(No Model.) 2 Sheets—Sheet 1.

G. CORBETT.

TOWER.

No. 428,462. Patented May 20, 1890.

FIG. I.

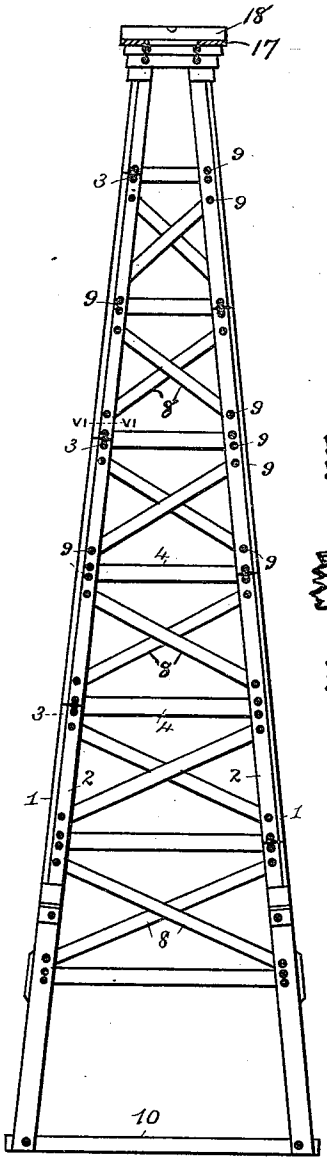


FIG. II.

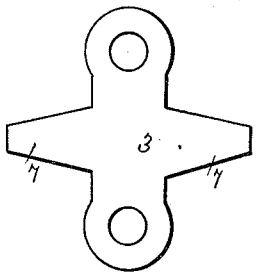


FIG. III.

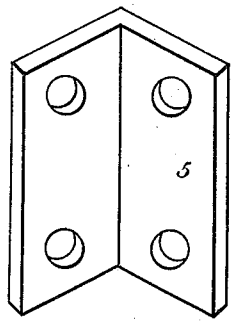


FIG. IV.

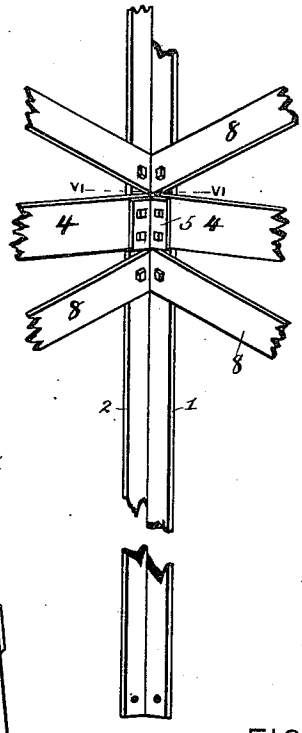


FIG. V.

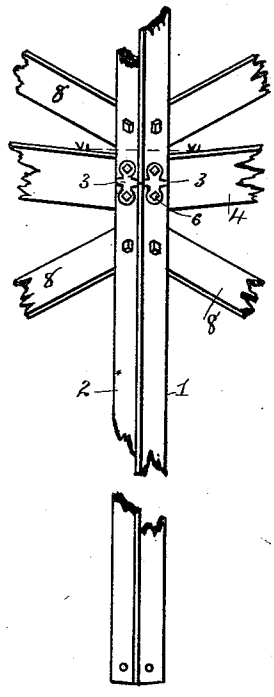
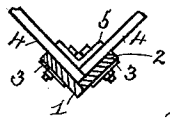


FIG. VI.



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(No Model.) 2 Sheets—Sheet 2.

G. CORBETT.

TOWER.

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FIG - VII -

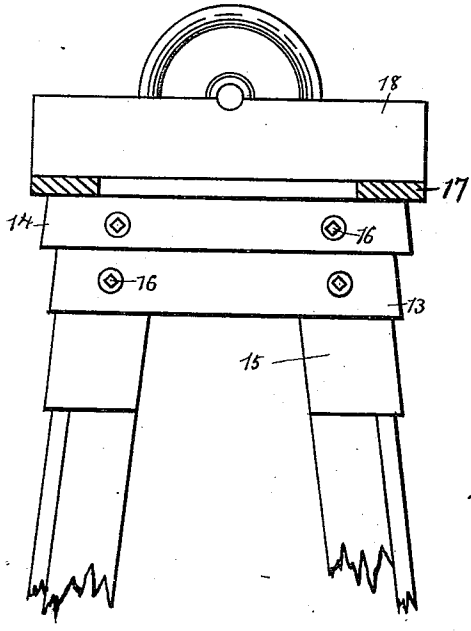
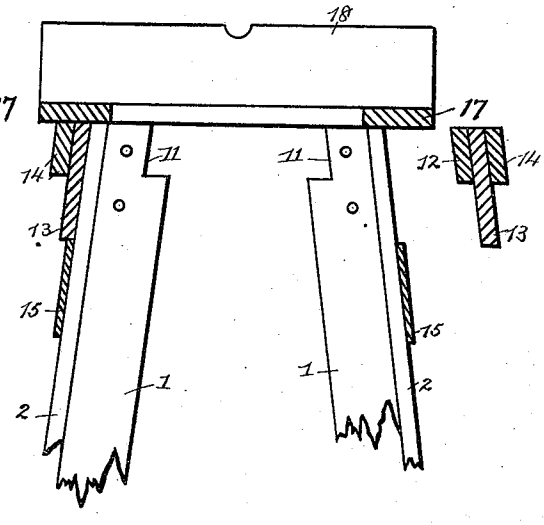


