

(No Model.)

T. DILLON.
MAST ARM FOR ELECTRIC LAMPS.

No. 454,166.

Patented June 16, 1891.

Fig. 2.

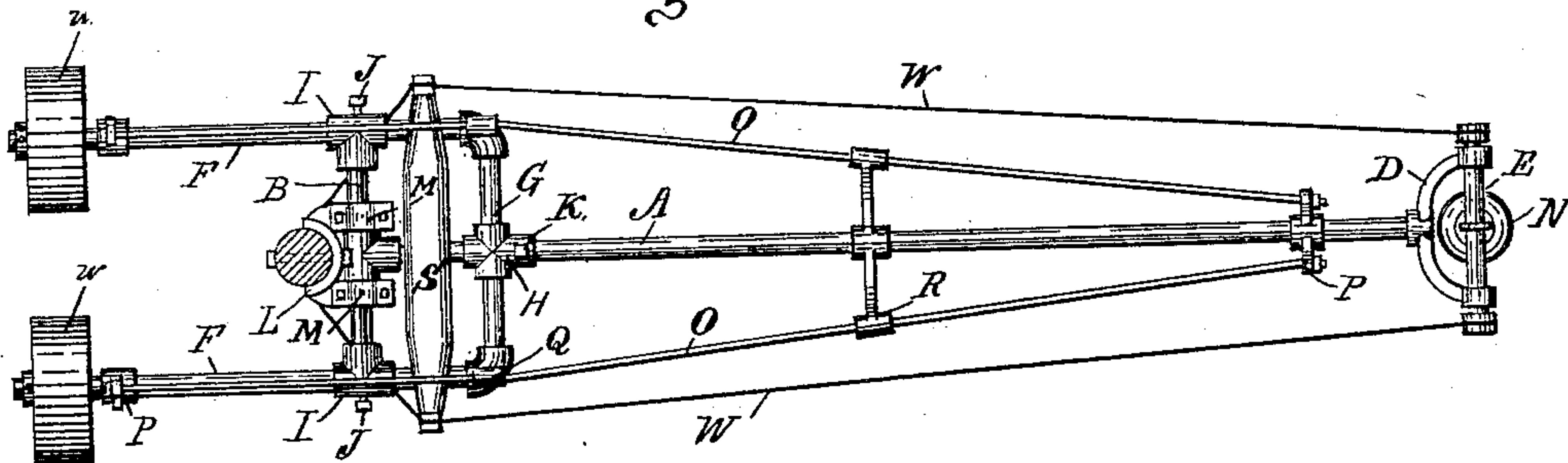
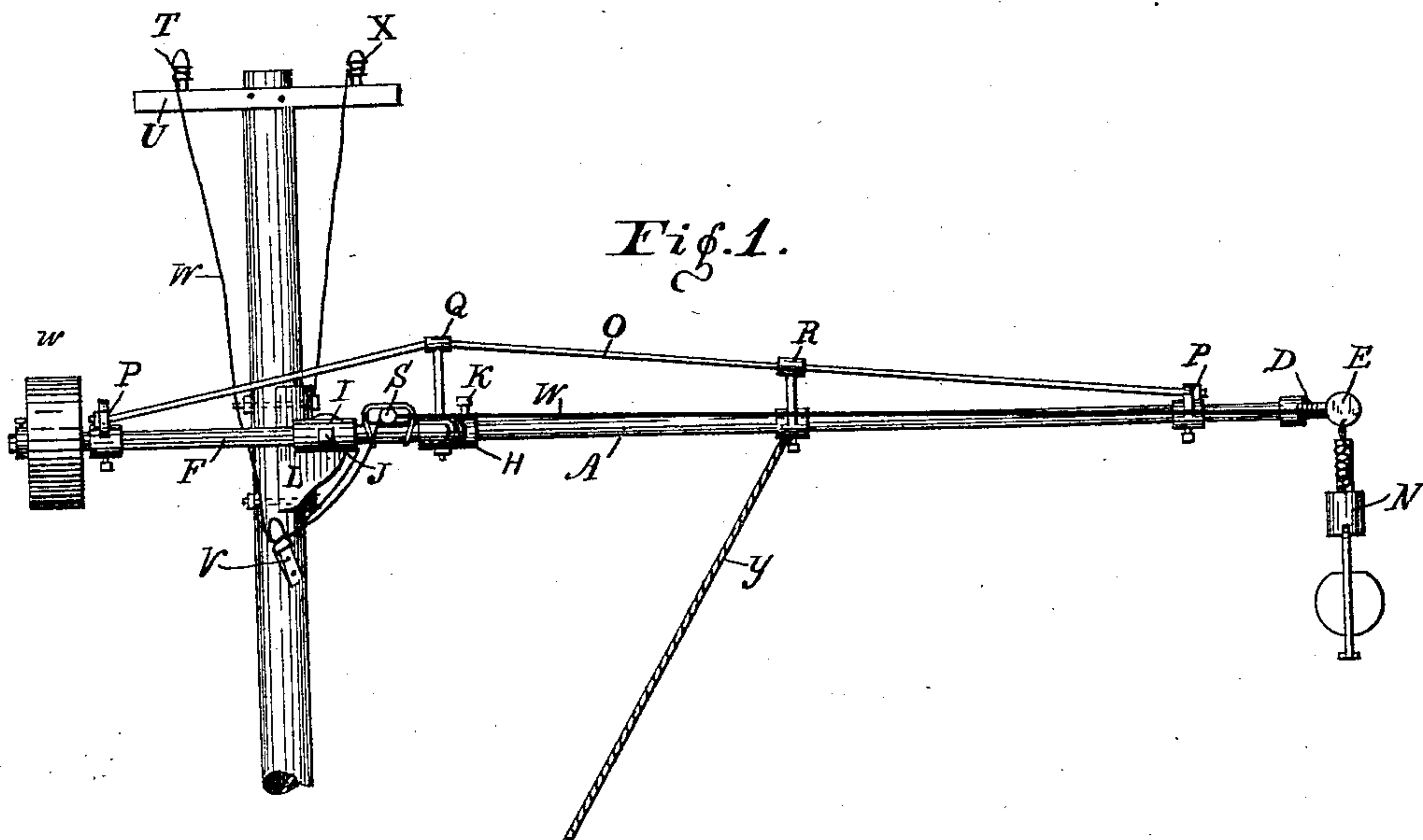


