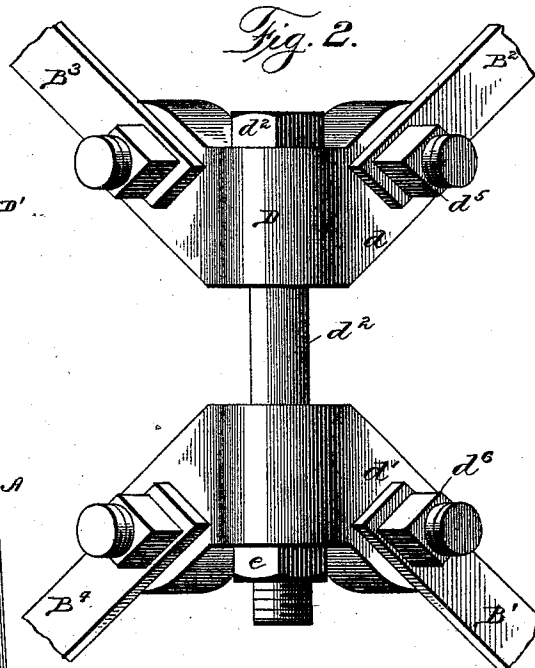
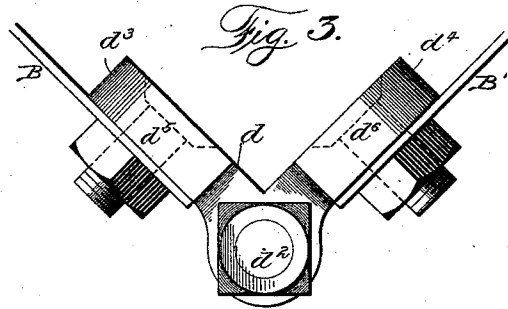
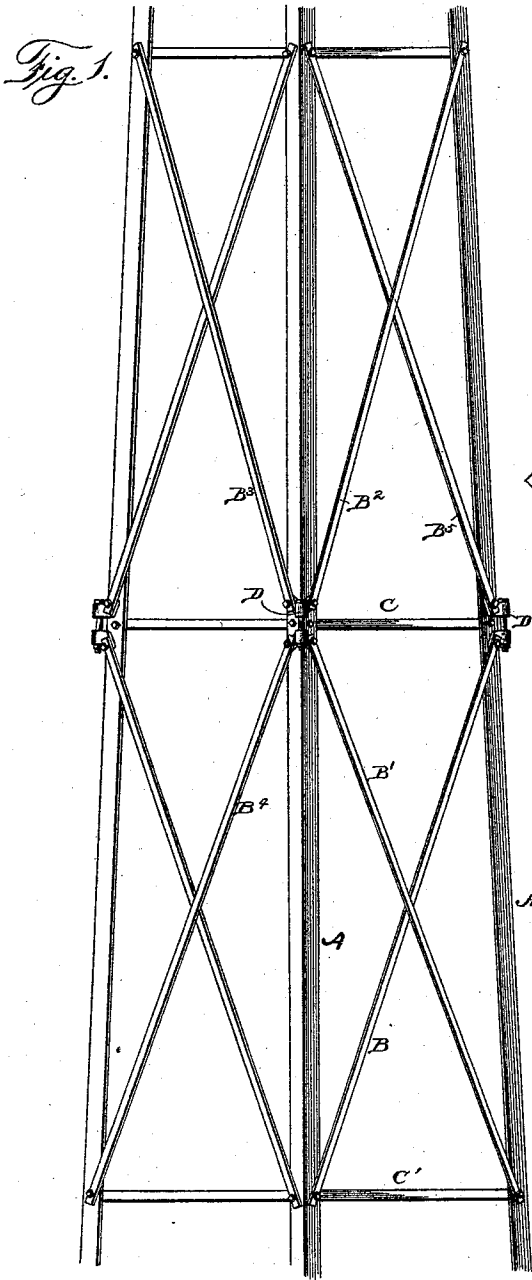


(No Model.)

H. P. HANSON & W. C. MEYRICK.
METAL TOWER.

No. 536,203.

Patented Mar. 26, 1895.



