

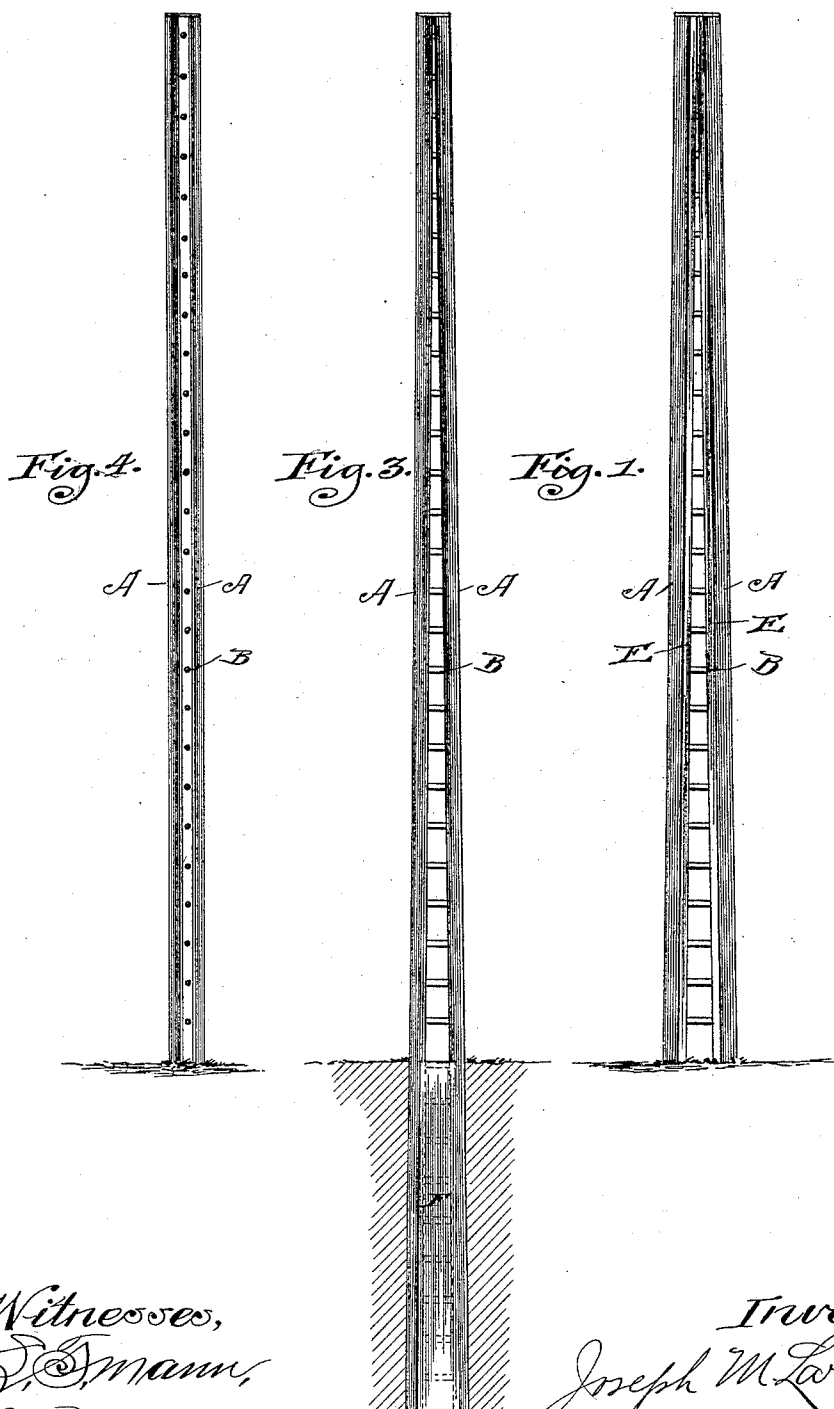
(No Model.)

3 Sheets—Sheet 1.

J. M. LARIMER.
METAL POST.

No. 463,317.

Patented Nov. 17, 1891.



