

No. 630,852.

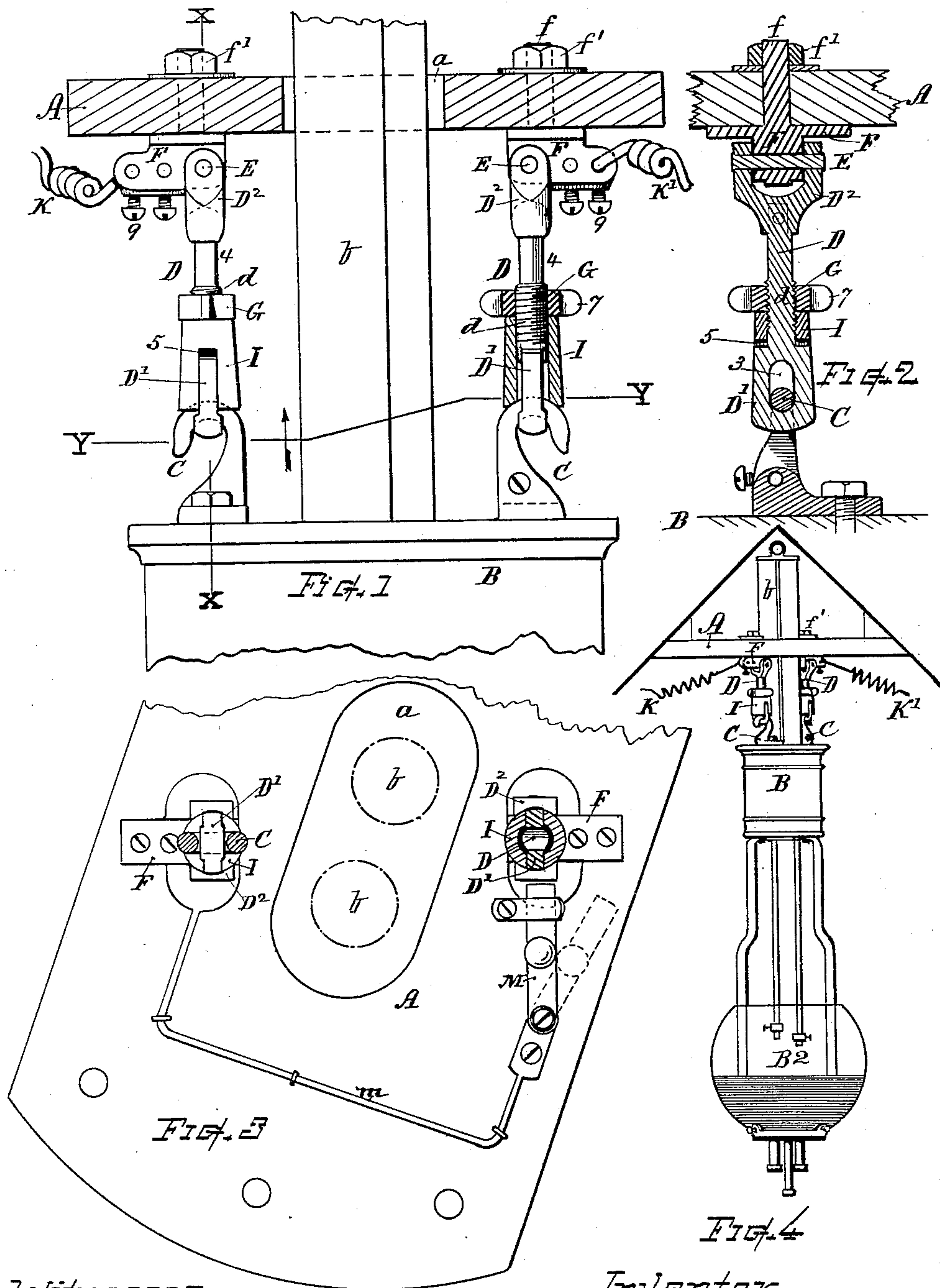
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J. A. BRENNAN.

