

C. GONZALEZ-PEREZ.
ARC LAMP.
APPLICATION FILED JUNE 15, 1911.

1,034,294.

Patented July 30, 1912.

Fig. 1.

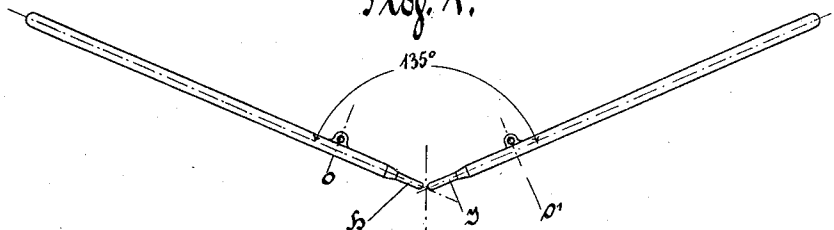


Fig. 2.

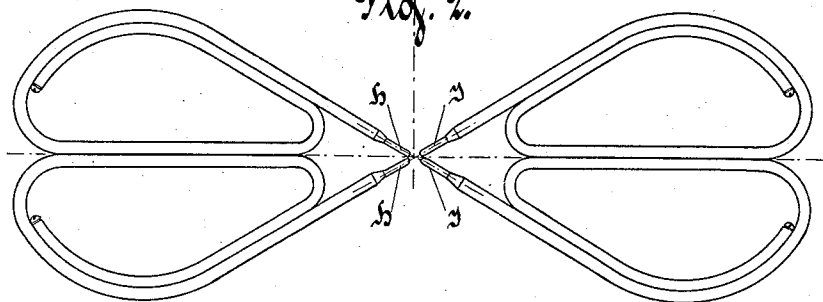
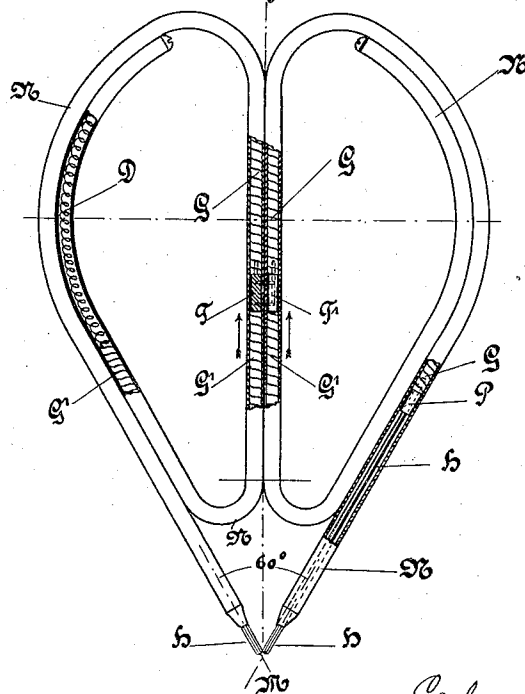


Fig. 3.



WITNESSES:

John C. Sanders
Leon Spring

INVENTOR:

Carlos Gonzalez-Perez
BY *Wm. Wallace White*

ATTY

UNITED STATES PATENT OFFICE.

CARLOS GONZALEZ-PEREZ, OF MADRID, SPAIN.

ARC-LAMP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CARLOS GONZALEZ-PEREZ, of 53 Calle de Zurbano, Madrid, Spain, engineer, have invented new and useful Improvements in and Pertaining to Arc-Lamps, of which the following is a specification.

This invention relates to an arc lamp, in which each electrode consists of several carbons that mutually support each other in such manner that the pole of each electrode is always positioned at the point of intersection of the two converging carbons.

In accordance with this invention the feed of the carbons is effected by connecting together the rearward prolongations of the tubes in which the carbons are arranged, and by furnishing them with a common element that is connected with the carbons by means of a flexible pressure device, which cannot be compressed the result being that the carbons of a pole will always be moved forward in an absolutely uniform manner. By means of this arrangement the carbons of each pole can be arranged at any desired angle in relation to each other, while the pairs of carbons, each of which constitutes a pole, may also be arranged at any desired angle and consequently directly opposite to each other, if desired, with the result that the lamp can be kept exceptionally flat. It is even possible to impart an upward direction to the pairs of carbons, an arrangement which renders the lamp especially suitable for the lighting of ceilings. The absolutely uniform forward movement of the individual carbons independently of the use of weights secures the further advantage that the lamp is rendered quite indifferent to shocks and vibration.

A further advantage consists in the fact that the entire feed mechanism is completely shut off from the outer air with the result that the risk of destruction of the component parts of the lamp by the action of the atmospheric air and the gases and vapors evolved is entirely obviated.

The accompanying drawings illustrate an arrangement in accordance with this invention wherein—

Figures 1 and 2 show in lateral view and plan respectively an arrangement of the carbons; and Fig. 3 shows a pair of carbons and the feed mechanism thereof.

Each pole consists of two or more carbons, the left pole consisting of the carbons

H, and the right pole of the carbons I. The carbons of each pole are inclined to each other, so that their axes intersect. The carbons during their consumption are uniformly fed forward so that their pole or point of combustion M will coincide with the point of intersection of the two axes. The two carbons H are inserted into two tubes N; and upon the upper end of each carbon there presses a piston P, which is moved forward by a pressure device G, which may be of any suitable construction, and which, in the case illustrated in the drawings, has the form of a flexible incompressible spring. The object of the device G is to effect the forward movement of the two carbons H simultaneously, and for this purpose the tubes N are curved so as to be brought into contact along the middle line, where they are put into communication by means of a slot. In the tubes there is arranged a double piston, T, T' which, by means of a spring device G' comprising spiral springs D, is moved forward to an extent corresponding to the amount removed from the carbons at their point of combustion M. The provision of a double piston secures the absolutely uniform forward movement of the carbons. The arc is struck by rotating the carbon holders N around the points o and o' (Fig. 1) and thus moving the carbons away from another.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In an arc light, two converging tubes, carbons mounted in said tubes and forming an electrode, incompressible elements within said tubes and operatively engaging said carbons, means positioned within said tubes and operatively engaging both of said incompressible elements and means exerting a pressure on said first-mentioned means, whereby the carbons will be fed.

2. In an arc light, two converging tubes, carbons mounted in said tubes and forming an electrode, incompressible elements within said tubes and engaging said carbons, a double piston engaging both of said elements, and means for moving said piston to move said elements, whereby the carbons are fed.

3. In an arc light, an electrode composed of two converging carbons, tubes in which said carbons are positioned, said tubes being

in contact with one another throughout a portion of their length, the contacting portions of the tubes being provided with slots, whereby the tubes are in communication
5 with one another, a flexible incompressible member in each tube operatively engaging the carbon positioned within said tube, and feeding means common to both carbons operatively engaging said flexible members,
10 said means comprising a double piston slidably mounted in said tube and extending through said slots.

4. In an arc light, an electrode composed of two converging carbons, tubes in which
15 said carbons are positioned, said tubes being in contact with one another throughout a portion of their length, the contacting por-

tions of the tubes being provided with slots, whereby the tubes are in communication with one another, a flexible incompressible
20 member in each tube operatively engaging the carbon positioned within said tube, a double piston slidably mounted within the tubes and extending through the slots, said piston operatively engaging said flexible
25 members, and resilient means constantly urging said piston to exert pressure upon said flexible members.

In testimony whereof I affix my signature in presence of two witnesses.

CARLOS GONZALEZ-PEREZ.

Witnesses:

JOSE M. GAY,

MANUEL SANCHES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
