S. E. DONNELLY.

ELECTRIC ARC LIGHT.

APPLICATION FILED JAN. 16, 1909.

928,857. Patented July 20, 1909.

Fig. 1.

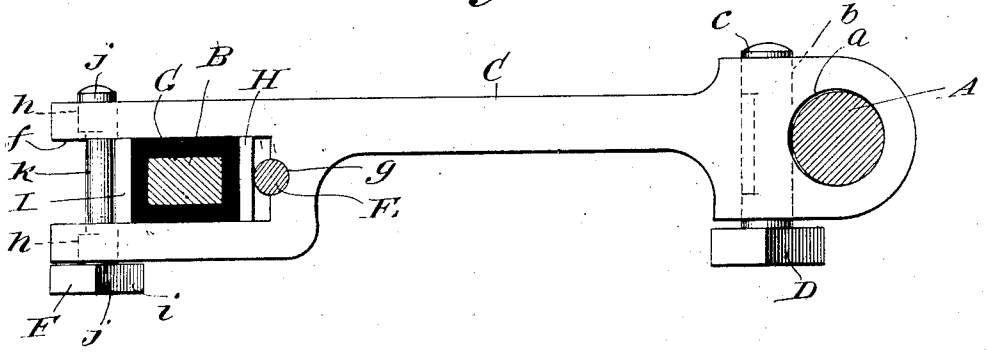


Fig. 2.

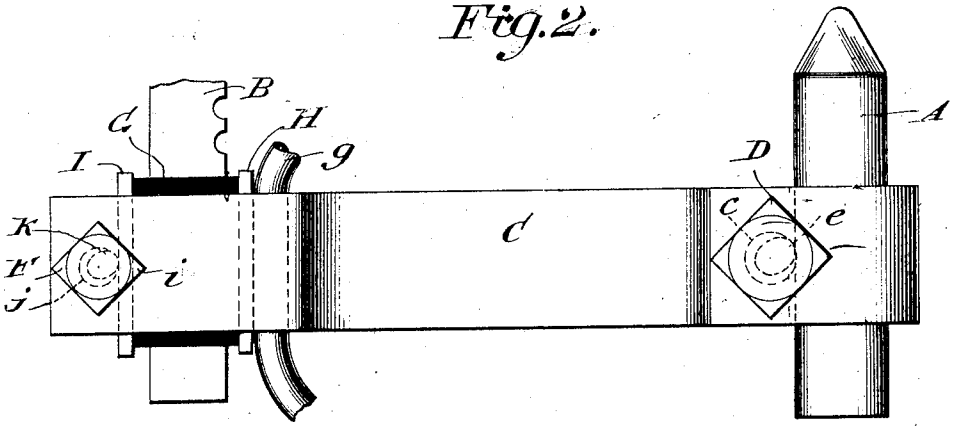
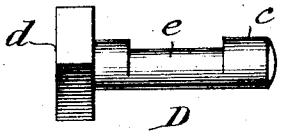


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

SIDNEY E. DONNELLY, OF SHREVEPORT, LOUISIANA, ASSIGNOR OF ONE-FOURTH TO H. KRAMER AND ONE-FOURTH TO C. G. MORRIS, OF SHREVEPORT, LOUISIANA.

ELECTRIC-ARC LIGHT.

No. 928,857. Specification of Letters Patent. Patented July 20, 1909.

Application filed January 16, 1909. Serial No. 472,622.

To all whom it may concern:

Be it known that I, SIDNEY E. DONNELLY, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented new and useful Improvements in Electric-Arc Lights, of which the following is a specification.

My invention pertains to electric arc lights, and more particularly to means for holding carbons.

One of the objects of the invention is to provide a simple, easily adjusted and reliable device for fixing a carbon in and with respect to a holder body, and this in such manner that expansion due to heat is not liable to loosen the carbon in the said body.

Another object of the invention is the provision of means for effecting electrical connection between the holder body and a conductor and for electrically isolating the said body and the conductor from the support therefor, and, at the same time, clamping the insulation employed in such manner that there is no liability of casual movement of the insulation or of parts thereagainst, and consequently no liability of the insulation wearing out after a short period of use.

