(No Model.) 2 Sheets—Sheet 1.

C. V. PHELPS.

TOWER.

No. 422,036. Patented Feb. 25, 1890.

Fig. 1.

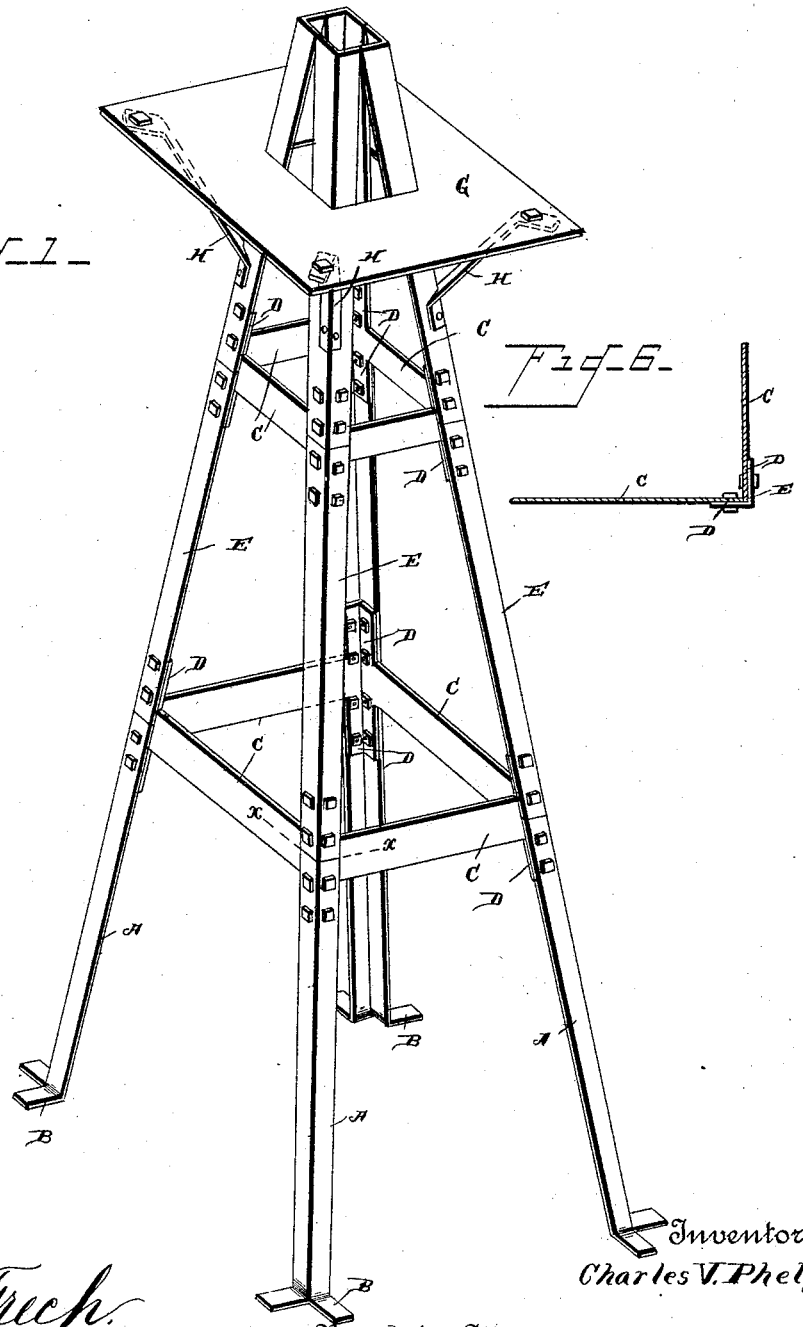

Fig. 6.

Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

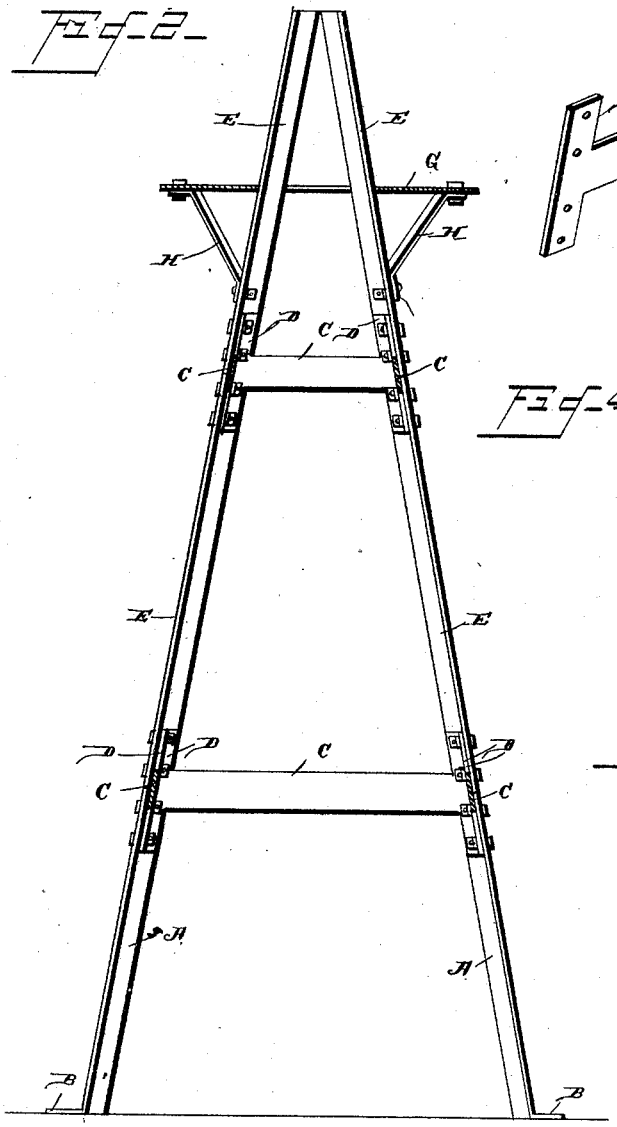


Fig. 3.

