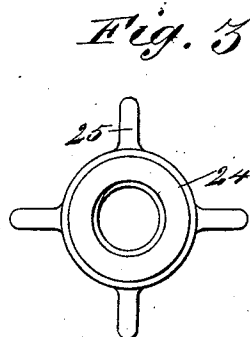
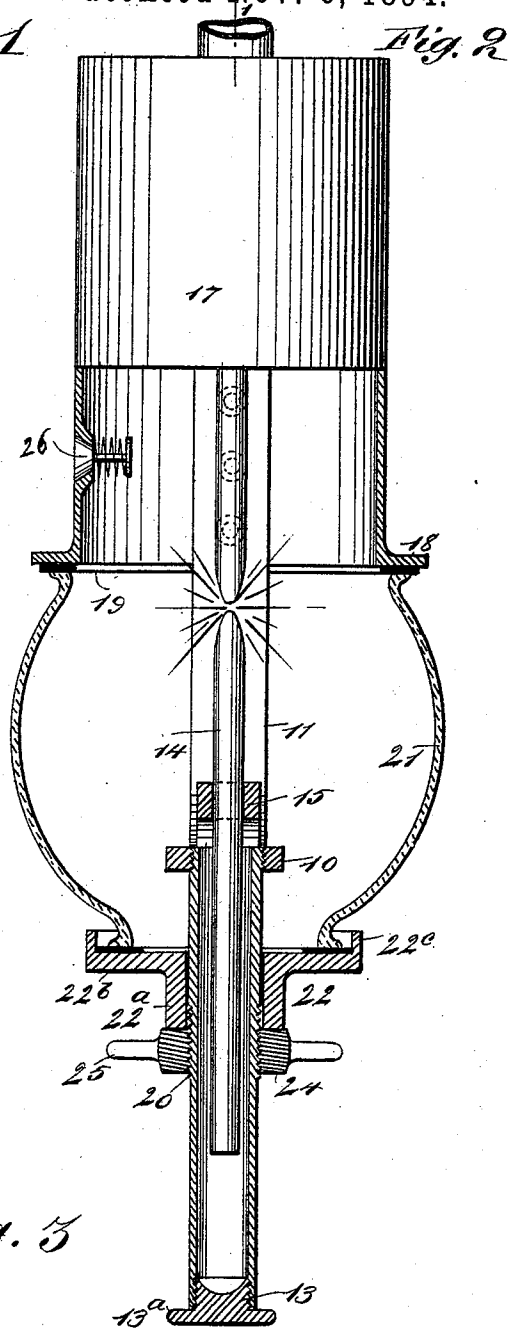
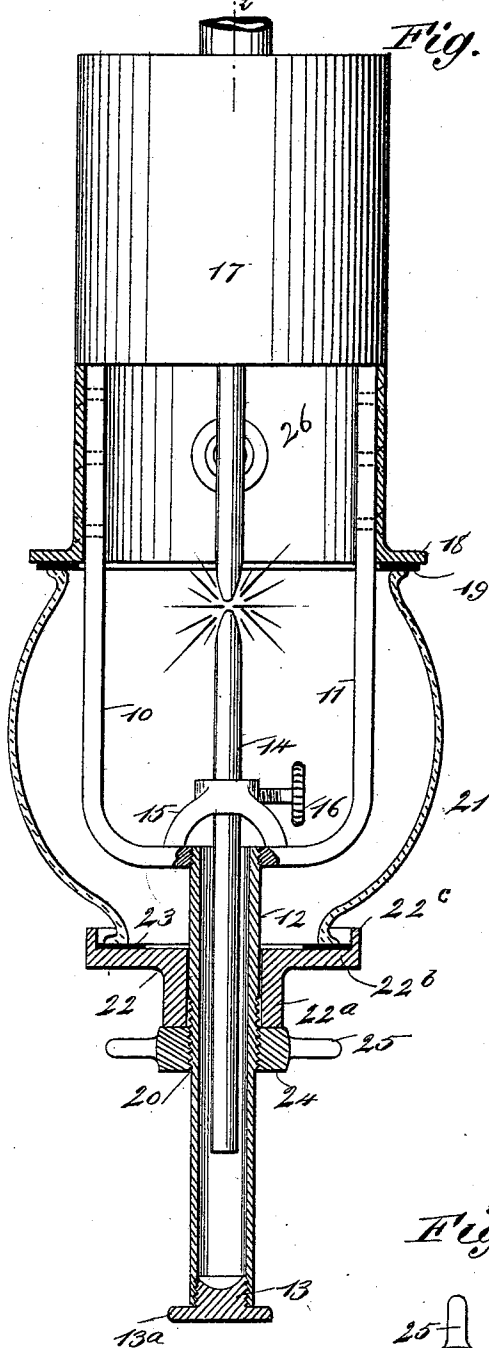


