

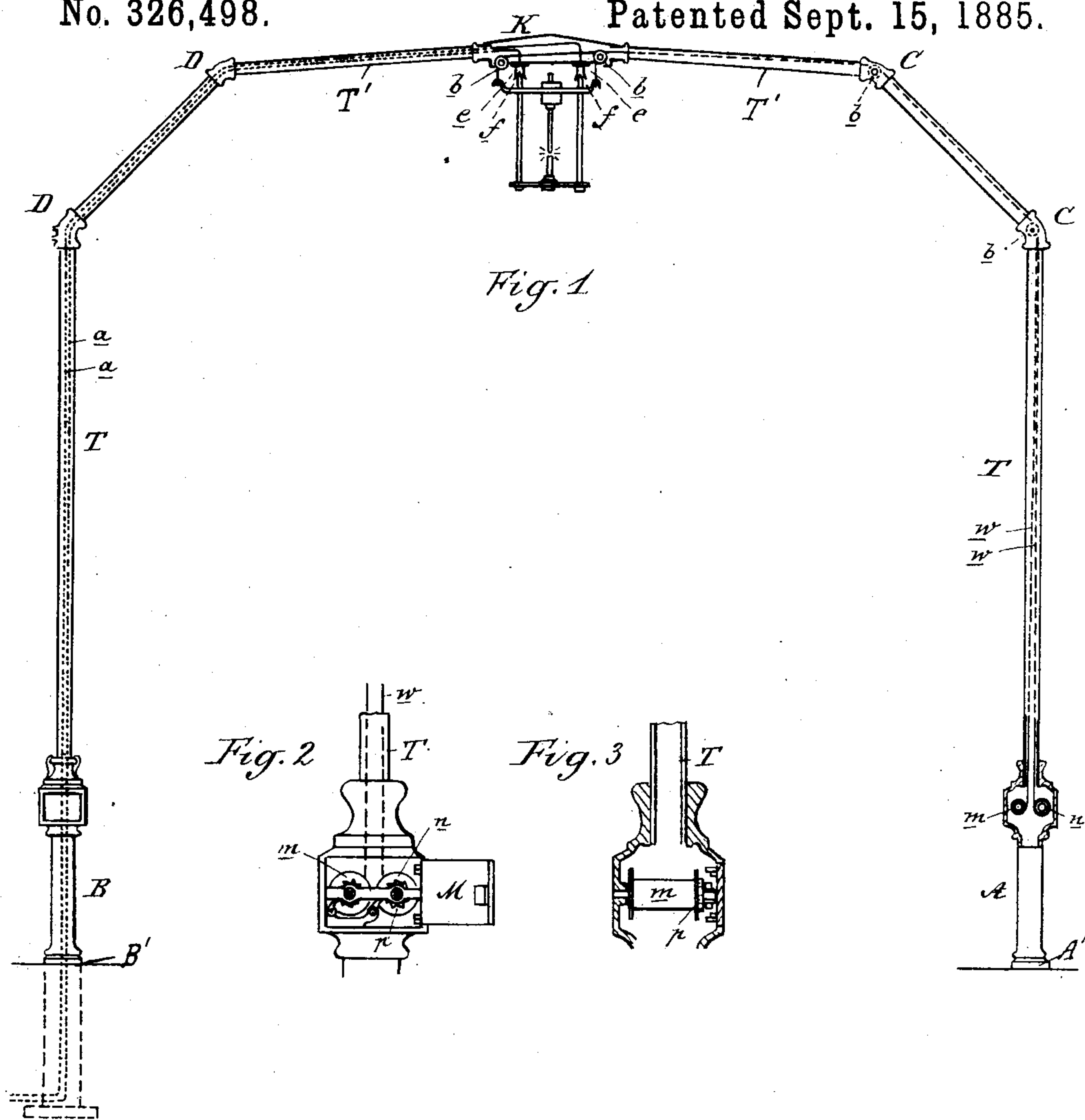
(No Model.)

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ARCH FOR SUPPORTING ELECTRIC LAMPS.

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ARCH FOR SUPPORTING ELECTRIC LAMPS.

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To all whom it may concern:

Be it known that I, P. HENRY GRIFFIN, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Arches for Supporting Electric Lamps; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in means of supporting electric-arc lamps over the intersections of streets, with which are combined means for elevating and lowering such lamps as occasion may demand, means for carrying the circuit-wires to the lamp, and means for breaking and connecting circuit, so that the lamp may be lowered from its position without the necessity of any more circuit-wire than just enough to make the necessary connection with the lamp when in position for operation.

The invention consists in so constructing the arch and its connections that the above-described service can be obtained, and in the peculiar construction, combination, and operation of the parts, as more fully hereinafter specified.

In lighting streets of cities by means of electric-arc lamps, it has been found that the best results are obtained by supporting such lamps from the center of the intersections of streets, so that the light may be cast in four directions, and is not interrupted by shade-trees and other obstructions sometimes found at the sides of the streets or over sidewalks; and the object of the present invention is to provide such means.

Figure 1 is an elevation of my improved arch-support, the two feet thereof resting at diagonally-opposite corners of street intersections. Figs. 2 and 3 are details showing the manner of elevating and lowering such lamps.