Other objects of the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a horizontal section taken through a carbon and the support therefor in a plane above the holder body and illustrating my improvements in plan. Fig. 2 is a side elevation of the same. Fig. 3 is a detail view illustrating one of the rocking clamping devices comprised in my improvements as removed.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a carbon.

B is the conventional or any other suitable support for the carbon, and C is the holder body through which the carbon is connected with the support. The said body C is preferably of metal and is provided adjacent one end with a vertically disposed aperture *a* for the reception of the carbon. It will also be observed by reference to Fig. 1 that the body C is provided with a transverse or horizontal bore *b*, which is arranged at one side, preferably the inner side, of the aperture *a* and in communication therewith. The said bore *b* is designed to receive one rocking or axially movable clamping device D of my invention, and it will be seen by comparing Figs. 1 and 3 that the said device is in the general form of a pin or bolt—that is to say, it comprises a shank *c* the end portions of which are of circular form in cross-section, and a head *d* of angular or other suitable form. It is peculiar, however, in that it is provided with an intermediate eccentric portion *e*, arranged as shown, so as to directly contact with the carbon and assure great locking pressure against the carbon when the device is slightly turned about its axis. Because of the direct connection between the eccentric portion *e* and the carbon it will be manifest that tendency of the carbon to gravitate only serves to bind it the more firmly in the holder. It will also be manifest that the clamping device D is strongly supported at opposite sides of the point where it contacts with the carbon, and that it may be expeditiously and easily turned either to fix or to release the carbon at the pleasure of an attendant, the head *d* serving in such case for the engagement of the fingers of the attendant or for the application of a wrench or the like; and further that adjustment of the carbon or the removal of the same and the placing of a new carbon in position entails adjustment of but one element, viz: the device D.

At its end remote from the carbon A the holder body C is bifurcated, as indicated by *f*, and in the inner end wall of said bifurcation is a shallow groove *g*, while in the side walls of the bifurcation alined transverse apertures *h*, of circular form, are provided. The support B extends vertically through the bifurcation *f*, and the groove *g* is designed to receive a wire or other conductor E, while the apertures *h* have for their office to receive the device F for clamping the insulation, presently described, and for adjustably fixing the said insulation, the holder body C and the conductor E with respect to the support B. The said clamping device F is provided with a head *i* and also with a shank, the latter being made up of end portions *j*, of circular form in cross-section, and an intermediate eccentric portion *k*. The insulating material, indicated by G, extends all around the portion of the support B in the bifurcation

of the holder body C, and I prefer to interpose a metallic strip H between the said insulating material and the conductor E, and a similar strip I between the insulating material and the eccentric portion *k* of the clamping device F. Thus it will be manifest that when the clamping device F is turned about its axis to press the eccentric portion *k* toward the support B, the insulating material, the metallic strips, the conductor E, the holder body C and the support B will all be firmly held in position, without liability of casual movement of any of the parts and the wear generally incidental to such movement. From this it follows that the insulating material will remain fixed with respect to the other parts until the clamping device F is loosened, and there is no liability of heating taking place because of any of the parts becoming loose; also, that the weight of the holder body C and the parts carried thereby will tend at all times to keep the clamping device F tight, and yet when occasion demands the said clamping device F may be expeditiously and easily turned or rocked toward the left.

In addition to the practical advantages hereinbefore ascribed to my improvements, it will be appreciated that the improvements as a whole are compact, and that all of the parts comprised in the improvements are well adapted to withstand the usage and exposure to which devices of corresponding character are ordinarily subjected.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. In means for the purpose described, the combination of a support, an electric conductor, a holder body apertured to receive the support and the conductor, insulation surrounding the support and interposed between the same and the walls of the aperture, and a clamping device having end portions of circular form in cross-section journaled in the holder body at opposite sides of the aperture, and also having an intermediate eccentric portion adapted to be presented to the insulation.

2. In means for the purpose described, the combination of a support, an electric conductor, a holder body having a bifurcation to receive the support and conductor, and also having a shallow groove in the inner wall of the bifurcation to seat the conductor, insulation surrounding the support and arranged in the bifurcation of the holder body, and a clamping device having end portions of circular form in cross-section journaled in the walls of the bifurcation, and an intermediate eccentric portion adapted to be presented to the insulation and also having a head at one end.

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

SIDNEY E. DONNELLY.

Witnesses:
O. B. Eaton,
J. H. Prescott.