(No Model.)

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

No. 528,642.

Patented Nov. 6, 1894.



WITNESSES:

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ALFRED H. MOSES, JR., OF NEW YORK, N. Y.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 528,642, dated November 6, 1894.

Application filed January 8, 1894. Serial No. 496,039. (No model.)

To all whom it may concern:

Be it known that I, ALFRED H. MOSES, Jr., a citizen of the United States, and a resident of New York city, in the county and State of New York, have invented certain new and useful Improvements in Electric-Arc Lamps, of which the following is a specification.

My invention relates to an improvement in electric arc lamps, and it has for its object to provide a means whereby the globe of the lamp may be expeditiously and conveniently dropped or removed from the carbons or electrodes to expose the latter, the globe remaining at the same time in connection with the lamp.

A further object of the invention is to provide a means whereby the globe of an electric arc lamp need not be removed from its support when the globe is to be lowered, and whereby the globe and its support may be carried upward to an engagement with the casing, or to its normal position in an exceedingly expeditious manner, the connection between the casing and the globe being a thoroughly air-tight one.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

In the drawings, Figure 1, is a partial side elevation and partial vertical section through a lamp having the improvement applied, the section being taken essentially on the line 1—1 of Fig. 2. Fig. 2, is a view similar to Fig. 1, the section however being taken at right angles to that shown in Fig. 1, and practically on the line 2—2 of said figure; and Fig. 3, is a plan view of the lock nut employed upon the lamp.

In carrying out the invention the frame of the lamp consists preferably of parallel bars 10 and 11 which at their lower ends are carried inward in a horizontal direction and secured to the upper end of a tube 12, in any suitable or approved manner, the tube being located about centrally between the two bars and pendent therefrom. The lower end of the tube 12, which may be of any desired length, is closed ordinarily by a plug 13, as shown in Figs. 1 and 2. The lower carbon or electrode 14, is passed into the tube 12 through a spider-like socket 15, the carbon

or electrode being held in the socket through the medium of a set screw 16, or its equivalent.

A casing 17, preferably of metal, is secured by means of screws or equivalent fastening devices to the upper portions of the frame bars 10 and 11, the said casing 17, being provided at its lower edge with a horizontal flange 18 preferably made of greater thickness than that of the body of the casing, and the flange 18 has a washer or gasket 19, of rubber, leather or like material, preferably permanently and securely fastened to its under face.

The plug 13 when it is employed to close the lower end of the tube 12, is provided with a head 13^a, which extends beyond the sides of the tube, and the tube ordinarily about midway between its ends is provided with an exterior thread 20.

The globe 21 is adapted to engage with the washer or gasket 19, of the casing flange, and to be normally held against said washer in such manner as to form an air tight connection with the casing, and the lower portion of the globe is made to rest upon a support 22 adjustable or movable upon the casing. This support usually consists of a tubular body section 22^a, a horizontal bed section 22^b, integral with the top of the body section, and an annular flange 22^c located at the margin of the bed section, extending upwardly therefrom; and a washer or gasket 23 is located upon the bed section of the support, adapted to receive the lower edge of the globe. A lock nut 24 shown in detail in Fig. 3, is located upon the tubular portion 12 of the frame the said lock nut being adapted to slide over the unthreaded or plain exterior of the tube and to be screwed upon the threaded section thereof. The elastic washers serve to afford relief to the globe when expanded by heat, besides making the joints tight.

