

(No Model.)

H. H. FAIRBANKS & W. H. COUGHLIN.
SUPPORTING FRAME FOR ELECTRIC LAMPS.

No. 356,580.

Patented Jan. 25, 1887.

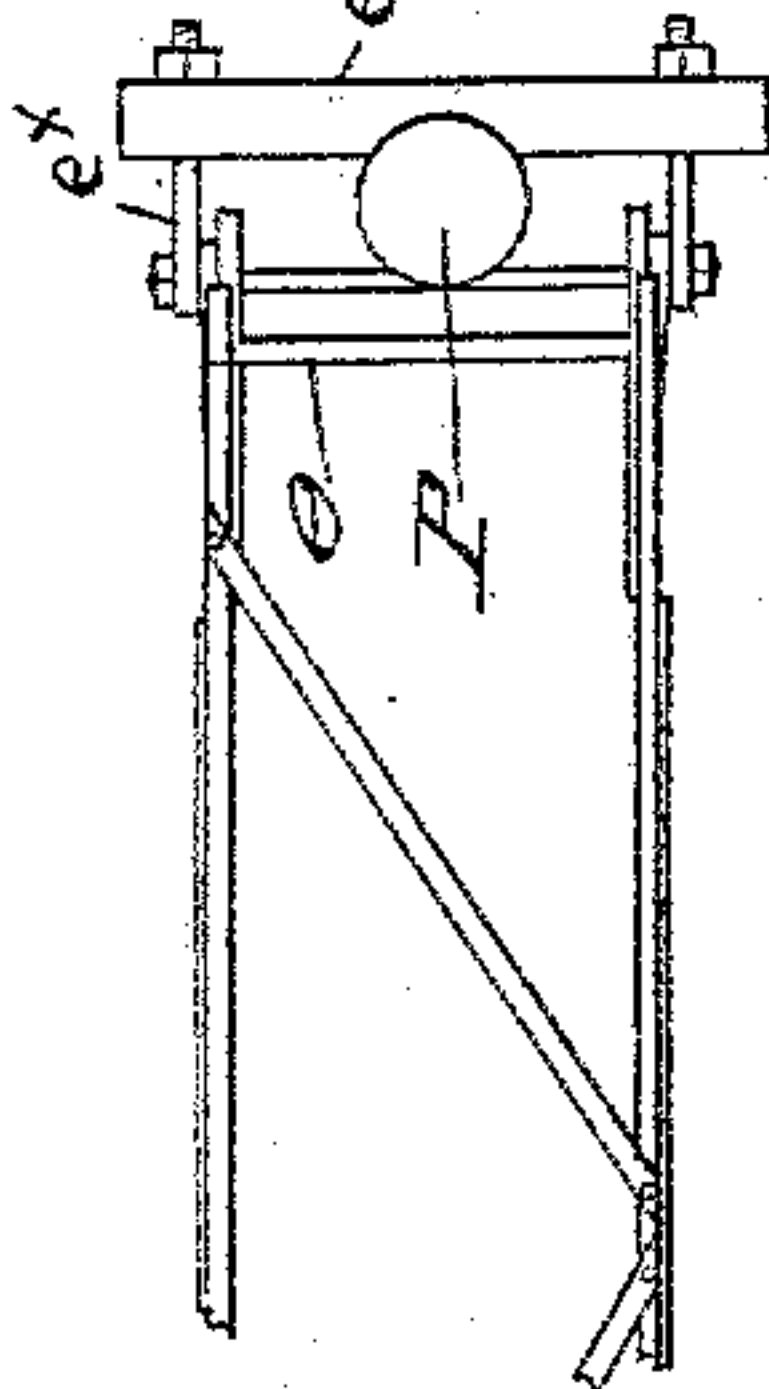
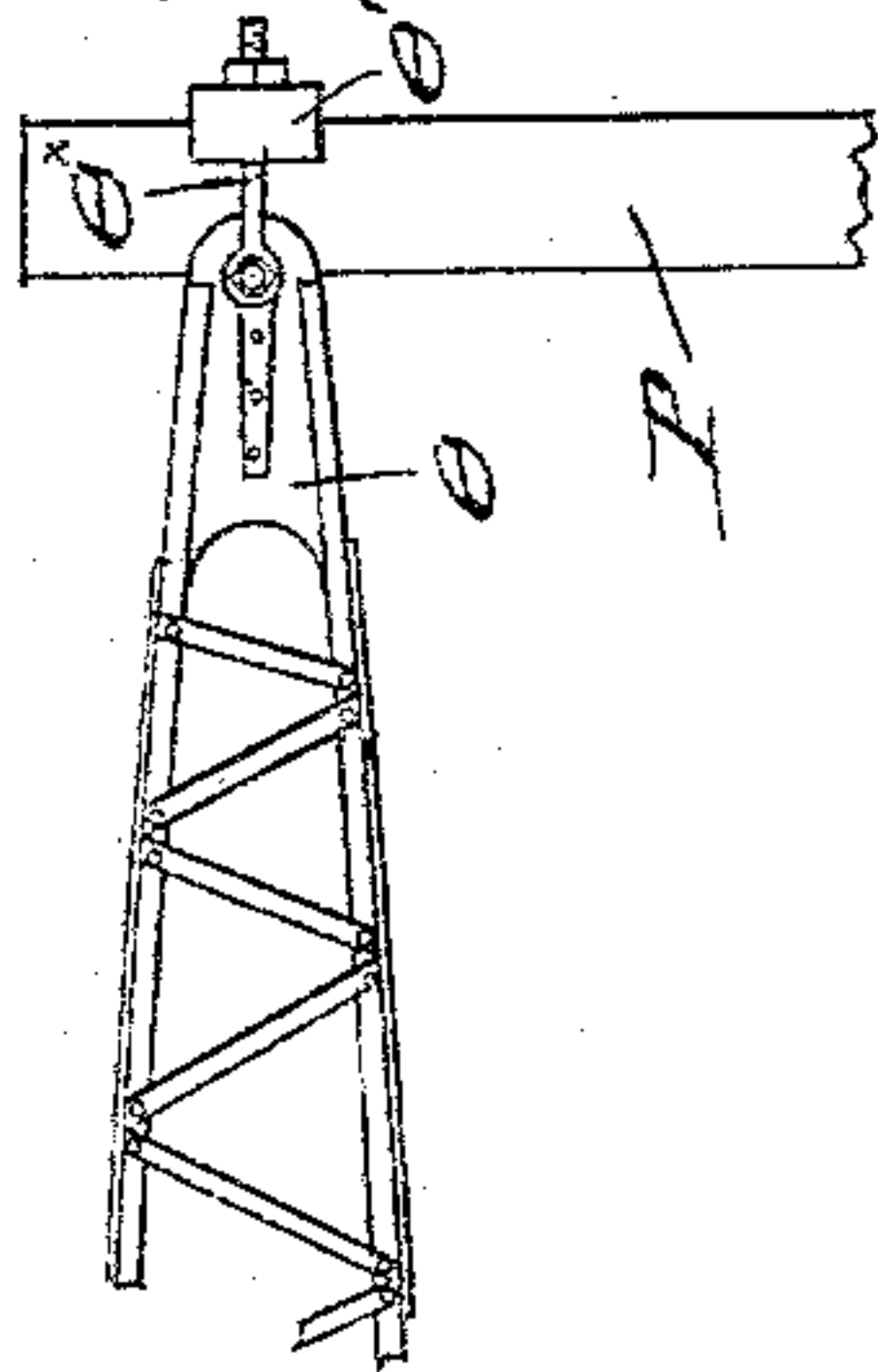