LOCKING HANGER FOR ELECTRIC ARC LAMPS.

(Application filed May 24, 1897.)

(No Model.)



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## LOCKING HANGER FOR ELECTRIC-ARC LAMPS.

SPECIFICATION forming part of Letters Patent No. 630,852, dated August 15, 1899.

Application filed May 24, 1897. Serial No. 637,846. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. BRENNAN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Locking Hanger for Electric-Arc Lamps, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide a simple, convenient, and efficient means for hanging electric-arc lamps in a manner that will give a secure positively rigid attachment and prevent movement of the hooks in the hangers by the swaying of the lamp in high winds; also, to obviate any arcing in the hanging-joints and the consequent burning of the metal at the adjacent bearing-surfaces and destruction of perfect electrical contact incident thereto. These objects I attain by the mechanism illustrated in the accompanying drawings, wherein—

Figure 1 is a side view, partly in section, showing my invention. Fig. 2 is a vertical section at line X X on Fig. 1. Fig. 3 is a horizontal section at line Y Y, looking upward; and Fig. 4 is a side view of an electric-arc lamp, showing the manner of hanging the same.

This invention is more especially designed for outdoor or street uses or for hanging arc-lamps located in situations exposed to the wind and weather, but may be employed in the hanging of arc-lamps at any situations where available, as desired.

A denotes the usual hanging-board or hood-board, which is permanently secured in the hood or to such other carrier or support as may be employed for sustaining an electric-arc lamp.

B indicates the top of the lamp, provided with the usual hooks C C, which are rigidly fixed thereon at either side of the rod-sheath tubes b in well-known manner.

D indicates the hanger-rod, which, in accordance with my invention, is made with a flat eye or loop portion D', having an opening therethrough of proper size for receiving the hook C, and a central cylindrical shank,

the lower portion of which is screw-threaded, as at d, and the upper portion plain, as at 4, while its top end is provided with a bifurcated head or earpieces D<sup>2</sup>, pivotally secured to the attaching-block F by a pin E, that passes horizontally through the parts, thereby permanently hinging the hanger-rod to the block, the earpieces or jaws D<sup>2</sup> of the bifurcated head closely embracing the upright sides of the attaching-block above and below the pivot-pin, so that the rod-head and attaching-block are closely coupled together and no movement of the pendent rod in relation to the block is permitted, excepting that the rod when not in gripped engagement with a lamp can be swung backward and forward on its pivoting-axis. The attaching-block F is formed with a body having upright side faces and a top seating flange or surface and is fixed to the board A by the bolt or shank f, that projects upward from the body of said block and passes through the board and has the nut f' threaded thereon, as shown.

Upon the rod D and freely movable thereon I arrange a guard sleeve or collar I, having in its opposite sides longitudinal slots 5, opening from its lower end and serving for the reception and guidance of the flat side portions of the loop D', while the top end of the sleeve is annularly complete or cylindrical. The length of the slots is sufficient to allow the sleeve to close down over the loop to the lower end thereof, or nearly so, and to slide upward thereon, with the sides D' guiding in the slots 5, to a distance that will permit the curved end of the lamp-hook C to pass in upright position through the opening 3 without interference. The end of the guard-sleeve is fitted to countermatch with the elevated and rounded top of the hook C, as indicated.

Above the sleeve I provide a narrow screw-nut G, threaded to match the thread d on the shank and furnished with projecting wings or thumb-plates 7, so that it can be readily turned by hand. A few turns of this nut will run it off the thread d, and it can then be slipped free up and down on the plain part 4 of the rod D.

The two hangers at the right and left are of similar structure and the above description applies to each.



K K' indicate the circuit-wire connections with their binding-screws 9 in the attaching-blocks.

M indicates the cut-out switch, and *m* indicates the cut-out connection, both of which may be of usual or any suitable construction.

