(No Model.)

2 Sheets—Sheet 1.

J. S. ADAMS.

TOWER.

No. 335,102. Patented Feb. 2, 1886.

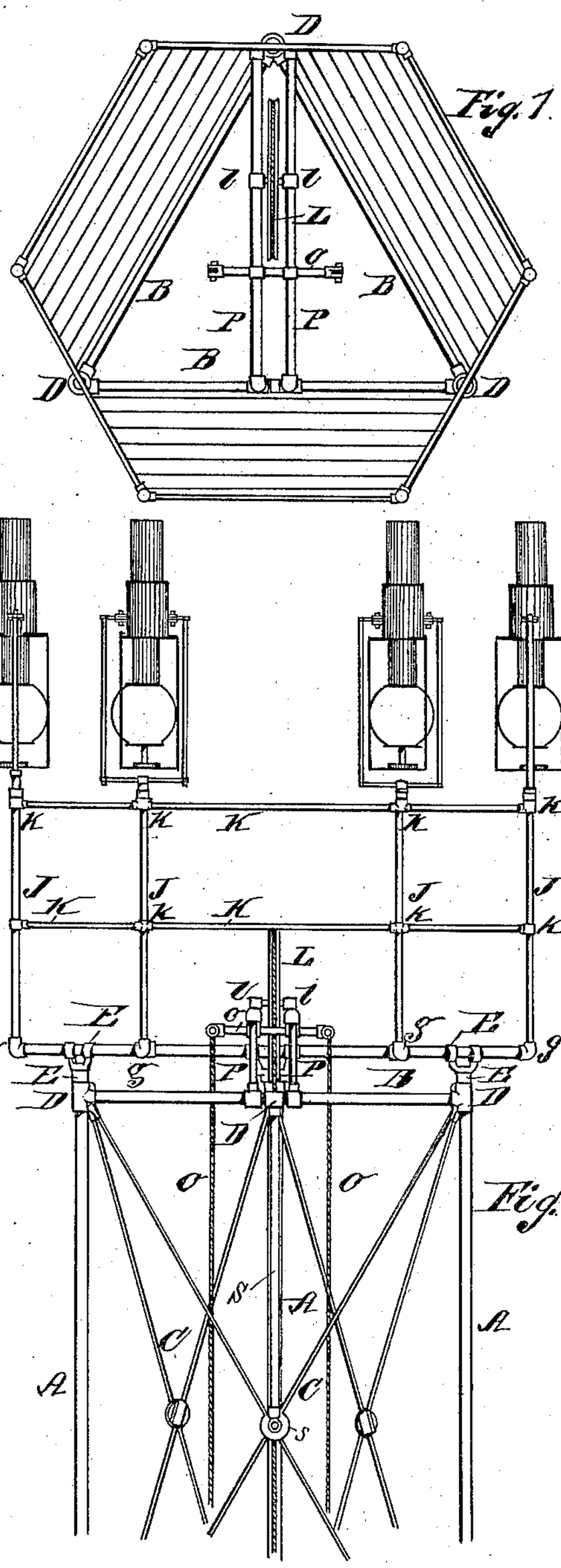

Fig. 1.

Fig. 2.

WITNESSES
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Attorney

(No Model.)

2 Sheets—Sheet 2.

J. S. ADAMS.

TOWER.

No. 335,102. Patented Feb. 2, 1886.

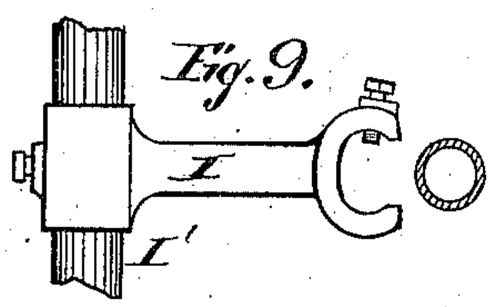

Fig. 9.