Fig. 1.

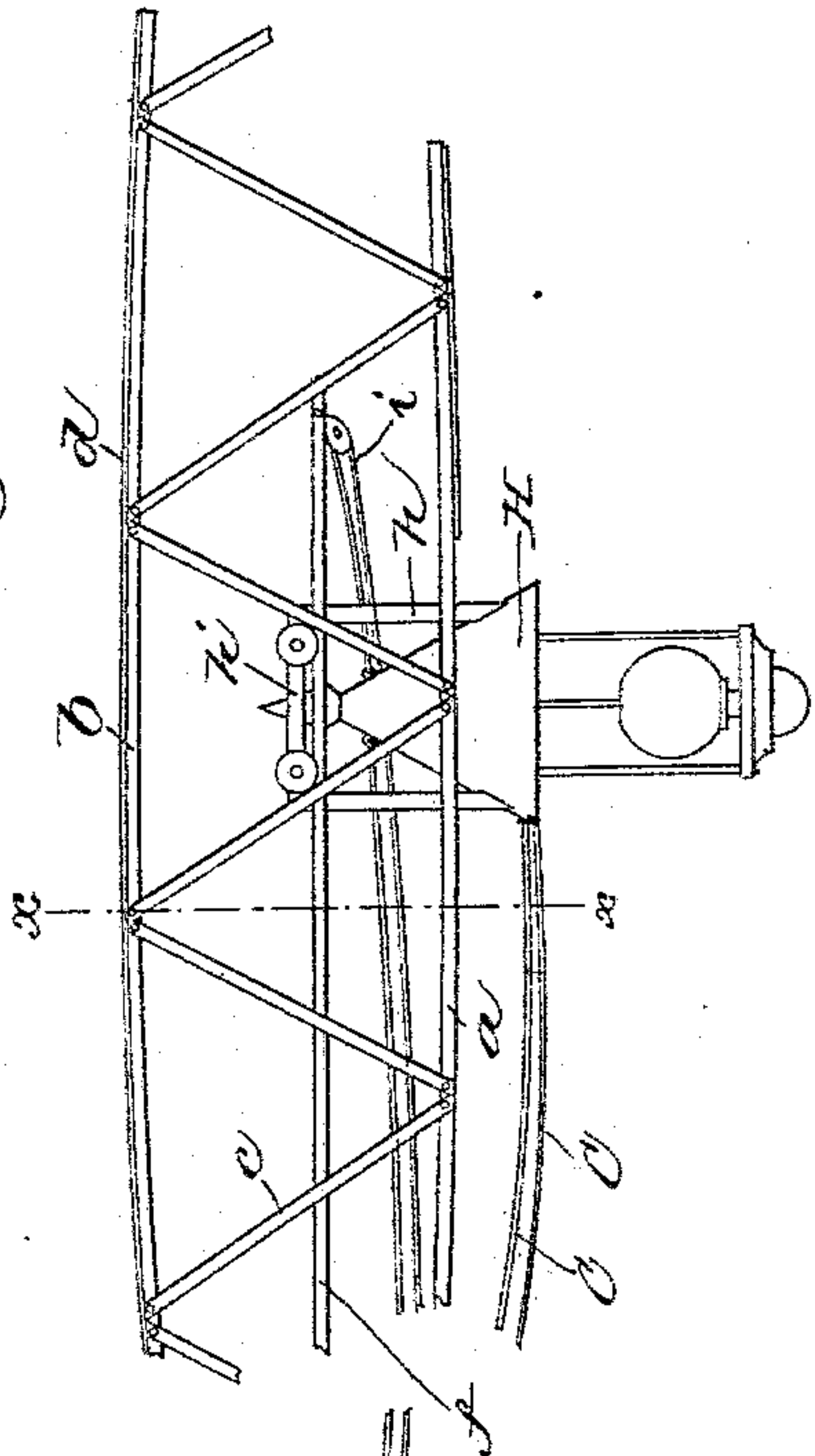


Fig. 2.