Witnesses:
John Enders Jr.
James Miller

Inventors:
Hawken P. Hanson
William C. Mayrick
by Hui Hui
Attorneys.

UNITED STATES PATENT OFFICE.

HAWKEN P. HANSON AND WILLIAM C. MEYRICK, OF DECORAH, IOWA, AS-
SIGNORS TO THE DECORAH WINDMILL COMPANY, OF SAME PLACE.

METAL TOWER.

SPECIFICATION forming part of Letters Patent No. 536,203, dated March 26, 1895.

Application filed May 23, 1894. Serial No. 512,245. (No model.)

To all whom it may concern:

Be it known that we, HAWKEN P. HANSON and WILLIAM C. MEYRICK, both citizens of the United States of America, residing at Decorah, county of Winneshiek, State of Iowa, have invented certain new and useful Improvements in Metal Towers, of which the following is a description.

Referring to the accompanying drawings, wherein like reference letters indicate like or corresponding parts, Figure 1, is a section of a tower showing our improvement. Fig. 2, is a side elevation of our improved device for connecting together the adjacent ends and tightening the braces, and Fig. 3, is a top plan of the same.

In the construction of metal towers, such as are used in connection with wind-mills, electric lights, &c., the ends of the diagonal braces are usually connected directly or indirectly to the corner posts. For this purpose the corner posts are either punched or otherwise cut away to adapt them to such connections. It is obvious that the punching or cutting of the corner-posts weaken them at that point, and to offset such effects it is necessary to use heavier material to secure the desired strength.

The object of our invention is to construct a tower of suitable rigidity and strength, by using lighter and cheaper material, and in order to do this to dispense with a large part of the punching or cutting of the parts, as well as the labor and expense of the same.

For this purpose our invention consists, first, in the construction of a tower in which the proximate ends of a part or all the braces are secured together and the said braces tightened by means of a device disconnected and separate from the corner posts of the tower, and, second, the construction of a practical device for such purpose.

In the drawings our invention is shown as applied to a four post tower, but it is equally applicable to other towers of a greater or less number of posts.

As shown, A, A represent the corner posts

of a tower, preferably of angle-steel. B, B', B², B³, &c., are the diagonal braces of the same.

C, C', are the horizontal struts, or girts, and D, D' are our improved fastening. The fastening device is composed of preferably duplicate parts $d-d'$, secured together by a draw bolt d^2 , or its equivalent. The parts d, d' are each constructed with projecting wings d^3-d^4 , to which the ends of the braces may be secured in any preferred manner. As shown in the drawings short bolts d^5-d^6 are used for such purpose. It will thus be seen that the connection rests or rides upon a corner post, but is neither directly nor indirectly attached to the same.

The mode of operation is preferably as follows: The distant ends of four braces, as, for example, B', B² B³, B⁴, are first secured to the proper corner posts in the proper manner. The several free ends of said braces are then assembled as at D, and each secured to its proper wing. The bolt, d^2 , is then positioned and the nut, e , or its equivalent, permits the two parts $d-d'$, to be drawn toward one another, thus tightening the braces and jointly clamping and binding the tower together in all directions. The connecting device thus rides upon the post, as described, and yet is as securely held in position by the opposing strain of the several braces as if it were secured to the post. The several braces thus act as trusses, giving the tower great strength without weakening it by punching or cutting

If preferred, the braces need only be secured directly to the posts at the extreme top and bottom thereof, the connections described being used at all the other points. We prefer, however, to construct the tower as first described.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a metal tower, the corner posts, the horizontal struts, and the diagonal braces, secured at one end only to the corner posts in combination with a securing and tightening device, disconnected from the corner posts

but riding thereon, and so arranged that the proximate free ends of the braces attached thereto will be securely held in position and the braces tightened, substantially as set forth.

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2. A securing and tightening device for metal towers, consisting of two parts secured together by a straining rod, each part so constructed as to afford means for attaching the
10 proximate ends of two braces, the whole,

when thus connected, adapted to ride upon a corner post, and retain its position thereon without connection with said post, substantially as set forth.

HAWKEN P. HANSON.
WILLIAM C. MEYRICK.

Witnesses:

H. C. GODDARD,
J. E. TUCKER.