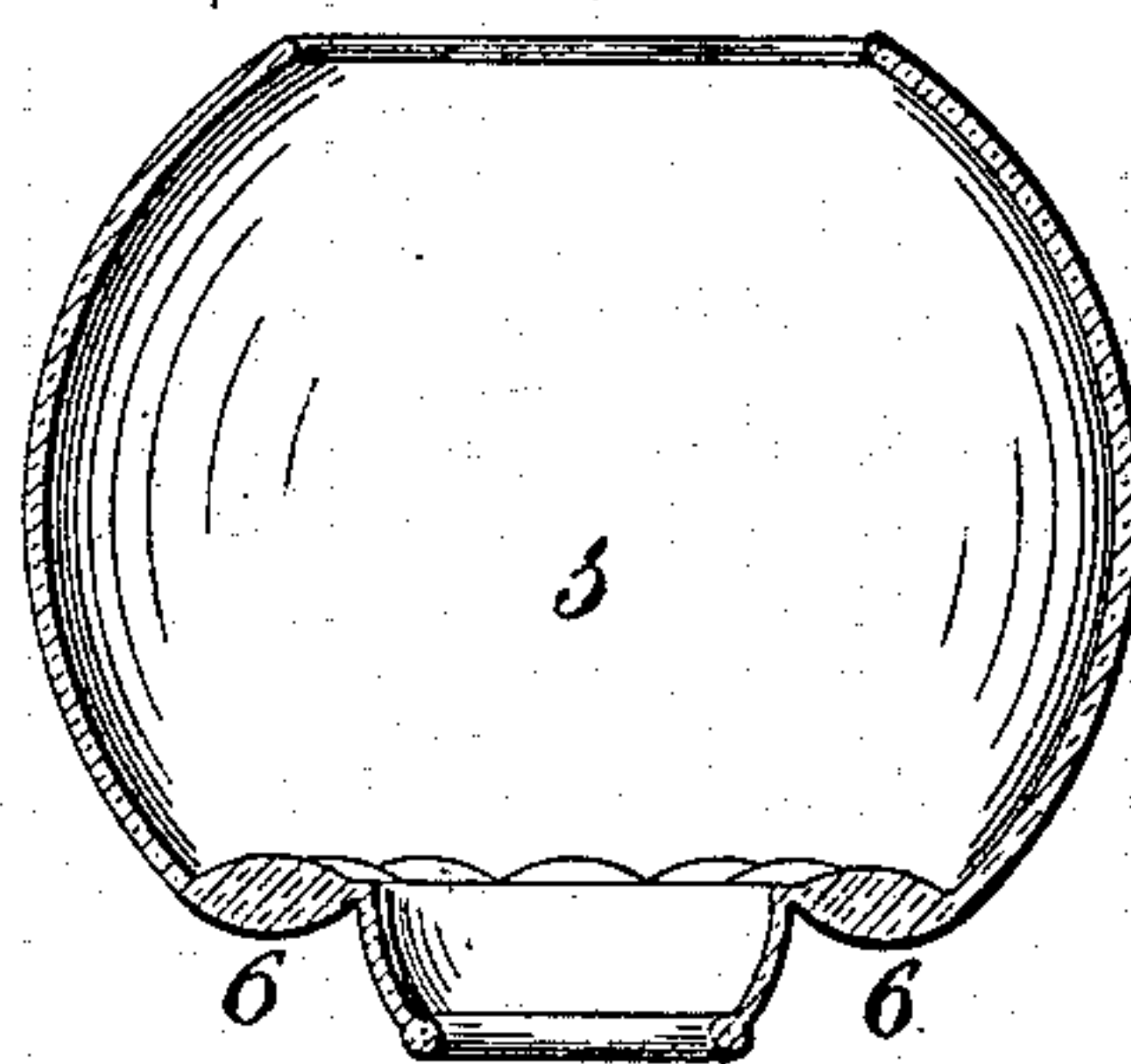


FIG. 4.



WITNESSES

W. E. Allen

Am.ington

INVENTOR

Henry G. Mills.

By John H. Hetherington
Attorney

UNITED STATES PATENT OFFICE.

HENRY G. MILLS, OF MILWAUKEE, WISCONSIN.

ARC-LAMP GLOBE.

SPECIFICATION forming part of Letters Patent No. 612,049, dated October 11, 1898.

Application filed May 10, 1897. Serial No. 635,817. (No model.)

To all whom it may concern:

Be it known that I, HENRY GRAHAM MILLS, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Arc-Lamp Globes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in lamps, and has more particular relation to lamp-globes.

The invention consists in certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a central vertical section through an arc-lamp provided with my improvement. Fig. 2 represents an enlarged detail view of the carbon-holder, carrying the reflector, taken from beneath. Fig. 3 represents an enlarged detail perspective view of my improved globe. Fig. 4 represents a central vertical section through a modified form of said globe.

1 in the drawings represents the carbon-holder of the arc-light, 2 the supporting-frame for the globe, and 3 my improved globe. Said carbon-holder 1, which may be of any desired construction, is provided at its lower end with a frame 4 of the shape of a truncated cone. This frame 4 is adapted to support a plurality of mirrors 5, arranged upon its under side so as to reflect the rays from the carbons diagonally downward. This frame is formed in sections, as seen in the drawings, to facilitate its being placed in position within the globe. The globe 3 is of ordinary construction, with the exception that it is provided at its bottom with a concentric row of lenses 6. The location of these lenses is such that the rays of light from the arc are diverted or diffused, so as to be thrown beneath the supporting-ring 7 of the frame 2, and thus avoid the shadow which is usually cast by said ring directly under the lamp.

In the modified form of my invention the lenses are located in a horizontal plane instead of in inclined positions, as shown in Figs. 1 and 2.

It will be observed from the foregoing description that the light from the arc will be reflected from the mirrors 5 diagonally down-

ward, and, striking the lenses 6, will be deflected so as to pass beneath the supporting-ring 7, and thus avoid the shadow which would otherwise be cast by said ring were the rays of light passed straight from the arc outward.

By the employment of my invention all shadows usually incidental to this class of lamps are avoided. The lenses 6 are preferably formed an integral part of the globe or may be separate from the same, if so desired.

I do not care to limit myself to the exact angle of the lenses formed in the bottom of the globe, as this angle must be governed according to the nature of the lamp upon which the globe is to be employed.

It is deemed important that the lenses be arranged near the lower end of the globe, below the horizontal center thereof, as shown, so that there shall be no shadow cast by the frame and bottom of the globe. The upper reflectors are designed and are so disposed as to assist the lenses and also help to do away with the shadow of the frame.

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

1. A globe for lamps comprising a globe proper having upper and lower open ends, and an annular pendent flange at the lower end of said globe, and a plurality of horizontally-arranged lenses below the horizontal center of the globe and formed integral with the globe proper and the annular flange and arranged concentrically about the latter in a horizontal plane with their optical axes disposed substantially vertically, substantially as described.

2. In an arc-lamp, the combination with a carbon-holder, of a conical reflector mounted about the same, a globe-supporting frame mounted below said reflector, a globe mounted on said frame so that its upper edge extends about the lower edge of the reflector, and a plurality of lenses formed integral with the globe and arranged with their optical axes disposed substantially vertically concentrically about the lower side of the globe, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY G. MILLS.

Witnesses:

E. E. CHAPIN,

WADE H. RICHARDSON.