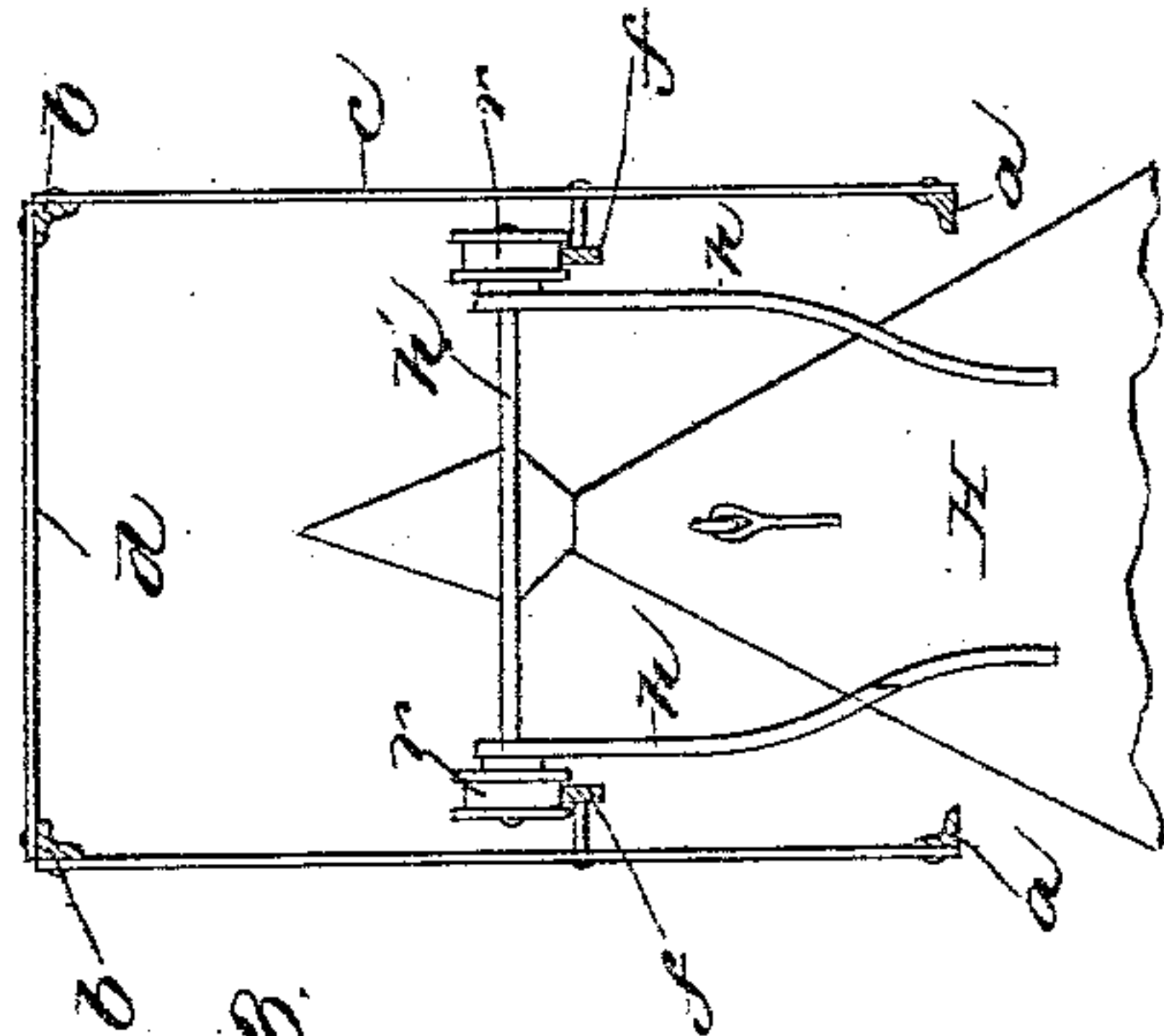