Witnesses,
J. S. Mann,
Frederick Goodwin

Inventor,
Joseph M. Larimer
By *Offield, Bowler & Hutchinson*
Attys.

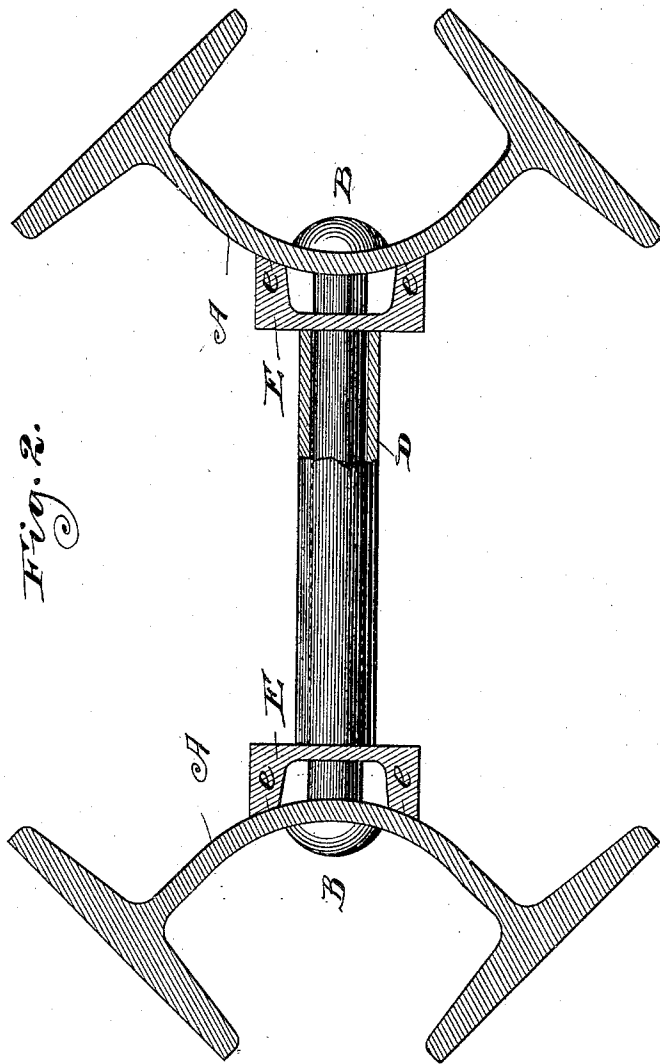
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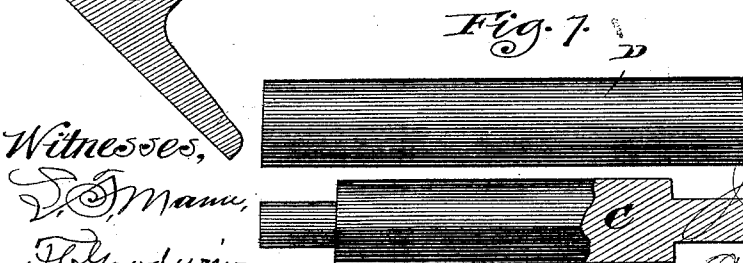
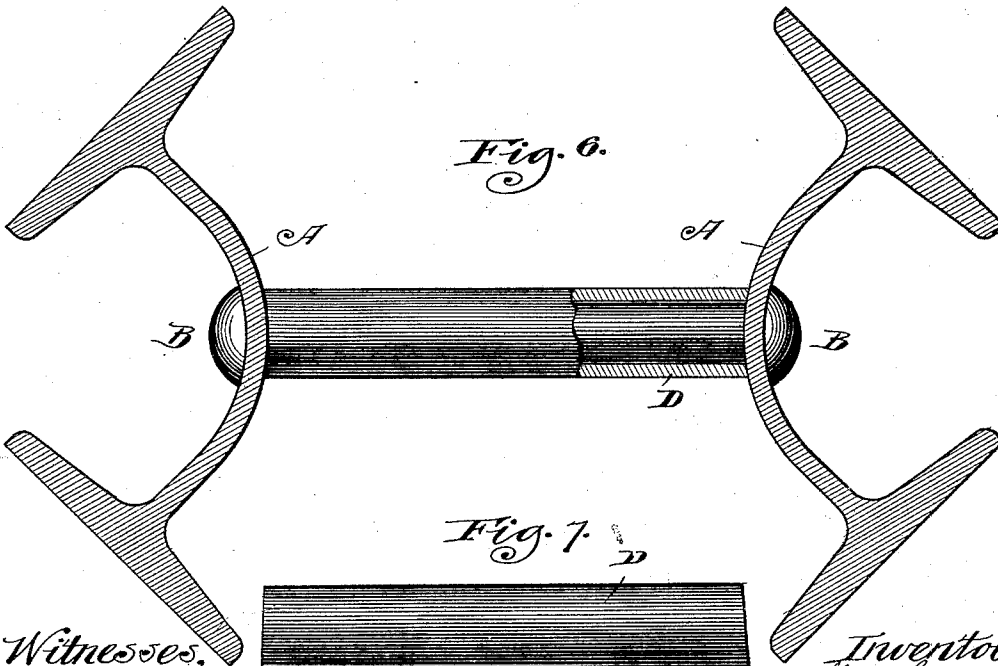
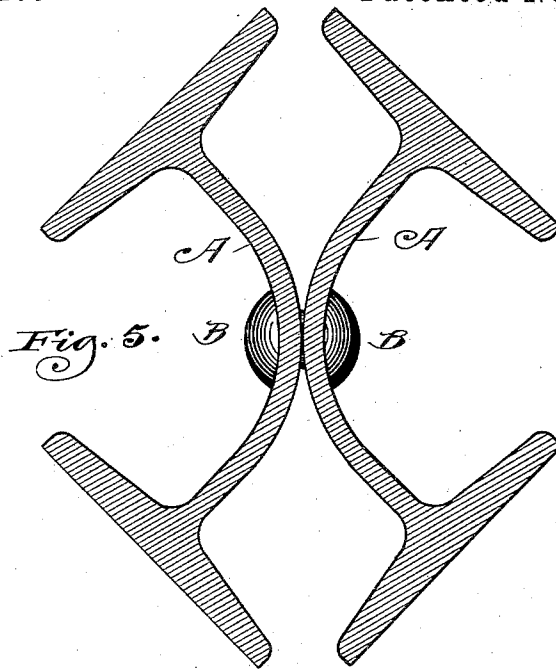
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3 Sheets—Sheet 3.