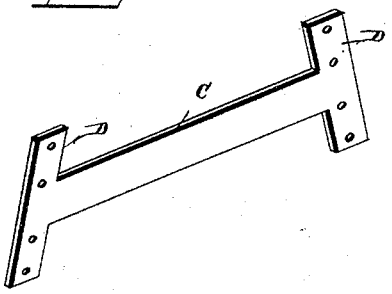


Fig. 4.

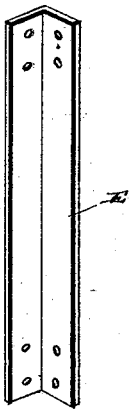
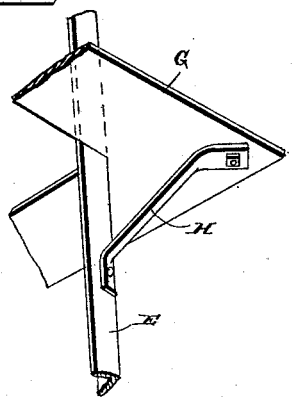


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES V. PHELPS, OF ROCHESTER, OHIO.

TOWER.

SPECIFICATION forming part of Letters Patent No. 422,036, dated February 25, 1890.

Application filed November 20, 1889. Serial No. 330,951. (No model.)

To all whom it may concern:

Be it known that I, CHARLES V. PHELPS, a citizen of the United States, residing at Rochester, in the county of Lorain and State of Ohio, have invented a new and useful Tower, of which the following is a specification.

My invention relates to improvements in towers for supporting windmills, electric lights, signals, and the like, or for use for derricks; and it consists in certain novel features hereinafter described and claimed.

Referring to the drawings, Figure 1 is a perspective view of my improved tower. Fig. 2 is a vertical section of the same. Fig. 3 is a detail perspective view of one of the braces. Fig. 4 is a detail view of one of the sections of the corner posts or standards. Fig. 5 is an enlarged detail view of a portion of the platform. Fig. 6 is a transverse section on the line *x x* in Fig. 1.

In carrying out my invention I employ the anchor-posts A A, which are provided at their lower ends with the feet B, adapted to be buried in the ground, and thereby secure the posts in their proper positions. The posts are constructed of cheap metal and are substantially L-shaped in cross-section, and their upper ends are connected by the braces C. These braces C are also constructed of metal and are provided at their ends with the integral T-heads or branches D, and the said T-heads or branches are bolted to the upper ends of the anchor-posts A, and the lower ends of the sections E of the tower are bolted to the upper portions of the said T-heads, so that these T-heads form a covering for the joints between the sections. The braces are arranged so that the T-heads will fit against the inner sides of the posts, with their edges meeting in the angles of the same, so that the joints between the sections will be entirely covered, while the sections will be firmly and positively connected, and at the same time braced against lateral movement. Any desired number of sections may be employed and the tower built to any height required. The meeting ends of all the sections are joined by cross-braces provided with the branches or T-heads at their ends, and the said T-heads or branches are made to converge slightly, so that the tower will be given the desired tapered form.

Near the upper end of the tower I provide the platform G, which may be composed of a single metallic plate having a central opening to fit over the top of the tower; or it may be composed of a number of plates bolted together, as will be readily understood. The platform is supported and secured in position by means of the inclined braces or supporting-arms H, which have their lower ends bolted to the corner-posts of the tower and their upper ends bolted to the under sides of the platform, as clearly shown.

It will be observed from the foregoing description that my improved tower is composed entirely of metallic plates bolted together, so that it can be very easily built and will possess the maximum strength with the minimum weight. The several joints are all re-enforced and the heads of the braces are so arranged as to completely cover the spaces between the same. The several parts may be easily separated and packed into a small compass to facilitate transportation of the tower, and the formation of the several parts will indicate their relative positions, so that they can be readily fitted together and the tower built by an unskilled person. It will be further observed that my tower is entirely open in the arrangement of its parts, so that strong winds will have free play therethrough, and the liability of the tower to be overthrown is thus obviated. If so desired, cross-strips may be secured on the sides of the tower and a ladder may be secured thereon; but such an arrangement forms no part of my invention, and I have not deemed it necessary to illustrate it. Neither do I consider it necessary to give detailed descriptions and illustrations of the windmill, light, signal, or derrick-arms supported by and connected with my improved tower, as their employment and use is obvious and forms no part of the present invention.

Having thus described my invention, I claim—

1. The combination, with the sections of the corner-posts, of the cross-braces having integral T-heads at their ends bolted to the adjacent ends of the sections of the corner-posts, as set forth.

2. The combination of the posts made up

of a number of sections end to end, each section being L-shaped in cross-section, and the cross-beams having their ends fitting in the angles of the corner-posts, abutting against each other, and covering the spaces between the sections of the posts, as set forth.

3. In a tower, the corner-posts made in sections and L-shaped in cross-section, combined with the cross beams or braces having integral T-shaped heads at their ends which fit in the angles of the corner-posts and overlap the meeting ends of the sections, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES V. PHELPS.

Witnesses:
P. T. KESSLER,
PETER DAYNEN, Jr.