The operation is as follows: When placing the lamp in the hanger, the nuts G are loosened from the screw-thread *d* and the sleeve I is slipped upward on the rod, leaving the loop D' open, and the said loop is passed over the hook C on the lamp. This can be conveniently done, since the hanger is hinged to swing outward on the hinging axis or pin E. The sleeve I is then slipped down over the loop, the slots 5 allowing the end of the sleeve to rest upon the top or back of the hook C, and the nut G is then screwed down on the thread *d*, forcing the cupped lower end of the sleeve firmly against the hook, thereby clamping and locking the latter rigidly between the sleeve and loop, so that when both hangers are thus secured there is no possibility of the hook lifting in the hanger by reason of the swaying of the lamp by the wind, no matter how hard it may blow, nor of the lamp or either of its hooks becoming detached from the hangers by the shaking of the post or support on which the lamp is suspended. Furthermore, the surfaces of the hanger and hooks being held firmly against each other, all liability of arcing in the joints, and consequent burning of the metal of the hooks or hangers, is entirely obviated and proper electrical contact for the full flow of the current through the lamp is at all times assured.

The lamp can at any time be taken down by first releasing the nuts G and raising the guard-sleeve I on the hanger-rods.

The hanger-loop is preferably made with a broad bearing-surface to match against the hook C for giving ample electrical contact.

If in any instance desired, the hook C may be provided with an upward projection on its top to extend up and fit into the hollow end of the sleeve to give greater lateral rigidity to the locking-joint.

I claim as of my invention and desire to secure by Letters Patent—

1. The within-described hanger for electric-arc lamps, comprising the attaching-block with its shank-bolt and wire-binders, the pendent hanger-rod, its head hingedly connected to said attaching-block, its lower end eye-loop fitted for the reception and support of the lamp-hook, the central part of said rod formed plain with a screw-threaded portion adjacent to said loop; in combination with the movable slotted sleeve arranged on said rod to slip over the eye-loop opening, its end fitted to embrace the top of the lamp-hook, and the thumb-nut on said hanger-rod in limited confinement between the sleeve and

rod-head, said nut fitted to screw down upon the threaded portion against the end of the sleeve, and to release from and slide loose above said threaded part when turned up, all substantially as shown and described.

2. A hanger for electric-arc lamps, comprising a member adapted for permanent fixation to the hanger-board and having wire-receiving apertures and binding-screws therein, a pendent member consisting of a rod having a partially plain central stem provided with a forked top, its jaws embracing said fixed member and attached thereto by a transversely-disposed pivot-pin passing through the opposite jaws, said pendant also provided with an open lower end broadened below the opening and fitted with a seating-surface to countermatch the under surface of the lamp-hook, a movable member working upon said pendant and fitted with a seating-surface adapted to countermatch the back of a lamp-hook, and means in connection with the pendent stem for positively forcing said movable member rigidly down upon a lamp-hook inserted through the hanger-opening, in the manner set forth.

3. The combination with an electric-arc lamp provided with oppositely-disposed rigidly-attached hanging-hooks having elevated top surfaces; of a pair of oppositely-disposed pendent hanger-rods, the heads thereof in suspending connection with attaching-blocks fixed on the hanging-board, said pendent rods having a partially plain and partially threaded central body with an opening below the threaded part, a laterally-winged nut arranged on said rods for working on and off the threaded section, and a locking-sleeve controlled by said nut and having a recess in its lower end adapted for receiving and immovably confining the elevated top portion of a lamp-hook, when said sleeve is depressed thereon, substantially as set forth.

4. The combination with the hanger-board, of an attaching-block having a body portion provided with upright parallel sides, a seating-flange and an integral upright extension passing through said board, its extremity screw-threaded and provided with a nut thereon, a pendent rod having a bifurcated head fitting the opposite sides of said attaching-block and connected thereto by a pivot-pin inserted transversely through the block and head, said pendent rod provided at its lower part with means for supporting and detachably immovably confining therein the curved top of an electric-lamp hook, for the purpose shown and described.

Witness my hand this 5th day of May, 1897.

JAMES A. BRENNAN.

Witnesses:

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