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METAL POST.

No. 463,317.

Patented Nov. 17, 1891.



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Fig. 8.

By Alfred B. Smith
Att'y

UNITED STATES PATENT OFFICE.

JOSEPH M. LARIMER, OF CHICAGO, ILLINOIS.

METAL POST.

SPECIFICATION forming part of Letters Patent No. 463,317, dated November 17, 1891.

Application filed August 10, 1891. Serial No. 402,234. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH M. LARIMER, of Chicago, Illinois, have invented certain new and useful Improvements in Metal Posts, of which the following is a specification.

My invention relates to the construction of metal posts such as are used to support trolley-wires for electric railways, for electric-lamp posts, and for similar purposes; and it is the object of my invention to provide a post of this kind which shall be strong, easy to build, light in weight, and economical in construction. To these ends I employ in the construction of my improved posts flanged metal beams, and bend the webs of such beams upon curved lines and connect said webs with their convex sides toward each other by means of a line of bolts or rivets. In order to give the post the proper taper I employ spacers of gradually-diminishing length from the bottom toward the top of the post, while at the very top the convex sides of the beams may touch. The spacers may vary in form; but I prefer to employ sleeves or short tubes, and either cut away or concave the ends of such tubes in order that said cut-away or concave ends may fit the convex sides of the webs of the beams which form the post, or interpose between the ends of said tubes and the said webs small channel-beams whose flanges bear directly on said webs.

