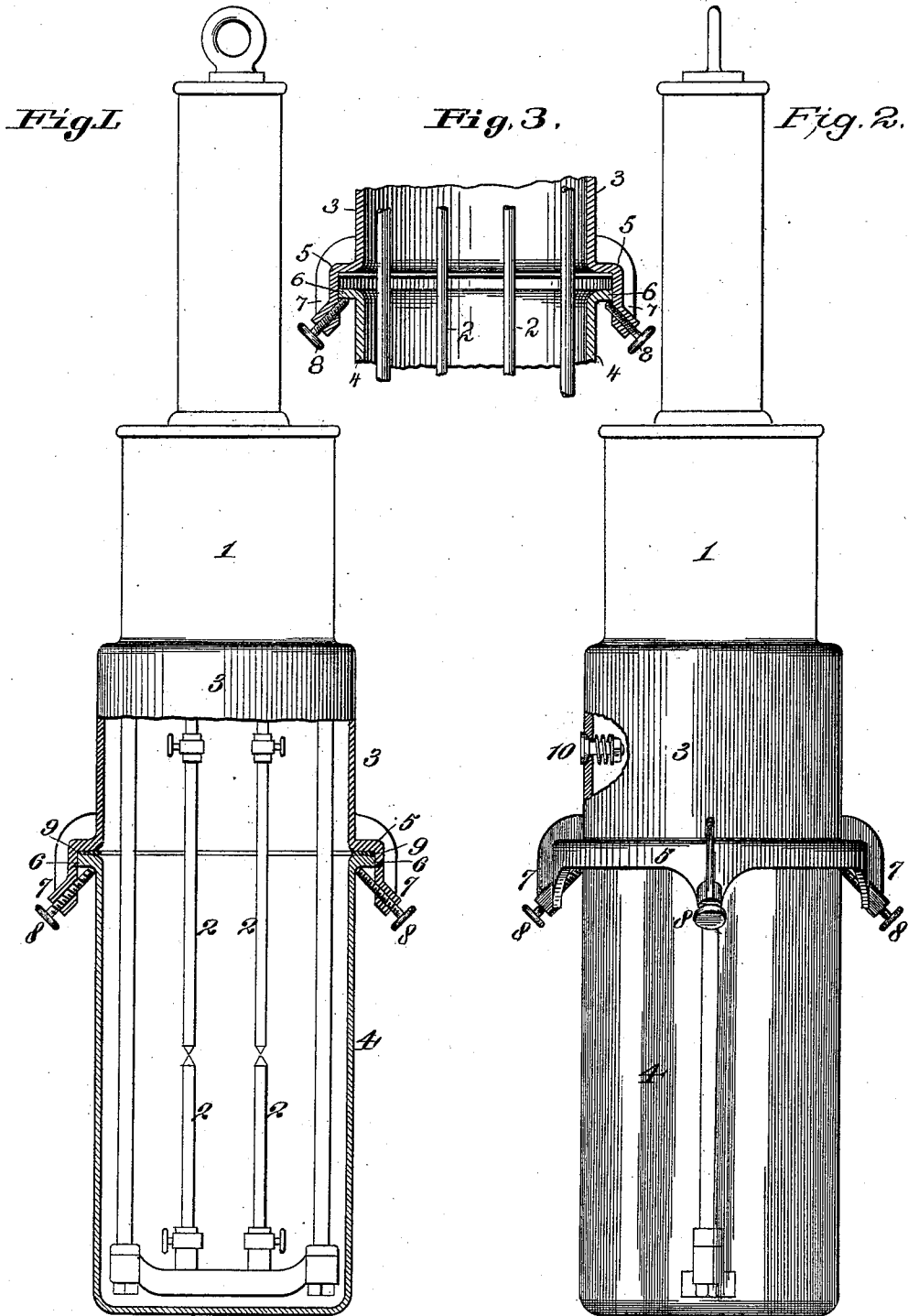


(No Model.)

A. H. MOSES, Jr.  
ELECTRIC ARC LAMP.

No. 527,559.

Patented Oct. 16, 1894.



Attest:  
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# UNITED STATES PATENT OFFICE.

ALFRED H. MOSES, JR., OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO  
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## ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 527,559, dated October 16, 1894.

Application filed January 21, 1893. Serial No. 459,256. (No model.)