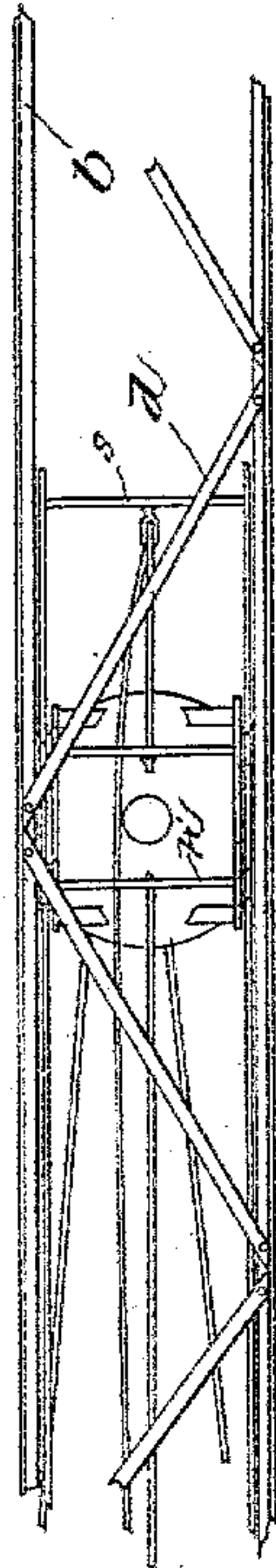
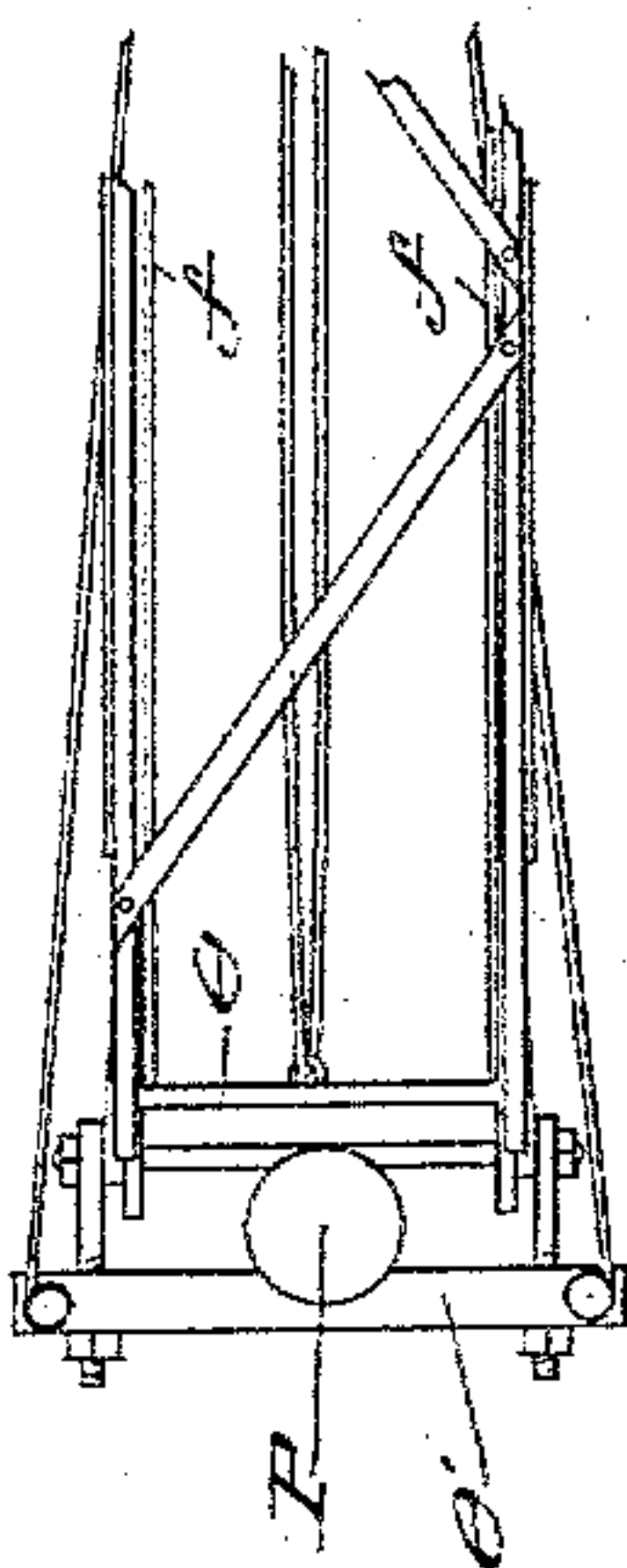
