

No. 737,825.

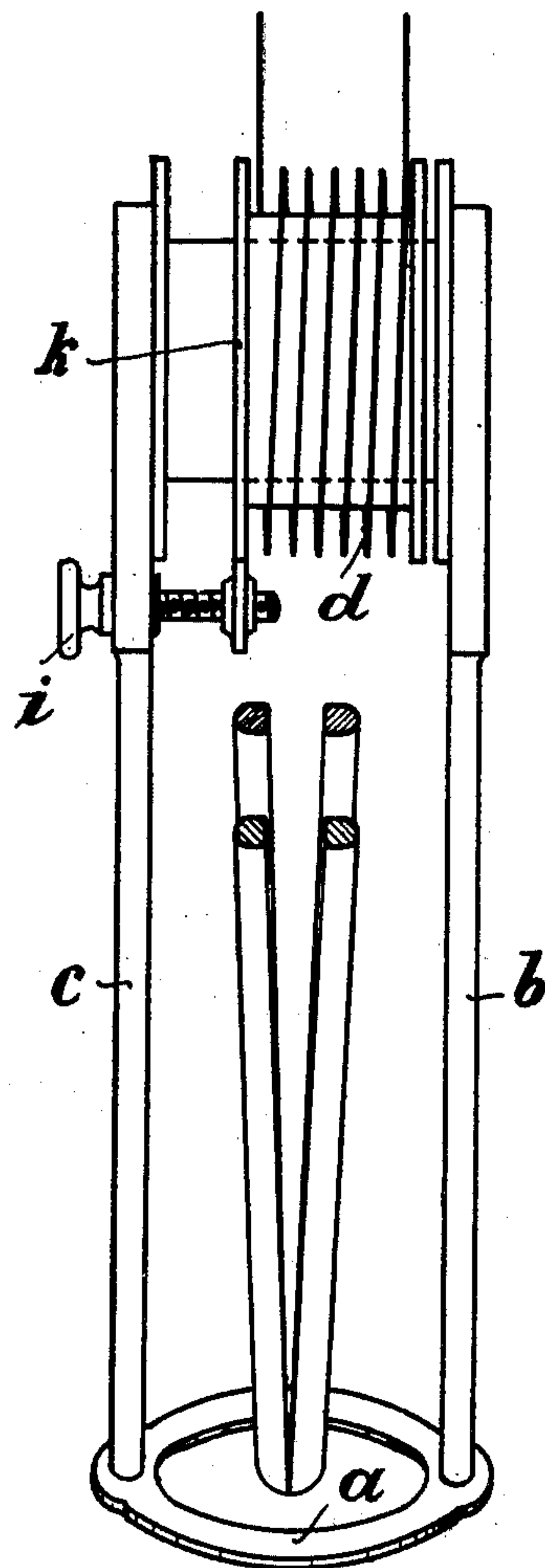
PATENTED SEPT. 1, 1903.

T. L. CARBONE,  
ELECTRIC ARC LAMP.

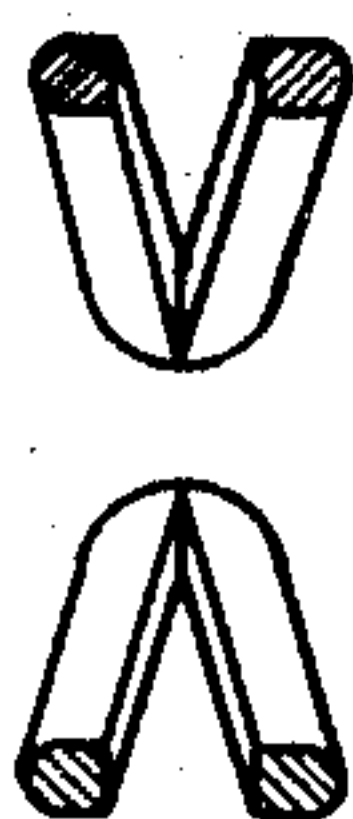
APPLICATION FILED MAR. 25, 1903.

NO MODEL.

*Fig. 1.*



*Fig. 2.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

TITO LIVIO CARBONE, OF GRUNEWALD, NEAR BERLIN, GERMANY.

## ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 737,825, dated September 1, 1903.

Application filed March 25, 1903. Serial No. 149,583. (No model.)

*To all whom it may concern:*

Be it known that I, TITO LIVIO CARBONE, a subject of the King of Italy, residing at Grunewald, near Berlin, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Arc-Lamps; and I do hereby declare that the following is a full, clear, and exact description.

The present invention relates to an apparatus for influencing magnetically the arc of electric-arc lamps in order to obtain a very bright, steady, and white light while the carbons burn up without residues.

The magnetic effect may be obtained most simply by arranging an iron ring close to and above the arc, the ring being traversed by lines of magnetic induction produced by a coil, the lines being led to and from said ring by means of two iron rods and passing between two opposite points of the ring. The lines of force coming from the north pole are thus divided and pass to the south pole through the two branches of the ring. For the purpose that the magnetically-influenced arc is exactly in the center of the iron ring the coil is arranged horizontally movable on its iron core. Thus the coil may be shifted in that position, which forces the magnetically-influenced arc exactly in the center of the iron ring.

The subject of the present invention is diagrammatically represented in the annexed drawings.

It is understood that the arc passes between two pairs of carbons, meeting one another at an acute angle, though my invention is not limited to this arrangement of the carbons. Both carbon rods of each carbon pair face one another with their flat sides and touch one another only at their lower ends,

where the arc is formed, because the two rods are inclined together at an acute angle. The guiding and feeding of the carbons in the above mechanism may be automatically effected in any known or suitable manner.

Figure 1 shows the new apparatus, in which the coil can be moved horizontally on its iron core. Fig. 2 shows the two pairs of carbon rods in plan view.

A little above the place where the arc is to be formed the ring *a* is arranged. It is carried by two iron rods *b* and *c*, which are connected to the coil *d* in such a way that the lines of induction produced by the coil when a current passes may reach the ring *a* and return from the latter to the coil.

The coil *d* is wound on a socket *k*, which is horizontally movable with respect to its iron core and can be adjusted in the desired position between the two iron rods *b c* by means of the screw *i* in such a manner that the arc is forced exactly in the center of the ring *a*.

Having now described my invention and in what manner the same is to be performed, what I claim, and desire to secure by Letters Patent, is—

In an arc-lamp the combination with the carbons of a ring surrounding said carbons, iron rods secured to the opposite poles of an iron core, and a coil, which is horizontally movable on said iron core and may be adjusted in its proper position, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

TITO LIVIO CARBONE.

Witnesses:

HENRY HASPER,  
WOLDEMAR HAUPT.