In operation the support rests upon the lock nut 24, and the bore of the support is sufficiently large to enable it to pass readily over the threaded section of the sleeve. Therefore, when the lock nut is screwed upon the threaded section of the sleeve, the support 22 and the globe will be forced upward until the upper edge of the globe has a firm and air-tight connection with the flange 18

of the casing, and the said flange is rendered thicker than the body of the casing in order that the flange may stand firmly against a maximum pressure. When access is to be
 5 gained to the electrodes or carbons, the lock nut is unscrewed from the threaded portion of the frame sleeve 12, and will drop downward upon the sleeve to an engagement with the head 13^a of the plug 13, which acts as a
 10 stop, and the support, carrying with it the globe 21 will follow the lock nut in its downward course, and will leave the electrodes or carbons exposed to such an extent that they may be freely reached, replaced or removed,
 15 and at the same time the globe is entirely out of the way but yet remains upon the frame of the lamp, and when the carbons have been manipulated as desired by pressing upward the support and lock nut and screwing the
 20 lock nut on the threaded portion of the frame sleeve, the globe will be restored to and secured in its normal position. In order that the lock nut may be operated conveniently, it is preferably provided with a series of pins
 25 or studs 25, which project from its peripheral surface.

It will be understood that the adjusting device for the globe of the casing above described may be applied to a double arc lamp
 30 as well as to the single form illustrated. When the double form of lamp is employed a third pendant or extension of the frame may be located between the two tubular extensions receiving the carbons or electrodes.
 35 In this event the support for the globe will slide upon all three of the extensions, while the lock nut may be made to travel upon the intermediate extension only.

To provide against accumulation of undue
 40 pressure within the lamp that may possibly occur by the slight combustion consequent to the oxygen contained in the lamp at the beginning, or any other cause of such pressure, an ordinary relief valve is provided at 26, in
 45 the case, said valve adapted to open at any desired internal pressure above atmospheric pressure and permit escape of the gas.

Having thus described my invention, I
 50 Patent—

1. In an electric arc lamp, the combination,

with the frame, a pendant of the frame provided with a stop at one end, and an exteriorly threaded section, the surface of the pendant
 55 being plain between the thread and stop, of a casing attached to the frame and provided with a flanged lower edge, a support having sliding movement upon the pendant of the frame, a globe located upon the support and adapted for engagement with the
 60 flange of the casing, and a lock nut located upon the pendant and engaging with the support, whereby the support and lock nut may be moved together and a tight joint may be obtained between the globe and support and
 65 the globe and the casing, substantially as described.

2. The combination of the case open at its lower end and said end flanged suitably for making a joint thereat with the top of the
 70 globe, the pendent portion of the frame, the globe support adapted to slide up and down said pendent portion of the frame the globe adapted to be clamped between the globe support and the flange of the case, and the lock
 75 nut on the pendent portion of the frame, and adapted to clamp the globe support, globe and the flanges of the case tightly together substantially as described.

3. The combination of the case open at the
 80 lower end and said end flanged suitably for making a joint thereat with the top of the globe, the pendent portion of the frame, the globe support adapted to slide up and down said pendent portion of the frame the globe
 85 adapted to be clamped between the globe support and the flange of the case, a packing of elastic material for the protection of the globe and the lock nut on the pendent portion of the frame and adapted to clamp the globe
 90 support, globe and flange of the case tightly together, said globe and case being practically air-tight and provided with a relief valve substantially as described.

Signed at New York city, in the county and
 95 State of New York, this 27th day of December, A. D. 1893.

ALFRED H. MOSES, JR.

Witnesses:

W. J. MORGAN,
 S. H. MORGAN.