In the accompanying drawings, which form a part of this specification, A B represent two hollow iron columns, preferably made of gas-pipe, of suitable size, the lower ends of which are screwed into, or otherwise secured to, hollow bases A' and B', which are designed to be set in the ground at the proper places, and one of these bases conceals the mechanism

by means of which the lamp is raised or lowered.

T T represent gas-pipes one end of each of which is joined to the columns A B by suitable connections, and their opposite ends are joined to the horizontal-pipe T', by means of couplings C C and D D, so as to form the arch.

K is a hollow-iron casting secured upon the pipe T', at about the center of its length.

b b represent two small pulleys inclosed in the casting K, one near each end thereof.

e e are two projections of brass from the lower face of the casting K, and properly insulated from the same, and performing the office of holding the ends of the circuit-wires.

f f are two brass castings attached to the top of the lamp and designed, when the lamp is in place for operation, to fit into or form contacts with the projections e e, for the purpose hereinafter stated.

The electric wires a a are conducted through the column B and the pipe T, and through the hollow casting K, and attached to the brass castings e e, the wires being properly insulated from the iron parts, and connecting with the brass points of the casting K.

Inside the couplings C C there is provided a small pulley over which the two cables w operate. These two cables run through the column A and the adjacent pipes T and T', and over the pulleys b b, and are attached to the lamp.

n and m are two drums suitably journaled in the base A' of the column A, and upon the ends of the drums there are secured ratchet-wheels p p, adapted to engage with suitable dogs and retain the drums in the positions in which they may be left after having been actuated by suitable cranks.

The base A' may be provided with a door, M, suitably locked to prevent the mechanism being surreptitiously used, and the cranks used to operate the drums should be made detachable, in order that the mechanism may not be interfered with, except by the operator, who should carry the cranks with him. Both of these drums and their connecting cables are designed to lower the lamp and to raise it, and the drums may be operated by means of one crank, if it is thought best, and connected by suitable gearing, so that as one

revolves in one direction the other will revolve in the opposite direction, although this is not essential. If the conducting-wires are laid underground, they are brought up through the base *B'* of the column *B*, and through such column; or, if the wires are above ground, they may be carried into the arch through the proper openings in either of the couplings which join the parts of that side of the arch together.

When the lamp is ready for use, the contact-points *f f*, by means of the drum and cable, are drawn into contact with the contact-points *e e*, and these points may be made of any suitable form and size to insure perfect contact under all circumstances when the circuit is complete.

The means at present employed for supporting electric-arc lamps for street-lighting consist in posts and the suspension of the light by conducting-wires, or otherwise, between two posts. This plan is open to the objection that it is unsightly, and that to perform the daily work of attending to the lamps is troublesome, and principally that the wires, although generally covered with insulating material, are exposed to contact with other wires and liable to be a source of great danger thereby, on account of the powerful current of electricity required.

The device hereinbefore shown and described is intended to obviate all of these objections and to provide a means for suspending the lamps that will admit of their being readily handled when the necessary daily work on them is to be performed, and that will prevent all danger from contact between the electric-light and other wires or objects, and at the same time will present an attractive appearance.

What I claim as my invention is—

1. An arch for supporting electric-arc lamps, composed of hollow pipes suitably connected, and having secured to its highest point and insulated therefrom contact-points connected with circuit-wires, in combination with contact-points on the lamp, and means, substantially as described, for making and breaking the circuit as the lamp is raised and lowered, and means for raising and lowering the lamp independently of the circuit-wires, substantially as set forth.

2. In an electric-arc-lamp support, the com-

bination, with the two limbs thereof, of the casting *K*, having sockets to receive the adjacent ends of said limbs, and provided with electric contact-points in connection with the poles of an electrical-generator, substantially as and for the purposes set forth.

3. A support for lamps, consisting of a series of straight pipes connected by couplings, each coupling carrying a pulley, and a rope connecting with said lamps passing over the pulleys, substantially as described.

4. An arch-support for electric lamps, one limb of which is provided with electric conductors for the lamp and the other with a cable for lowering the same, substantially as described.

5. In an arch for supporting electric-arc lamps, electric wires supported by one limb of the arch and terminating in points, in combination with mechanical means carried by the other limb to automatically make and break the circuit between the said points, substantially as and for the purpose described.

6. In an arch for supporting electric-lamps, pulleys within the couplings which connect the parts together, in combination with the cables passing over said pulleys and through the couplings, and mechanism for operating such cables for elevating and lowering the lamp, substantially as described.

7. An arch for supporting electric-arc lamps, composed of a series of straight pipes, a suitable base for the same, hollow couplings joining said pipes and provided with pulleys, and a central casting carrying electric contact-points and also provided with pulleys, in combination with cables passing over said pulleys, and mechanism within the said base for operating such cables for elevating and lowering the lamp, substantially as described.

8. In an electric-arc-lamp support, the points *e e*, fixedly connected thereto, and the contacts *f f*, connected to the lamp, in combination with the cables *w w*, connected with the contacts *f f*, and the pulley-drums *m n*, each carrying one of the cables, the parts being constructed and arranged to move the contacts *f f* to and from the points *e e* in parallel planes, as and for the purposes specified.

P. HENRY GRIFFIN.

Witnesses:

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