### *To all whom it may concern:*

Be it known that I, ALFRED H. MOSES, Jr., of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Electric-Arc Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in electric arc lamps, and especially to an improvement in that class of lamps in which the carbons or electrodes are preserved against open contact with atmospheric air, and the object of this invention is to provide improved means whereby the globe employed may be brought to a substantially air-tight connection with a casing and held in that position without danger of breaking the globe, or of accident resulting thereto through the adjusting medium, the globe and casing serving to substantially incase the carbons or electrodes.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully described and claimed.

Figure 1, illustrates my invention partly in side view and partly in vertical section. Fig. 2, is a side elevation with a part of the casing broken away. Fig. 3, is a detail of the section of Fig. 1, with the globe and the set screws in position illustrating the operation of the set screws.

In carrying out the invention the lamp 1, may be of any desired type or construction so far as the mechanism of the lamp is concerned, and the carbons or electrodes 2 of the lamp may be held and moved in the ordinary way. The inclosure of the carbons or electrodes consists of a casing 3, and a globe 4. The globe is made of a transparent material, and the casing 3 may be made of a like substance or it may be made of metal as in practice may be found most desirable. The casing 3 is provided at its lower end with an annular down-turned flange 5, which receives the out-turned flange 6 on the globe or lower portion 4 of the inclosure of the lamp. Lugs 7 are made to project from the flange 5 of the casing, and the said lugs are provided with set

screws 8, the said set screws being held or located at an acute angle to the globe 4 or lower portion of the inclosure, and are adapted to touch the under side of the flange 6 obliquely and at such distance from the body of the globe that while the points of the screws approach the body as they press the flange upward against the flange of the casing, they will close the joint tight without effecting inward pressure on the globe, at the angle between the body and flange of the globe as would be liable to break the globe.

The casing 3 may be made an integral portion of the body of the lamp if desired, or may be attached thereto in any suitable manner; and a gasket 9 is ordinarily secured upon the under face of the flange 5 of the casing 3, so as to make a practically air-tight joint between the flanges of the two sections 3 and 4 of the inclosure of the carbons. By placing the set screws 8 in the position above described, by simply manipulating the screws the globe section of the inclosure of the lamp may be forced upward in a convenient and expeditious manner to an air tight connection with the casing section 3 of the said inclosure; and by manipulating the set or adjusting screws in a reverse direction the globe will be permitted to drop from engagement with the casing 3, and may be readily entirely removed from the lamp to expose the carbons or electrodes.

In starting the lamp the arc is drawn in the usual way, and the carbons are fed or moved in the usual manner. The atmospheric air is not exhausted from the inclosure of the carbons, but after the arc has been burning for a short time the oxygen in the air contained in the lamp is consumed, leaving a combination of nitrogen and carbon di-oxide, or other products of combustion, and as the further admission of atmospheric air is excluded either in whole or to a great extent the disintegration and the consumption of the carbons are to a great extent overcome and the life of them is to a great extent prolonged.

To prevent danger of the lamp exploding and the case being broken by high pressure or gas formed within the inclosure, I leave a small opening preferably in the casing section of the inclosure, and to prevent the in-

flux of atmospheric air when the pressure is relieved I provide an outwardly opening check or relief valve 10, as shown in Fig. 2.

It is obvious that the invention can be applied to arc lamps using electrodes other than carbon, and I desire it to be understood that I do not claim broadly an inclosure for the carbons or electrodes or arclamps for the purpose of preventing the said carbons or electrodes being in open contact with atmospheric air; and furthermore I do not claim broadly the application to the inclosure of the relief valve, as I am aware that these features are not original with myself.

I claim as my invention—

In an electric arc lamp, the combination with an inclosure for the carbons or electrodes, said inclosure comprising a casing and a globe section, of a flange formed upon the casing section, a corresponding flange formed upon the globe section and adapted for con-

tact with the casing flange, said casing having the flat under side as shown, pendants projecting from the casing flange, and adjusting screws carried by the pendants, having an upward inward inclination adapted for impinging obliquely on the said flat under side of the globe flange at a distance from the body of the globe adapted to avoid material inward pressure at the angle between the flange and the body, substantially as described, whereby the screws have a direct lifting action and wide range of adjustment, and are capable of exerting strong pressure upon the globe without injury thereto, and of insuring a tight joint between the globe and the casing sections as set forth.

ALFRED H. MOSES, JR.

In presence of—

S. L. COHEN,

GEO. H. KNIGHT.