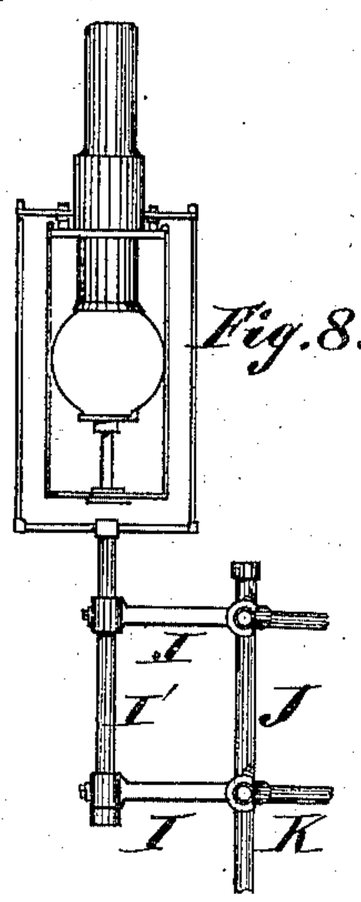

Fig. 8.

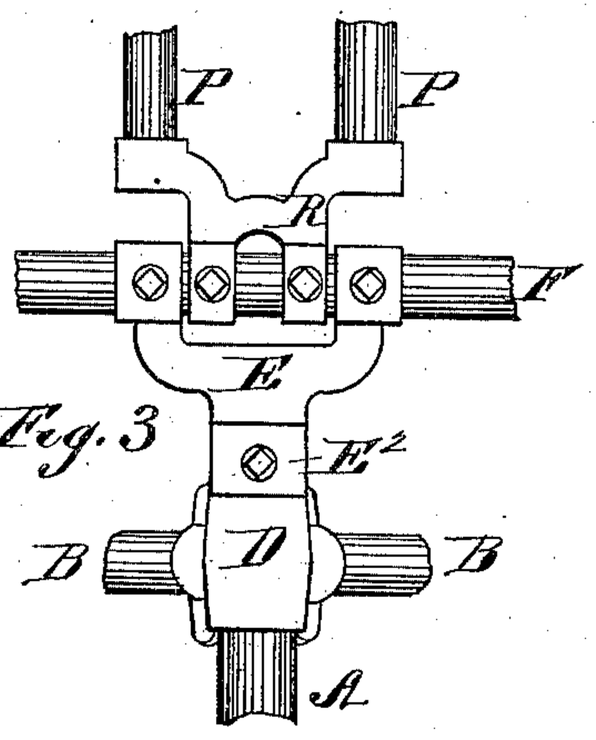

Fig. 3

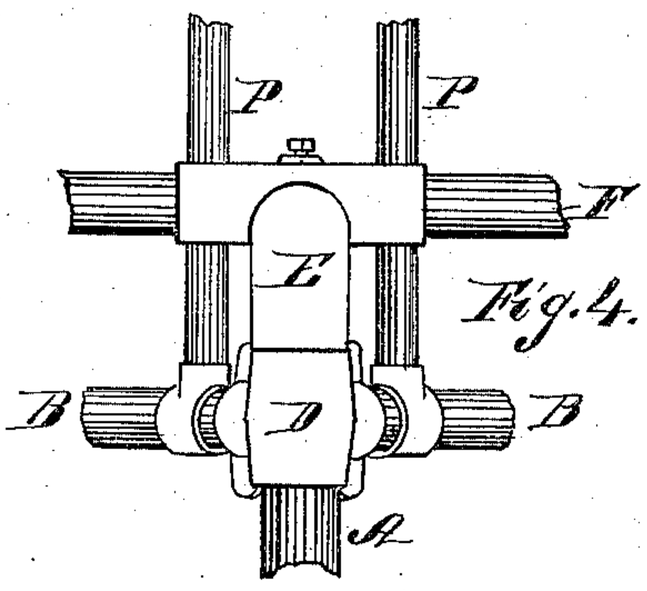

Fig. 4.