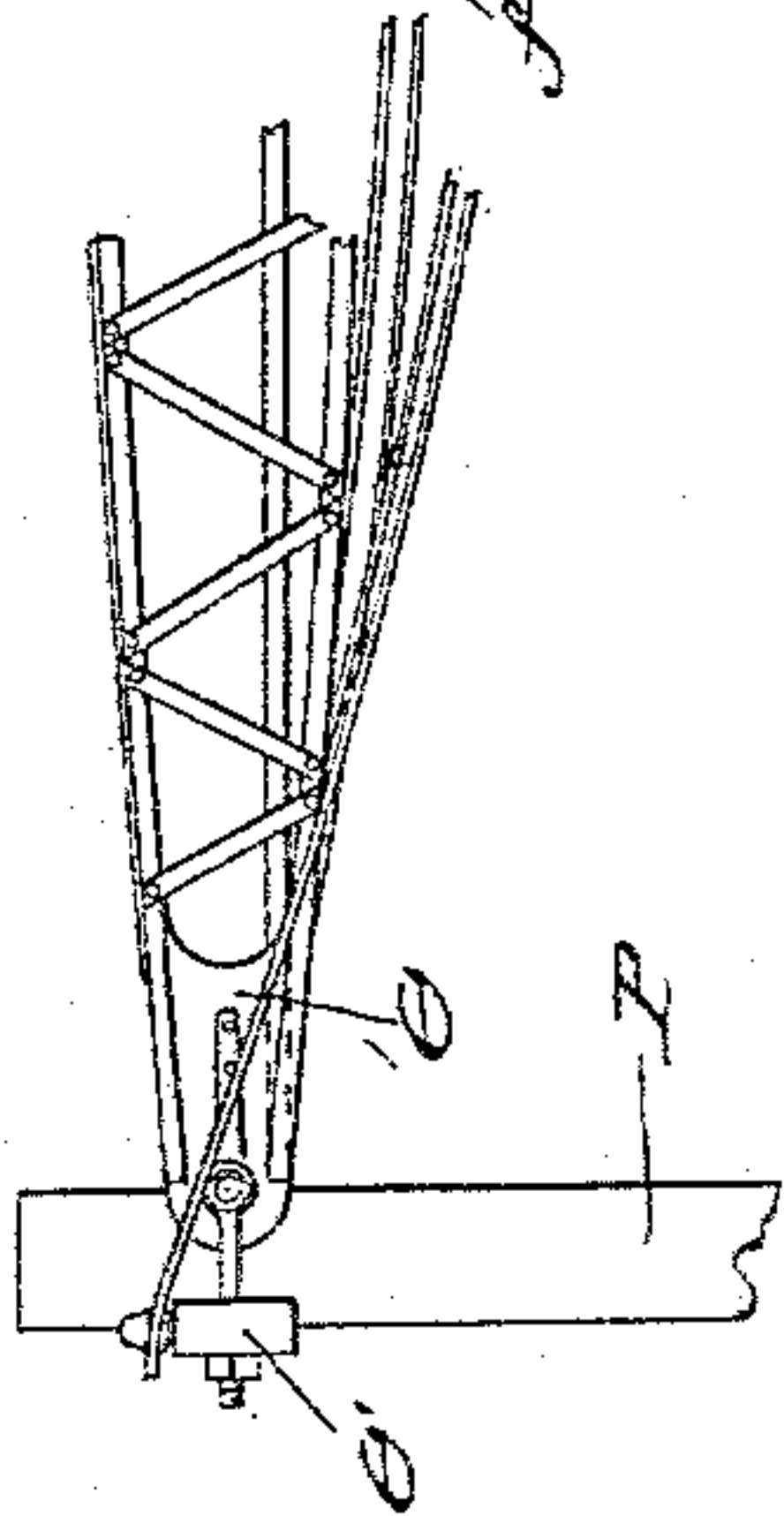


