(No Model.) 2 Sheets—Sheet 1.

S. P. PARMLY.

ELECTRIC ARC LAMP.

No. 546,388. Patented Sept. 17, 1895.

Fig. 4.

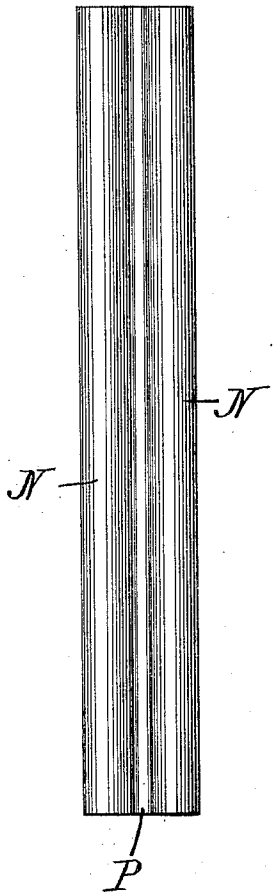


Fig. 1.

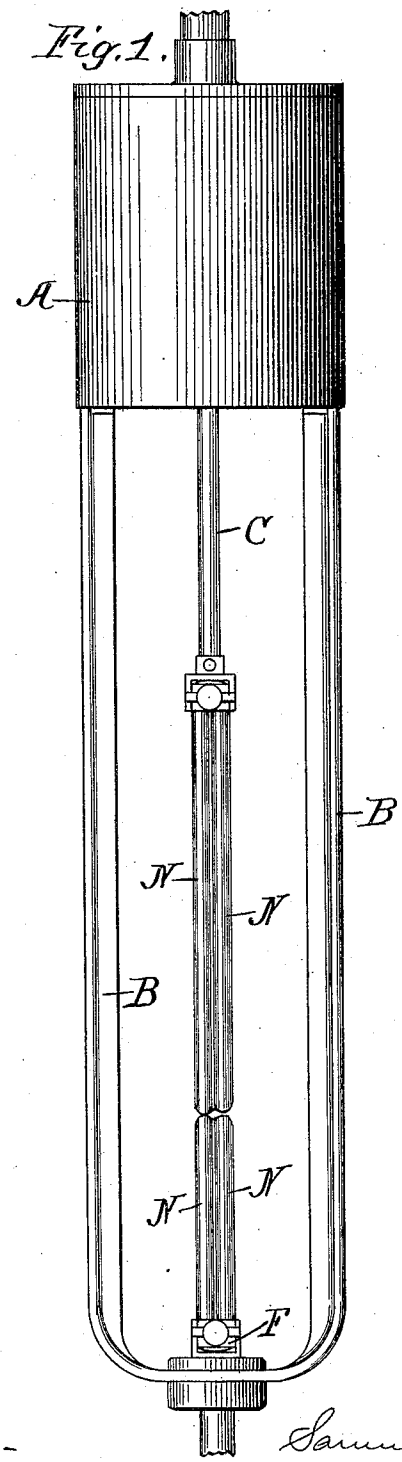


Fig. 2.

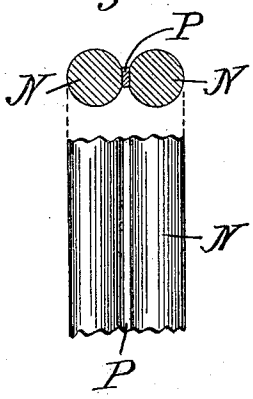
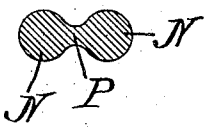


Fig. 3.



Witnesses.
E. T. Wray
J. H. Coulter

Inventor.
Samuel P Parmly
by Bruce & W. Parker,
his Atty.

ANDREW B. GRAHAM. PHOTO-LITHO. WASHINGTON, D.C.

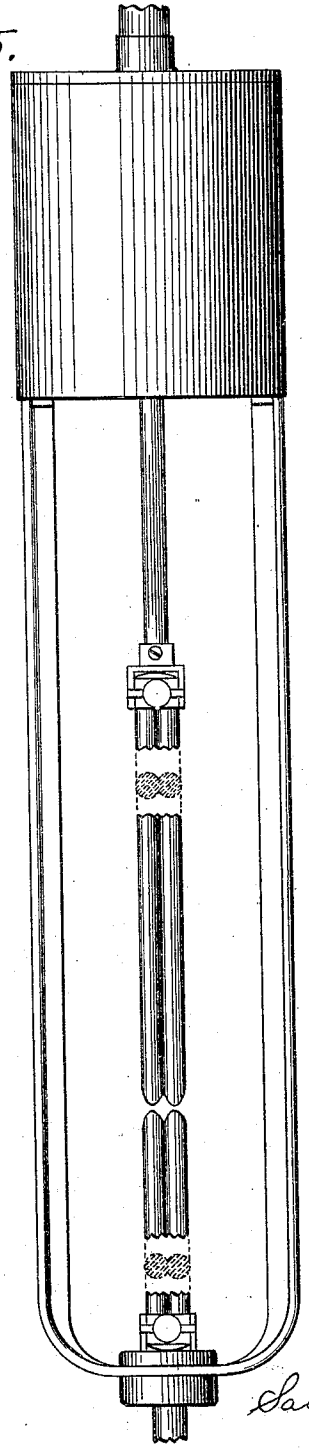
(No Model.) 2 Sheets—Sheet 2.

