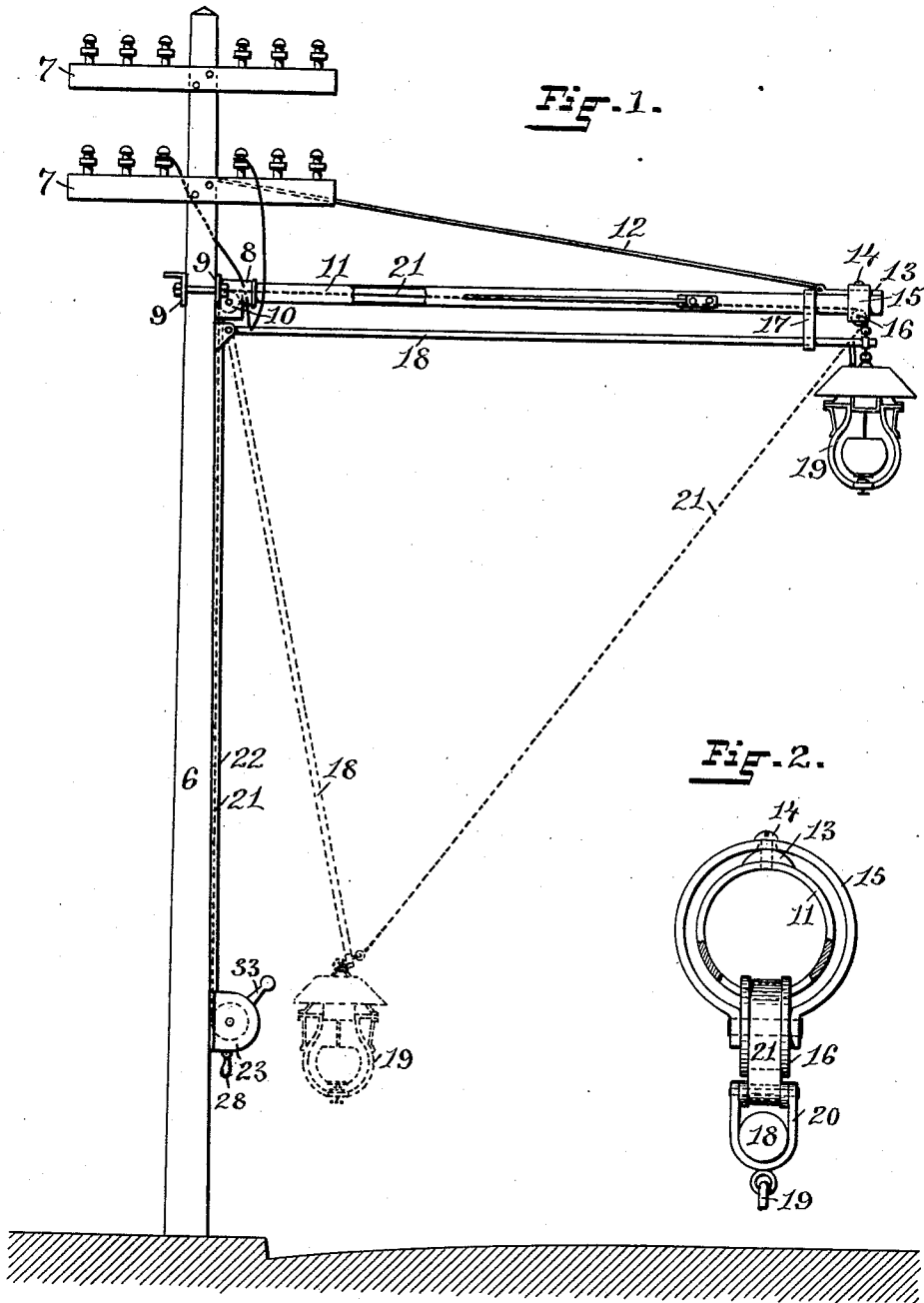


A. WRIGHT.
SUPPORT FOR ELECTRIC LAMPS.

No. 482,112.

Patented Sept. 6, 1892.



WITNESSES:

Henry J. Miller
Chas. H. Luther Jr.

INVENTOR:

Augustus Wright
by Joseph A. Miller & Co.
Attys.

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Fig. 3.

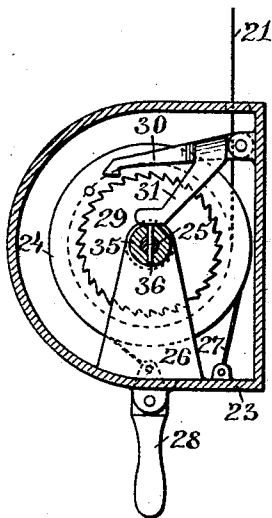


Fig. 4.

