

H. BECK.
ELECTRIC ARC LAMP.
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962,732.

Patented June 28, 1910.

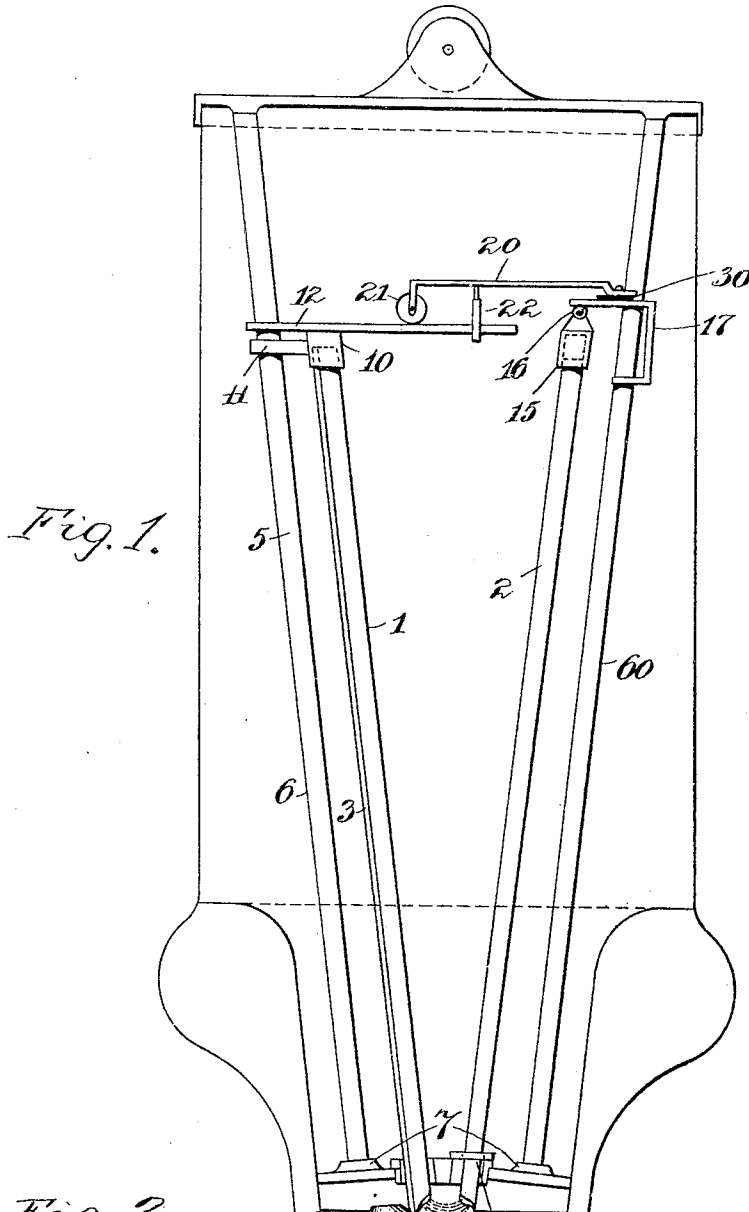


Fig. 1.

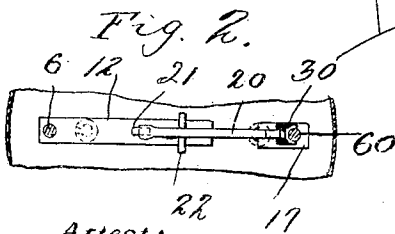


Fig. 2.

Attest:
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by *William R. Baird*
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UNITED STATES PATENT OFFICE.

HEINRICH BECK, OF FRANKFORT-ON-THE-MAIN, GERMANY, ASSIGNOR TO BECK FLAMING LAMP COMPANY, OF CANTON, NEW YORK, A CORPORATION OF NEW YORK.

ELECTRIC-ARC LAMP.

962,732.

Specification of Letters Patent. Patented June 28, 1910.

Application filed November 15, 1906. Serial No. 343,538.

To all whom it may concern:

Be it known that I, HEINRICH BECK, a subject of the German Emperor, residing at Frankfort-on-the-Main, Germany, have invented certain new and useful Improvements in Electric-Arc Lamps, of which the following is a specification.

