

K. VON DREGER.
ARC LAMP.

APPLICATION FILED JAN. 14, 1909.

1,034,594.

Patented Aug. 6, 1912.

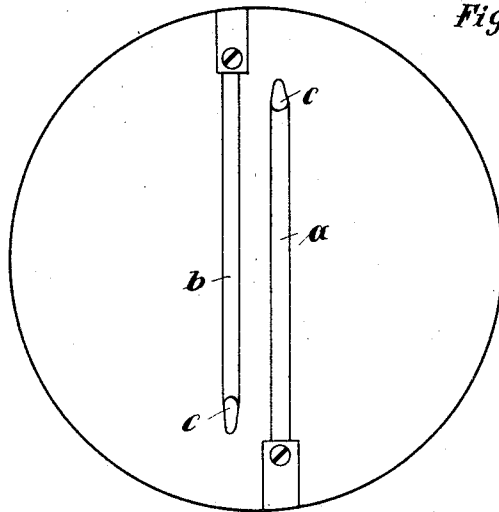


Fig. 1.

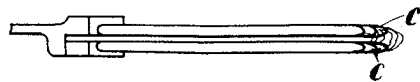
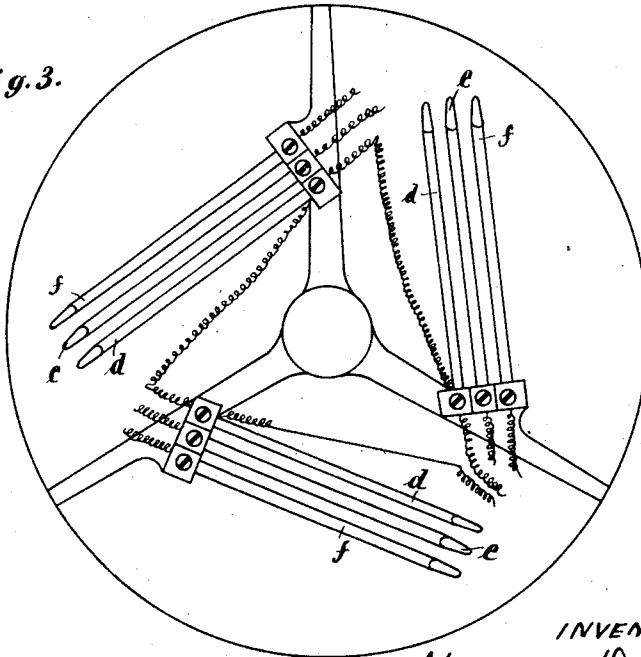


Fig. 2.

Fig. 3.



ATTEST

R. M. Kelly,
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INVENTOR

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By his atty *[Signature]*

UNITED STATES PATENT OFFICE.

KARL VON DREGER, OF BERLIN, GERMANY, ASSIGNOR TO GESELLSCHAFT FÜR VERWERTUNG TECHNISCHER PATENTE MIT BESCHRÄNKTER HAFTUNG, OF BREMEN, GERMANY.

ARC-LAMP.

1,034,594.

Specification of Letters Patent.

Patented Aug. 6, 1912.

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To all whom it may concern:

Be it known that I, KARL VON DREGER, a subject of the Emperor of Austria-Hungary, residing at Berlin, S. W. 61, in the Empire of Germany, have invented a new and useful Arc-Lamp, of which the following is a specification.

Ordinary arc lamps with vertical carbons throw their light downward in the form of a cone, and the distribution of the light is suitable for the lighting of grounds, floors and the like. When, however, it is desirable to light the walls, as well as the floor, vertical carbons are not satisfactory. While horizontal carbons will throw the light both outward on the walls and downward, the greater part of the light is thrown forward in front of the carbons, and there is insufficient light back of them.

This invention relates to a special arrangement of two or more sets of carbons by which the distribution of the light is effected more uniformly and which permits the use of long carbons without excessively enlarging the diameter of the lamp, and these results I accomplish by the use of a plurality of pairs or sets of carbons arranged with the points or burning terminals of any pair directed toward the heels or holders of the succeeding pair, but not in direct line therewith, so that a geometrical plane through any pair of electrodes if prolonged beyond their burning terminals will pass at a distinct distance past the heels or holders of the succeeding pair.

In the drawings:—Figure 1 is a diagrammatic plan of a lamp containing two pairs of carbons arranged horizontally and oppositely; Fig. 2 is a side view of one of the pairs of carbons; and Fig. 3 is a diagrammatic plan view of a lamp having three sets of carbons each composed of three pairs.

In the construction shown in Fig. 1 only two pairs of carbons are used, pair *a* being oppositely arranged to the pair *b*, so that the burning points *c* of each pair are directed toward the heels of the other pair.

In the construction shown in Fig. 3 the carbons are arranged in sets, each set consisting of three pairs of carbons *d*, *e*, *f*.

These sets are arranged in a suitable support in a horizontal position to the central axis of the lamp with the burning points of the carbons of each set directed toward the heels of the carbons in the adjacent set, but not in line therewith, so that a vertical plane through the geometrical axis of any pair of the electrodes in any set if prolonged beyond the burning points will pass at a distinct distance past the heels of the pairs of electrodes in the next set.

In Fig. 1 both pairs of carbons *a* and *b* burn simultaneously. In the construction shown in Fig. 3 the three inner pairs of carbons *d* burn first. When these have become too short, the second pairs *e* come into operation automatically, and when these have become too short they are also automatically disengaged and the three pairs *f* come into action. Other arrangements of pairs of carbons may be made without departing from the invention, provided that the carbons in successive pairs are so arranged that the vertical plane in the geometrical axis of any pair when prolonged beyond the burning terminals of such pair will pass at a distinct distance past the heels or holders of the adjacent pair.

A lamp of this kind is of special use in lighting streets and highways and also narrow spaces in tunnels, excavations, sewers and the like, where horizontal space such as is necessary with lamps having vertical carbons is not available. No feeding mechanism is required and the carbons may have any length desired for any burning duration without having the vertical depth necessary with lamps having vertical carbons in which the vertical height is proportional to the length of the shafts and carbons and the duration of burning.

I claim:

1. An electric arc lamp containing a plurality of pairs of electrodes extending horizontally and tangentially about a central vertical axis, the electrodes in each pair being placed side by side.

2. An electric arc lamp containing a plurality of pairs of electrodes extending horizontally and tangentially about a central

vertical axis, the electrodes in each pair being placed side by side with the burning points of any pair directed toward the heels of the succeeding pair but in such manner
5 that a vertical plane through the geometrical axis of any pair, if prolonged beyond the burning terminals of said pair will pass

at a distance past the heels of the succeeding pair.

KARL VON DREGER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.