In the accompanying drawings, Figure 1 is a view in side elevation of one of my improved posts. Fig. 2 is a cross-sectional view of the same on an enlarged scale. Fig. 3 is a view in elevation of a post, the upright members whereof are secured at their lower ends to a short metal bar or post, whereby the post is anchored to the ground. Fig. 4 is a view at right angles to that of Fig. 3. Fig. 5 is a section near the top of the post shown in Figs. 3 and 4. Fig. 6 is a cross-section through the post near its base, the sleeve-spacer being shown partly broken away. Fig. 7 is a plan view of the sleeve, and Fig. 8 is a detail view of a stud-bolt.

In the drawings, A A indicate flanged metal beams of the type known as "I-beams," the webs whereof are bent upon curved lines, and which are secured with their convex sides toward each other and with a gradual approximation of such convex sides toward

each other from bottom to top of the posts. In order to secure these beams together I employ rivets such as B, (shown in Figs. 2, 5, and 6,) the webs of the beams being perforated for the passage of said rivets and the heads of the latter engaging the concave sides of the webs. Instead of the rivets, I may employ bolts having securing-nuts or the stud-bolt C shown in Fig. 8 of the drawings. In order to secure the desired taper in the post from its base to its top, I employ spacers, which may be formed integrally with the securing means—as, for example, the stud-bolt C of Fig. 8; and these stud-bolts or their spacers will be of gradually-increasing lengths in order to secure the proper spacing and the requisite taper—for example, as shown in Fig. 2 of the drawings.

D represents a sleeve through which the rivets may pass, and this sleeve will preferably have its ends concave, as shown in Fig. 6 of the drawings, the purpose of this conformation of the ends of the sleeve being to secure its more accurate fitting to the web.

Another construction, and one which is preferred when a post of considerable strength is desired, is shown in Fig. 2 of the drawings, where I employ, in addition to the beams A A, rivets and spacing sleeves or washers, channel-beams E, which are placed vertically with their open sides toward the convex webs of the beams A A, and take a bearing thereon on opposite sides of the securing bolts or rivets. These flanges may be beveled, as shown at e, in order to adapt them to more perfectly fit the curved webs of the beams A; but this feature is not essential. These channel-beams not only greatly strengthen the post and adapt it to be carried to a considerable height and yet maintain it rigidly, but they also serve to brace the post laterally, furnishing a bearing for the securing means on opposite sides of the center line of the connection. The precise form of these beams is not material, as U-beams and perhaps other forms may be found well adapted to this purpose. The posts for ordinary purposes are of such length that they may be made from a single length of beam; but if the height of the posts should render it necessary to construct them in sections it may be readily done by using the construction shown in Fig. 2, and in which case the channel-beams E would serve as

splices for the abutted ends of the main beams. The posts may be fixed to any suitable foundation; but in Fig. 3 I have shown a cast-iron section F bolted between the webs of the beams A A and furnishing a suitably-broad base to enable the posts to be planted in the ground and maintained in sufficiently-rigid position.

I do not limit my invention to the exact details of construction nor to the uses mentioned.

I claim—

1. A post composed of flanged metal beams having their webs bent upon curved lines and secured with their convex sides toward each other, in combination with suitable connecting and spacing devices, whereby the completed post has a uniform taper from bottom to top, substantially as described.

2. A metal post comprising, in combination, flanged metal beams having their webs bent upon curved lines and secured with their convex sides toward each other by means of suitable connecting devices and spacing pieces interposed between said webs, said pieces being of constantly-diminishing length from bottom to top of the post, whereby to give to the latter a uniform taper, substantially as described.

3. A metal post comprising, in combination,

flanged metal beams having their webs bent upon curved lines and secured with their convex sides toward each other by suitable bolts or rivets and flanged bracing-beams arranged with their flanges bearing upon said webs and securing means passing through said bracing-beams, substantially as described.

4. In a metal post, the combination, with flanged beams having their webs bent upon curved lines and secured with their convex sides toward each other, of tie bolts or rivets and interposed spacing-pieces having their ends concaved to adapt them to bear upon the convex sides of the webs on opposite sides of the connections, substantially as described.

5. In combination with a metal post composed of flanged metal beams having their webs bent and secured by bolts or rivets, spacing-pieces interposed between and separating said beams, and a cast-metal anchor interposed between the lower ends of the beams and secured therewith, substantially as described.

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Witnesses:

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