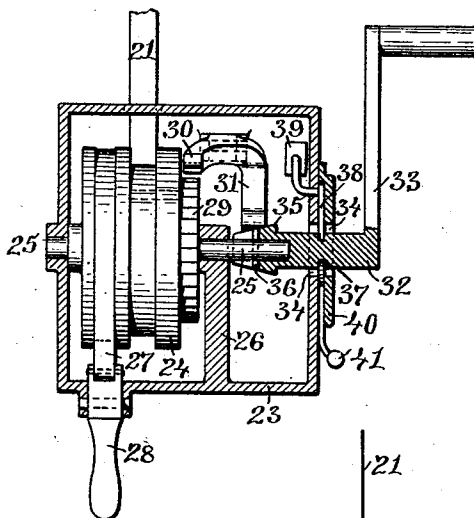
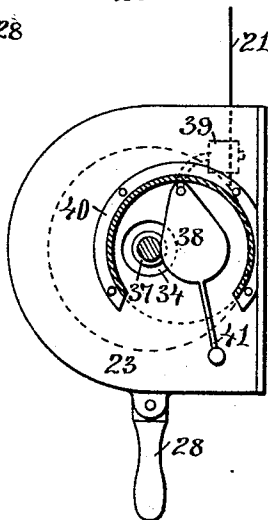


Fig. 5.



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UNITED STATES PATENT OFFICE.

AUGUSTUS WRIGHT, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO THE
HOPE ELECTRIC APPLIANCE COMPANY, OF SAME PLACE.

SUPPORT FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 482,112, dated September 6, 1892.

Application filed March 23, 1892. Serial No. 426,081. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS WRIGHT, of the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Supports for Electric Lamps; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference more especially to supports for electric lamps, by means of which the lamps are supported over a street or roadway when in use, but are readily accessible for trimming or repairs.

The objects of the invention are to produce a support for electric lamps in which the operating mechanism shall be less cumbersome than heretofore and at the same time more durable in construction and effective in operation.

The invention consists in the peculiar construction of the mast and arm and the combination therewith of means whereby a flat metal band or ribbon may be used for elevating and sustaining the weight of the lamp under the various conditions to which it must be subjected in practical operation.

Figure 1 represents an elevation of the improved lamp-supporting device. Fig. 2 represents an enlarged end view of the mast-arm, the rocking pulley secured thereto, and the band passing over the pulley and supporting the outer end of the drop-arm, to which the lamp is secured. Fig. 3 represents a vertical sectional view of the capstan-box to show the inner construction thereof. Fig. 4 represents a horizontal sectional view of the same. Fig. 5 represents an end view of the capstan-case, showing the means for closing the perforation through which the crank-shaft is inserted and for locking said shaft in place.

Similar numbers of reference designate corresponding parts throughout.

In the drawings, 6 indicates a mast or pole on which wires may be secured to the cross-arms 7 7 or otherwise. At a suitable distance from the ground is secured the hollow casting 8 by means of the yokes 9 9, clamped to the pole. This casting 8 is provided with a

pulley 10, journaled therein, and extending from the casting is a tubular mast-arm 11, the outer end of which is suitably stayed to sustain lateral and downward pressure. The strap by which the outer end of the upper stay-rod 12 is secured to the mast-arm is extended to form the bearing-block 13, having a rounded upper surface, and pivoted to this block by the screw 14 is a pulley-frame 15, which encircles the mast-arm and carries the pulley 16 having flanged ends, journaled between the ends of said frame, and near the outer end of the mast-arm is secured a pair of depending fingers 17, between which the drop-arm is engaged when the lamp is elevated.

The drop-arm 18 is pivoted to the mast at a point below the mast-arm and is tubular to contain and protect the local-circuit wires, which extend to the lamp 19, supported on the end of this arm, or to a band 20, surrounding and secured to such end. This band has its ends closed by a bolt, to which is fastened the flat metal band 21, which extends over the pulley 16, through the hollow mast-arm 11, over the pulley 10, and finally down through the runway 22, secured to the mast, to the capstan-drum. The capstan is contained within the case 23, which, being of small size, can be secured to the street side of the pole 6 without extending into the street. The band or ribbon 21 enters the case through a slot formed in the top thereof and is secured in a circumferential groove of the drum 24, which is secured on the shaft 25, journaled in bearings formed in one end of the case and in the bracket 26. Around one end of the drum extends the brake-strap 27, secured at one end to the casing and at the other to a lever 28, extending through and pivoted in a perforation cut through the bottom of the case. The drum 24 is also provided with a ratchet 29, secured thereto, and a pawl 30, having the depending arm 31, is pivoted to the back of the case and engages said ratchet when not raised by said arm. The shaft 32 of the crank 33 is inserted through the perforation 24 in the end of the capstan-case. The end of this shaft has a conical enlargement 35, in which is formed an axial recess adapted to receive the end of the shaft 25 and a transverse slot

for engaging the pin 36, extending through said shaft. As the conical enlargement 35 is pushed inward the lower end of the arm 31 is lifted by riding up over the same and raises
 5 the pawl 30 from engagement with the ratchet 29. The capstan-drum is now free to rotate, but may be held by means of the brake or by the crank-handle.