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ELECTRIC ARC LAMP.

No. 546,388. Patented Sept. 17, 1895.

Fig. 5.



Witnesses.
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by Frank N. Parker,
his Atty.

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UNITED STATES PATENT OFFICE.

SAMUEL P. PARMLY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE STANDARD ELECTRIC COMPANY, OF SAME PLACE.

ELECTRIC-ARC LAMP.

SPECIFICATION forming part of Letters Patent No. 546,388, dated September 17, 1895.

Original application filed October 26, 1891, Serial No. 409,941. Divided and this application filed December 24, 1894. Serial No. 532,838. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. PARMLY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented an Improvement in Arc Lamps, of which the following is a specification.

My invention relates to arc lamps, and has for its object to provide an arc lamp with opposed electrodes of such construction as will permit the arc to travel or slide from one point of localization to another point without actually extinguishing the arc.

My invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a lamp containing electrodes of my invention. Fig. 2 is a cross-section showing one form of electrode. Fig. 3 is a cross-section of another form. Fig. 4 is a side view of such latter form of carbon. Fig. 5 is a view of two carbons in position, each consisting of a sheet or plate of carbon material corrugated or grooved at the sides.

My improvement consists substantially in having electrodes, each composed of a series of carbon pencils, preferably but two, which are joined together by an intermediate rib—that is to say, each electrode is composed of two distinct pencils, whose axes are separated by somewhat more than the sum of their radii, the intermediate space being filled by a relatively thin rib of carbon or other such material, preferably continuous with the substance of the carbons. In such a lamp the arc does not travel continuously and with a comparatively regular tread, as it would in the case of two elliptical carbons, for example; but it persists in a substantially-fixed position for a definite and considerable period, and then quickly glides or travels over from one pair of pencils to the other, the motion of the arc in such gliding being across the adjacent edges of the rib material. These electrodes may be composed of a species of corrugated carbon—as, for example, that shown in Fig. 5—where I have illustrated two sheets of carbon corrugated, as it were, and wherein substantially the same result is accomplished as in the other forms herein treated of.

A is the casing which incloses the mechanism of the lamp; B B, the side bars; C, the carbon rod; D, the upper electrode; E, the lower electrode; F, the lower carbon-holder. The electrodes are composed of two carbon pencils N N, with the intermediate rib or connecting material P.

I am not in this application seeking to cover any particular form of carbon as such, but only to protect a form of lamp in which two carbons, each substantially of the form here suggested, are employed together.

Arc localization is a feature which results from such form of carbons. The arc may be more or less localized—that is, caused to persist for a greater or less length of time at any given point by varying somewhat the shape of one or both of said electrodes; but a material localization or persistance of the arc in one place and a comparatively quick transition, but without extinguishment, to another place is the characteristic feature of this invention.

I claim—

1. The combination with an arc lamp, of two carbon electrodes between which the arc is formed in alignment and in direct circuit, each electrode being composed of a series of carbon pencils placed in parallel position and united by a web portion, whereby the arc travels from one pair of opposing pencils to an adjacent pair by means of the connecting web portion, substantially as described.

2. The combination of two electrodes constituting the opposite terminals of the lamp, each consisting of two or more pencils in electrical connection along longitudinal edges, and feeding mechanism therefor, substantially as described.

3. In an arc lamp the combination of a lamp mechanism adapted to feed the carbons, with two electrodes each consisting of two round carbons placed parallel to each other with a conductor rib or intermediate conductor between them upon which they are firmly secured, the construction being such that the

arc is localized between each pair of carbons and then shifts to the other pair where it is again localized.

4. In an arc lamp the combination of a lamp mechanism adapted to feed the carbons, with two electrodes each consisting of a sheet or plate of carbon substantially in the form of two round carbons with a connecting or intermediate portion.

SAMUEL P. PARMLY.

Witnesses:
FRANCIS W. PARKER,
J. H. COULTER.