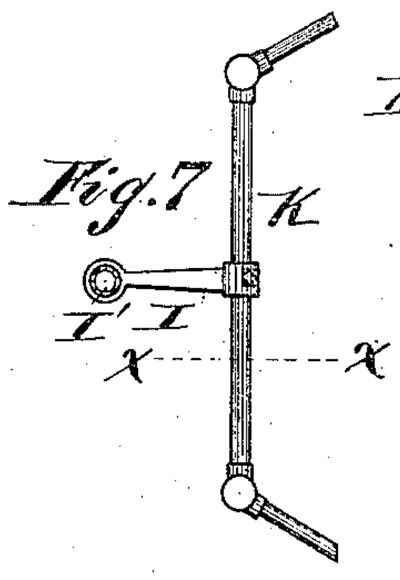

Fig. 7

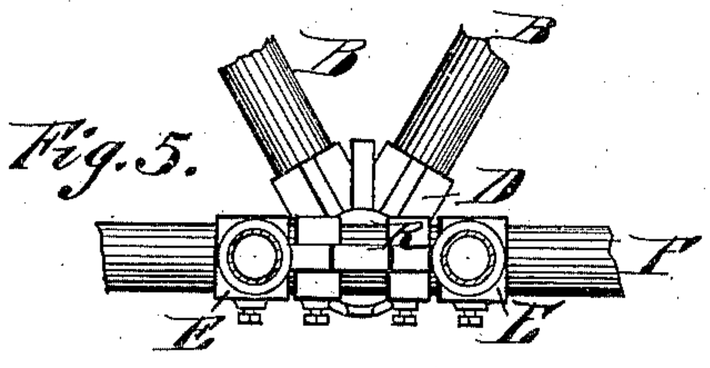

Fig. 5.

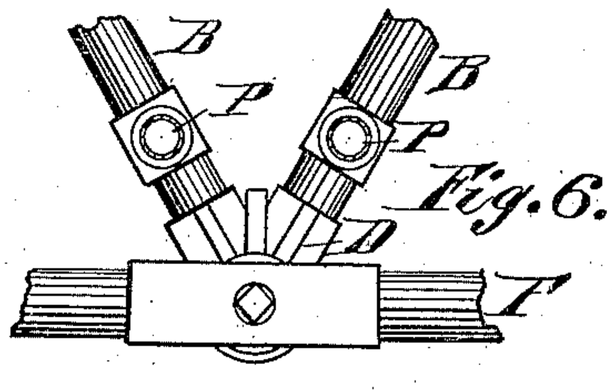

Fig. 6.

WITNESSES

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M. E. Hummel

INVENTOR

John S. Adams.

By W. W. Leggett.

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UNITED STATES PATENT OFFICE.

JOHN S. ADAMS, OF DETROIT, MICHIGAN, ASSIGNOR TO THE DETROIT IRON TOWER COMPANY, OF SAME PLACE.

TOWER.

SPECIFICATION forming part of Letters Patent No. 335,102, dated February 2, 1886

Application filed June 30, 1884. Serial No. 136,397. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. ADAMS, of Detroit, county of Wayne, State of Michigan, have invented a new and useful Improvement in Towers; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates more particularly to the upper portions of electric-light towers, and is designed to provide improved means for the attachment and support of the upper platform or landing, the railing inclosing the landing, the elevator mechanism, and the electric lamps; and it consists in the several novel features of construction, and in the various combinations of devices hereinafter fully set forth, and designated in the claims.

In the accompanying drawings, this invention is shown as applied to triangular skeleton iron towers. The several members, which may be subjected to either transverse or compressive strains, are shown in tubular form; but any other suitable form of structural iron or steel may be used without departing from the control of this invention.

Figure 1 is a view of the top of an elevator-tower, on which the lamps are to be supported on standards, hangers, or brackets secured upon the railing-posts, or upon supplementary posts attached to the railings. Fig. 2 is a view of the elevator-tower, showing the lamps in position, the rope-pulley and guide-ropes, and the means by which these parts are attached and supported. Fig. 3 is a fragmentary elevation of the elevator-tower, and shows two of the pulley-bar posts supported by a yoke secured to the platform-bracket. Fig. 4 is a similar view, and shows the pulley-bar posts supported by clamps or collars secured upon the upper girts of the tower structure, near their intersection with the main couplings. Fig. 5 is a plan view of these posts arranged as shown in Fig. 3. Fig. 6 is a similar view of the arrangement of posts shown in Fig. 4. Fig. 7 is a fragmentary plan view of the upper railing, and shows the means by which a supplementary lamp-post may be attached. Fig. 8 is a vertical section through line *x x* of Fig. 7, showing a lamp in position supported by brackets secured upon the railings. Fig. 9 is an enlarged view of one of the brackets shown in Fig. 8.