Fig. 1.



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UNITED STATES PATENT OFFICE.

THOMAS DILLON, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF TO
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MAST-ARM FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 454,166, dated June 16, 1891.

Application filed January 19, 1891. Serial No. 378,269. (No model.)

To all whom it may concern:

Be it known that I, THOMAS DILLON, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Mast-Arms for Electric Lamps, of which the following is a specification.

My invention relates to an improved mast-arm of that class which is attached to the mast so as to swing in a vertical plane thereon, and by means of which an electric lamp may be suspended at a distance from the mast.

The objects of my improvement are, first, to so construct the arm that it may be pivoted to the side of the mast below its top instead of at the top, as heretofore; second, to provide means for adjusting that part of the arm carrying the counter-weight relatively to the forward portion of the arm, so as to conveniently counterbalance lamps of different weights, and, third, to provide such means for attaching the line-wire to the arm that the line-wire may be drawn taut in its course along the arm and its tension be unaffected by the raising and lowering of the arm, all as hereinafter fully explained.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation. Fig. 2 is a plan.

The frame of the mast-arm is constructed of tubing with suitable couplings. It consists of two sections adapted to slide longitudinally one upon the other, one section consisting of a straight bar or tube A, secured at one end to a shaft B, arranged at right angles thereto, and terminating at the other end in a yoke D, in which a wooden cross-bar E is mounted. The other section of the frame consists of two bars F F, united at one end by a short bar G, having at its center a sleeve H, through which the bar A passes. Bars F F pass, respectively, through sleeves I I, secured to opposite ends of shaft B. A sliding connection is thus formed between the two sections of the frame, which are adjustably secured relatively to each other by set-screws J J and K.

The frame is secured to the side of the mast, so as to swing in a vertical plane thereon, by means of a bracket L, adapted to be bolted

to the mast and having bearings M, in which shaft B rests. The lamp N is suspended from the cross-bar E. The arrangement of bars F is such that they pass on opposite sides of the mast and extend both forward and backward from the shaft B. On the free ends of bars F, I secure counter-weights *w w* of sufficient weight to slightly overbalance the bar A and the parts connected thereto. Bars A and F are stiffened and braced by truss-rods O O, secured at opposite ends to the arms by suitable clips P P and passing over struts Q and R.

Secured to bars F, near their connecting-bar G, is a wooden cross-bar S. It will be observed that by this construction the portion of bars F which projects backward from shaft B may be lengthened or shortened, so that the same counter-weight may be adjusted to counterbalance lamps of different weights by sliding the bars F F backward or forward. This adjustment, however, is designed to facilitate the construction of mast-arms of different lengths from like parts, and is not intended to be used in individual arms after they have been erected, but before the truss-rods have been applied. Consequently said rods are not made adjustable. Bracket L being secured to the side of the mast below its top, as illustrated in Fig. 1, the line-wire W passes from the insulator T on the cross-arm U, secured to the mast in the usual manner, to an insulator V, attached to the mast below bracket L, from thence to the insulated cross-bar S, thence to the insulated cross-bar E, and from thence to the lamp, the return-line passing over a similar course on the other side of the arm to the insulator X. By this construction of the arm and arrangement of the line-wire that portion of the line-wire between the insulated cross-bars S and E may be drawn taut and is not affected by the swinging of the arm upon its pivot, thus avoiding the unsightly slack line-wire heretofore used in connection with this class of mast-arms.

The arm when extended horizontally is held in place by a cord *y*, secured to the arm and to the mast below.

I claim as my invention—

1. In a mast-arm, the combination of a single bar, a shaft secured to one end of said

bar at right angles thereto, a bracket forming a bearing for said shaft and adapted to be secured to a mast, a pair of bars joined at one end and mounted on the shaft and single
5 bar, so as to be longitudinally adjustable thereon, and counter-weights mounted on said pair of bars, all arranged to co-operate substantially as and for the purpose set forth.

2. In a mast-arm for electric lamps, the
10 combination of the shaft having sleeves at its ends, the bar projecting at right angles from said shaft, the pair of bars mounted in said sleeves so as to slide longitudinally therein and connected together at one end, and coun-

ter-weights mounted on the free ends of the 15 bars, all substantially as set forth.

3. As a new article of manufacture, the above-described mast-arm, consisting of bar A, shaft B, having sleeves I I, yoke D, cross-bar E, bars F F, joined by bar G, having sleeve 20 H, set-screws J J and K, cross-bar S, truss-rods O O, clips P P, strut Q, counter-weights w w, and bracket L, all combined and arranged substantially as set forth.

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Witnesses:

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