My invention relates to electric arc lamps and its novelty consists in the construction and adaptation of the parts as will be more fully hereinafter pointed out.

On July 25, 1905, there was granted to me Letters Patent of the United States No. 795,681, for an electric arc light in which there is shown and described a lamp comprising a pair of electrodes arranged points downward, a support on one of which said electrodes rests and means for retarding the consumption of the part of the supported electrode turned away from the light.

My present invention may be considered as an improvement upon the invention described in that patent and it has for its object providing the electrodes with means whereby a substantially uniform distance may be maintained between the arcing ends of the electrodes.

In the drawings, Figure 1 is a plan view somewhat in diagrammatic form illustrating an arc lamp embodying my invention, and Fig. 2 is a detail plan view.

In the drawings, 1 represents one electrode and 2 the other. The electrode 1 is provided with a longitudinal rib indicated at 3 and is adapted to rest upon a support 4 suitably mounted on the frame of the lamp. A framework 5 consisting of depending rods 6, 60, and a transverse yoke 7 is arranged in convenient proximity to the electrodes which, near their lower extremities, pass through apertures thereon and project into the globe of the lamp. The parts above described are not essentially different from the similar parts described in the patent above referred to.

To the upper end of the electrode 1, is secured a carrier herein shown as comprising a socket 10 provided with a lateral bracket 11 adapted to embrace the rod 6 so as to slide thereon. On top of this socket there is secured a bar 12 projecting toward the other electrode 2. To the upper end of the electrode 2 is secured a socket or holder 15 terminating at its upper extremity in a universal joint, or hinge, 16 of any approved con-

struction by means of which it is connected to a lateral bracket 17 having a member 18 adapted to embrace the rod 60 and to slide thereon. This bracket carries a bar 20 provided at its extremity with a wheel, or roller, 21 adapted to roll upon the bar 12 and it also carries a depending fork 22 adapted to prevent the lateral displacement of the bars with respect to each other. A layer of insulating material 30, as mica, is interposed at a convenient point between the electrodes.

31 is an air seal loosely embracing the electrode 2.

In the operation of the device the electrode 1 rests upon the support 4 and as this electrode burns away it is fed downward by gravity. As it moves downward the wheel 21 and bar, with the bracket 17, and socket piece 15, follows, acting under the influence of gravity. The fork 22 keeps the bars 12 and 20 in alinement and the rods 6 and 60 in connection with the apertures in the yoke 7 keep the electrodes properly spaced apart, and as they move downward together their lower extremities are naturally kept at a uniform distance apart.

What I claim is—

1. In an electric arc lamp, a pair of electrodes and means for preserving a uniform distance between the arcing ends thereof in their longitudinal movement, comprising members connected to the electrodes and movable therewith and projecting therefrom toward each other, said members having relative longitudinal movement, a roller carried by one of the members and having a rolling contact with the other, means carried by one of said members and engaging the other, for preventing lateral displacement thereof.

2. In an electric arc lamp, a pair of electrodes and means for preserving a uniform distance between the arcing ends thereof in their longitudinal movement, comprising members connected to the electrodes and movable therewith and projecting therefrom toward each other, said members having relative longitudinal movement, a roller carried by one of the members and having a rolling contact with the other of the members, and a yoke projecting from one member and engaging the edges of the other member and preventing lateral displacement thereof.

3. In an electric arc lamp, a frame, a lon-

gitudinally movable electrode, a support therefor, a guiding means comprising a carrier having a guiding element which is slidably engaged with the frame, a second electrode, and means whereby the second electrode is carried by the first-mentioned electrode and is movable laterally relatively thereto, comprising an arm movable with the first electrode and projecting thence toward the second electrode, a holder secured to the second electrode, a guiding connection between the holder and the frame, said holder pivoted to said guiding connection, an arm movable with the second electrode,

and extending over the first-mentioned arm, 15 a rolling bearing between said arms by which the second arm is supported to roll on the first-mentioned arm, and a yoke projecting from one arm and engaging the other arm and preventing lateral displacement 20 thereof.

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

HEINRICH BECK.

Witnesses:

JEAN GRUND,
CARL GRUND.