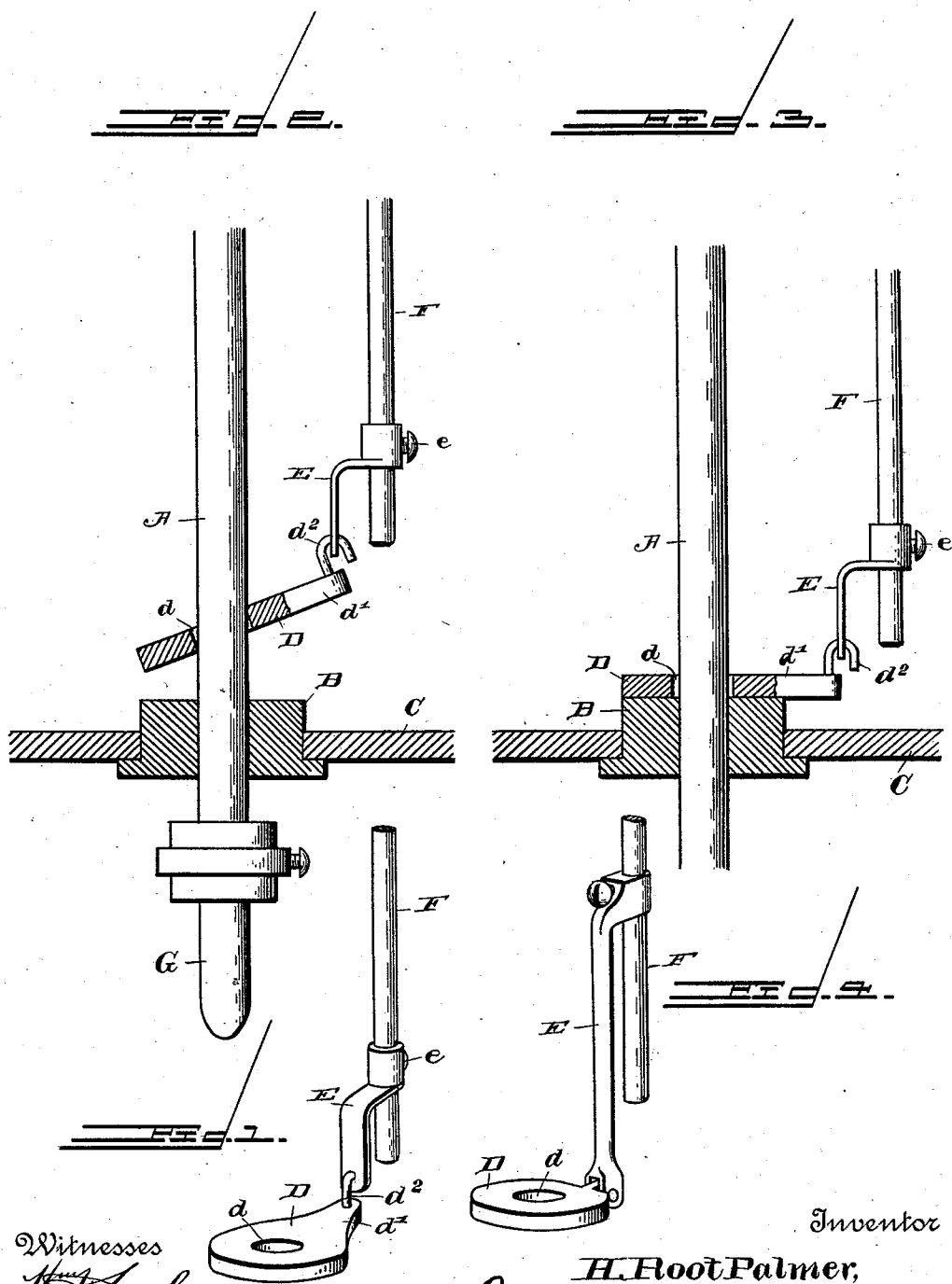


(No Model.)

H. R. PALMER.
ARC LAMP CLUTCH.

No. 567,355.

Patented Sept. 8, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

HARRY ROOT PALMER, OF NORFOLK, VIRGINIA.

ARC-LAMP CLUTCH.

SPECIFICATION forming part of Letters Patent No. 567,355, dated September 8, 1896.

Application filed June 10, 1896. Serial No. 595,040. (No model.)

To all whom it may concern:

Be it known that I, HARRY ROOT PALMER, a citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Arc-Lamp Clutches; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to arc-lamps for electric lighting, and the object is to provide a simple, reliable, and durable clutch for feeding the movable carbon-rod holder; and to this end the novelty consists in the construction of the same, as will be hereinafter more fully described and particularly pointed out in the claim.

In the accompanying drawings the same letters of reference indicate the same parts of the invention.

Figure 1 is a perspective view of my improved arc-lamp clutch. Fig. 2 is a vertical section showing the position of the clutch when supporting the carbon-rod. Fig. 3 is a vertical section showing the position of the clutch when the rod is released, and Fig. 4 is a modification of the same.

A is the carbon-clamp rod, which has a vertical reciprocating motion through the guide-collar B, secured in the bottom C of the lamp.

D is the clutch, and it consists of a flat metal plate provided with a circular orifice d , somewhat larger in diameter than the diameter of the rod A, so that when the rod lies at a right angle to said plate the rod passes freely through the orifice d ; but if the plate be "canted," as shown in Fig. 2, the diagonally opposite corners of the orifice bind or "bite" on the rod, so as to take a firm hold thereon, and in this position, if the

plate be raised vertically, it carries the rod with it. The plate D is formed with an integral arm d' , provided with a hook d^2 , forming a pivoted joint with the lower end of an adjustable pitman E, provided with a set-screw e , by means of which it is adjustably secured to the regulator-rod F; and it will be seen that when the regulator-rod is moved upward it carries the clutch, carbon-clamp rod, and carbon G upward with it; whereas if the current be broken the regulator-rod F falls, and with it the clutch D, the lower end of which strikes on the upper face of the guide-collar B. This causes the clutch to assume a horizontal plane or position, as shown in Fig. 3, its orifice being in the same vertical plane as the rod A, which falls through it, and the carbon makes contact with the lower stationary carbon-rod, which energizes the regulator and raises its rod F, which rises, "cants" the clutch-plate D, and it raises the clamp-rod A to separate the carbons the proper distance.

The device is very simple, and is entirely reliable and automatic in its action, and will be fully understood and appreciated without further description.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

The carbon-feed rod A, the clutch-plate D having orifice d , integral arm d' , the hook d^2 secured to the outer end of said integral arm, the pitman E pivotally engaging said hook and adjustably secured on the regulator-rod F, substantially as shown and described.

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

HARRY ROOT PALMER.

Witnesses:

F. M. JOHNSON,
J. G. MULLINS.