The lamp may be rapidly lowered and the
 10 speed governed by the use of the brake without danger from the crank flying off, as when the crank of the shaft is pushed inward a groove 37, extending around the shaft, is engaged by the edge of the plate 38, pivoted to
 15 the outer side of the capstan-case and operated by the counterweighted arm 39 inside of the case. This plate 38 also serves to close the perforation 34 when the crank is withdrawn and is covered by the hollow rosette 40,
 20 having a slot in its lower circumference, through which the depending-arm 41 extends. By means of this arm the plate 38 is moved to one side to allow the entrance of the crank-shaft.

25 The use of a metal band of ribbon as a means for raising the lamp to position is very desirable, owing to the small amount of space required for its storage in the capstan-case, and avoiding the use of the large and unsightly
 30 runway on the mast. I have found in practice that a metal ribbon one thirty-second of an inch thick and five-eighths of an inch wide will sustain a weight of nine hundred pounds. The length of the ribbon required for the operation of an ordinary lamp would not when
 35 wound on a six-inch capstan-drum in a single roll increase the diameter of the drum more than one-half inch.

The metal ribbon is more durable than the
 40 ordinary rope under longitudinal strain; but when exposed to lateral strains, as from the swinging of a lamp, the edges of the ribbon soon begin to tear, and this is especially true where the bearing-surface over which the ribbon is stretched is rigid. To avoid these difficulties, I have invented a rocking bearing,
 45 which will give in proportion to the swing of the lamp and prevent the edges of the ribbon from wearing on the bearing-surface of the
 50 pulley 16.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In an electric-lamp support, the combination, with a mast-arm suitably supported, a
 55 pivoted drop-arm, a lamp secured to the end thereof, and a metallic band by which the

lamp is sustained, of a rocking bearing over which the band is passed, carried by the outer end of the mast-arm, as described. 60

2. In a support for electric lamps, the combination, with a mast-arm suitably supported and a bearing-block 13, secured thereto, of the pulley-frame 15, bearing on said block and secured by the screw 14, a pulley 16, journaled
 65 between the ends of said frame, a metallic band 21, bearing on said pulley, and a lamp secured to the end of said band, as described.

3. In a support for electric lamps, the combination, with a mast and an arm extending
 70 therefrom, of a capstan-case 23, a drum 24, carried by the shaft 25, having the pin 26 journaled therein and having a groove to receive the band 21, a brake-band 27, extending around said drum and operated by the lever
 75 28, extending through and pivoted to the bottom of the case, a ratchet-wheel 29, also secured to said shaft, a pawl 30, having the depending arm 31, pivoted to the back of the case and engaging said ratchet, a crank-shaft
 80 32, having the tapering enlargement 35, an axial recess formed in said shaft and a transverse slot cut through the end portion thereof and adapted to engage the transverse pin 36, a groove 37, formed around said crank-shaft,
 85 and a counterweighted pivoted plate 3 adapted to engage in said slot and to be operated by the arm 41, as described.

4. The combination, with the pole 6 and a capstan secured thereto, the hollow casting 8,
 90 secured to the upper portion thereof by the yokes 9 9 and suitable bolts, a pulley 10, journaled within said casting, a tubular mast-arm 11, rigidly secured in the end of said casting and having the depending fingers 17 and the
 95 upper stay 12, secured to the outer end of said arm by an elongated strap forming a bearing-block 13, having a rounded upper surface, a pulley-frame 15, supported by said block and secured in place by the screw 14, and a pulley
 100 16, journaled between the ends of said frame, of the tubular rigid stay 18, pivoted to the mast 6, and a metallic band 21, secured to the outer end of said stay, passing over said pulleys 10 and 16, and secured at the other end
 105 to the capstan-drum contained within said case 23, as and for the purpose described.

In witness whereof I have hereunto set my hand.

AUGUSTUS WRIGHT.

Witnesses:

HENRY J. MILLER,
 JOSEPH A. MILLER, Jr.