The reference-letter A shows the posts or standards of the tower structure.

B shows the girts or horizontal braces, C the diagonal brace-rods, and D the main couplings by which these several members of the tower structure are connected. The upper works of these towers are connected with and supported by the main structures thereof, principally by means of the platform-brackets E, which are connected to the upper main couplings of the tower by the nipples, which are preferably cylindrical or tubular and screw-threaded upon their ends, but may obviously be of any other suitable form of iron, secured in the connected posts by means of bolts, pins, set-screws, &c.; or, if desirable, the entire combination of parts at this point may be cast in one piece, or in any other practicable number of pieces. The platform-bracket is usually provided with one or more lugs. These lugs may be cast upon the body of the bracket, or they may be formed upon the collar E^2, Fig. 3. The upper portion of the platform-bracket is preferably branched, as shown in Fig. 3, for the purpose of providing a firm support for the platform-bars F, which pass horizontally through the sleeved openings in the branches. This branched form is not, however, absolutely essential, as will be seen in Fig. 4, where the desired result is secured by the use of a single long-sleeved bearing for the platform-bars, which are secured in the sleeves of the brackets, preferably by means of set-screws.

In the form of construction shown the elbows *g* are secured upon the ends of the platform-bars, which also support the gratings or platform, upon which the attendant may stand when trimming his lamps.

The elevator mechanism shown consists of the sheave-wheel or rope-pulley L, the pulley-bearings *l*, the guide-ropes O, and the rope-bar *o*, secured upon the pulley-bars P, which are supported at their ends by posts *p*. In a triangular tower, as shown in Figs. 1 and 2, the posts P at one end of the pulley-bars are supported by clamps or collars secured upon the girt B near its center, which is in turn

supported by the strut S, connected with and supported by the lock-plates *s* at the intersection of the diagonal brace-rods. At the other ends of the pulley-bars the posts P are supported by the yoke R, secured upon the platform-bracket, as shown in Figs. 3 and 5, or by clamps or collars secured upon the girts B near their ends, as shown in Figs. 4 and 6.

In a quadrangular tower the pulley-bars may obviously be supported by either of the above-described methods.

In the use of the railing-posts J as supports for the attachment of lamp standards, hangers, or brackets, as shown in Fig. 2, the number of lamps which can be used on a tower is practically limited to the number of railing-posts or to a factor thereof.

It is sometimes desirable to use other numbers of lamps, and in Figs. 7, 8, and 9 are shown means for the attachment of any desired number of supplementary posts for this purpose; or the device here shown and described may, if desirable, be used for the entire group of lamps. The arms or brackets I are provided at their outer ends with vertical sockets, to receive and secure the lamp-post I′, and at their inner ends with horizontal sockets, preferably open at the end, to permit their attachment to the railings at any desired point or time. These brackets may be secured to the posts and railings by set-screws, keys, or any other available means, and the lamp supports, hangers, or brackets similarly secured upon the posts.

What I claim is—

1. In a tower, the combination of the platform-brackets sleeved to receive horizontal bars of the platform, and secured to the tops of the uprights, the platform-bars supported by said brackets, and the pulley-bars composed of uprights and transverse connecting-pieces supported at opposite ends, substantially as described.

2. In a tower, the pulley-bar posts, in combination with the clamps or collars secured upon the girts of the tower, as and for the purpose specified.

3. In a tower, the pulley-bar posts, in combination with the clamps or collars secured upon the girt of the tower and supported by the strut, substantially as and for the purpose specified.

4. In an electric-light tower, the combination, with the railing-posts, of lamps connected therewith, whereby said posts form the supports for the lamps, substantially as described.

5. In an electric-light tower, the lamp-posts secured upon the railings, for the support of electric lamps, as and for the purposes specified.

In testimony whereof I sign this specification in the presence of two witnesses.

JOHN S. ADAMS.

Witnesses:
N. S. WRIGHT,
M. B. O'DOGHERTY.