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

HERBERT H. FAIRBANKS AND WILLIAM H. COUGHLIN, OF WORCESTER, MASSACHUSETTS, ASSIGNORS TO THE WORCESTER ELECTRIC LIGHT COMPANY, OF SAME PLACE.

SUPPORTING-FRAME FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 356,580, dated January 25, 1887.

Application filed November 9, 1886. Serial No. 218,396. (No model.)

To all whom it may concern:

Be it known that we, HERBERT H. FAIRBANKS and WILLIAM H. COUGHLIN, both of Worcester, county of Worcester, and State of Massachusetts, have invented an Improvement in Supporting-Frames for Electric Lamps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

It is now customary in using electric-arc lights for street-lighting purposes to place the hood of the lamp upon a suitable pole, usually about thirty feet high, located at the edge of the sidewalk or just off the street and adjacent to the curbing. This has been found in practice to be very objectionable, especially during the summer season, when the foliage on the shade-trees is so dense as to absorb in some cases almost entirely the light from the lamps; and even if effort is made to adapt the location of the pole and lamp in a way that may in the greatest degree avoid this objection, it has been found even then exceedingly unsatisfactory. To obviate this objection various methods have been employed, such as the use of long arms, some of them attempting to be made adjustable, that they may be lowered or elevated, but all of them attended with more or less danger, and proving in practical work to be quite unsatisfactory.

This invention has for its object to provide for an exceedingly strong and substantial means of suspending or locating the lamp and hood over the center of the street, where the rays of light may be extended up and down the street with less obstruction by foliage, and also reaching under the lower limbs upon the sidewalk both sides of the streets, and to avoid danger to the attendant who operates it, and the objection of being swayed by heavy winds, and thus obtain the greatest security and economy of service by the distribution of the light, the stability of the structure, and avoidance of accidents or danger.

In carrying out this invention a supporting frame or truss elevated above and extended across a street is attached to the upper ends of two poles, the said truss having a suitable

track, upon which slides the lamp, the hood of which is provided with suitable rollers to run on the said track, the electrical conductors from the main line being connected to the lamp, an endless-rope and pulley contrivance being employed to draw the lamp and hood along the track from its point of suspension above the street toward one of the poles to be reached by the attendant upon the pole.

Figure 1 shows in side elevation a supporting frame or truss having a track upon which is mounted an electric arc lamp, the supporting-frame, partially broken away at intervals, being erected upon two poles, also shown as broken out to save space upon the drawings; Fig. 2, a top view of the devices shown in Fig. 1; and Fig. 3, a cross-section of Fig. 1, taken on the dotted line *x x*, part of the lamp being broken away.

The supporting-frame consists of lower rails or bars, *a*, upper rails or bars, *b*, braces *c*, and bars *d*, to join the upper and lower rails together, thus forming a truss like structure of sufficient strength and durability to withstand the weight of an electric-arc lamp and hood, and to retain the same in fixed position under the action of high winds, &c.

The bars and braces in practice are made of angle-iron, to thus secure the greatest strength with least weight of metal.

The supporting-frame is terminated with end pieces, *e e*, which are attached to the poles *P*, placed, for instance, at opposite sides of a street or passage-way, said end pieces having connected to them by a bolt, *e'*, a cross-bar, *e'*, which is placed at the opposite side of the poles *P*, to thereby sustain or attach the supporting-frame at the upper ends of the poles.

Two supporting rails or tracks, *f*, are joined to the supporting frame or truss and extend forward to substantially the center of the said frame.

The hood *H* of the lamp is provided with uprights *h*, (herein shown as four in number,) joined together at their upper ends by cross-pieces *h'*, which latter carry rollers *r*, which follow upon the supporting rails or tracks *f*. To the endmost cross-bar, *s*, joining the supporting-rails *f*, a small pulley is attached, over

which passes a cord, *i*, which is extended over a small pulley at the pole, the cord attached to the said lamp and hood, so as to move it.

Two flexible conductors, *C*, leading from the main line are connected with the lamp, so that the attendant upon climbing the pole *P* may, by the cord *i*, draw the lamp toward him, and after replenishing it with a carbon or otherwise fixing it may, by the cord, replace the lamp at substantially the center of the supporting-frame.

By employing two poles and a supporting-frame such as herein described it will be seen that an electric lamp may be suspended directly above a street, avenue, or passage-way, where it would be impossible to place one pole, and also by the construction of the supporting-frame, as herein shown and described, the lamp may be held in a fixed position under all conditions.

We claim—

1. The rigid supporting truss-like frame herein described, suspended between two poles, combined with a supporting-rail joined to the supporting-frame to sustain a lamp, substantially as described.

2. The rigid supporting truss-like frame herein described, suspended between two poles,

and the supporting rails or tracks *f*, combined with a lamp having the frame composed of the rods *h h'* and the rollers *r* to follow upon the tracks, substantially as described.

3. The rigid supporting truss-like frame herein described, suspended between two poles, and the supporting rails or tracks *f*, combined with the hood *H*, having the attached frame to carry the rollers *r* to follow upon the tracks, and a cord or rope, *i*, to operate, all substantially as described.

4. The rigid supporting truss-like frame herein described, suspended between two poles, and the supporting rails or tracks, combined with the electric lamp suspended upon the supporting rails or tracks, the flexible conductors *C*, and means, substantially as described, for moving the lamp toward and from its point of suspension on the said track, substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HERBERT H. FAIRBANKS.
WILLIAM H. COUGHLIN.

Witnesses:

HERBERT L. ADAMS,
WM. E. LOWE.