FIG - VIII -



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GEORGE CORBETT, OF BRADFORD, PENNSYLVANIA.

TOWER.

SPECIFICATION forming part of Letters Patent No. 428,462, dated May 20, 1890.

Application filed August 19, 1889. Serial No. 321,328. (No model.)

To all whom it may concern:

Be it known that I, GEORGE CORBETT, a citizen of the United States, residing at Bradford, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Towers, of which the following is a full, clear, and exact specification.

Broadly my invention relates to improvements in towers in general, but more particularly it has reference to those towers or derricks used in connection with rigs for drilling and pumping wells; and it has for its object a portable derrick or tower that will be strong, durable, and inexpensive, and one whose parts may be prepared complete and ready for use at a factory or shop and shipped to the field in a knocked down and compact form and readily put together without the assistance of a skilled rig-builder.

My invention, which will be more particularly pointed out in the claims hereto annexed, will now be fully described in connection with the accompanying drawings, forming an important part of this specification, and in which—

Figure I is a side elevation of a derrick or tower constructed according to my invention. Fig. II is a detail view of a binding-plate, hereinafter described. Fig. III is a detail view of a corner or angle iron. Fig. IV is an enlarged detail view of one corner of the tower, looking from the inside. Fig. V is a similar view looking from the outside. Fig. VI is a sectional plan of one corner of the tower, taken in the line VI VI, Figs. I, IV, and V. Fig. VII is a side elevation of the crown of the tower, showing the crown-pulley and its block in place, and Fig. VIII is a similar view showing parts removed.

The tower is preferably a four-sided structure, each side being constructed and appearing like the one side represented at Fig. I. The corner standards or columns of the tower are each composed of a number of, preferably, wooden sections, and each section is composed of two planks 1 2, nailed together at right angles to each other, as shown in Fig. VI. The ends of these sections come evenly together in the respective standards, and do not break joints, as is customary in structures of this nature. The sections of one standard or corner do, however, break joints with or fall intermediate of the joints in the diametrically-opposite standard, as shown in Fig. I. At the points where the planks 1 2 come together I arrange on the outside of the planks two binding-plates 3, and on the inside, in the corner of the tower and on the ends of the horizontal girts 4, I arrange an angle-iron 5, and through the upper and lower ends of the plates 3 and iron 5, I pass bolts 6, which also pass through the contiguous ends of the planks 1 2 and girts 4, and thus bind all of these parts firmly together. The binding-plates 3 are each provided at about their centers with lateral wings or projections 7, which, as shown in Fig. V, cover the joints between the ends of the planks 1 1 and 2 2, and thus, while they exclude a great deal of moisture that would otherwise find its way into these joints and hasten the decay of the wood-work, they at the same time have the more important function of preventing the warping of the ends of the planks.

As the braces 8 and one end of each horizontal girt 4 are secured to the standards at points 9, where there are no joints, it is only necessary to employ the ordinary bolt and washer for securing them at these points.

The base or butts of the standards may be secured together in any suitable manner, as by sills 10; but for their upper ends, or the crown of the tower, which has under the strain a normal tendency to collapse, a more rigid arrangement is necessary. The upper end of each plank in each top section of the standards is therefore notched or rabbeted at 11, and having their ends fitted snugly in these rabbets between the standards are plates or pieces 12, whose outer surfaces come flush with the outer faces of the planks 1 2. Covering these plates 12 and extending beyond the sides of the tower are broad plates 13, and resting against these latter are still other plates 14, which, however, are longer and narrower than the plates 13. The plates 13 are secured against shearing movement by blocks 15, secured to the standards, and all of the plates and standards are secured firmly together at each standard by means of two bolts 16. The extreme summit may, if desired, be finished off with a cap-plate or platform 17, upon which the crown-pulley block 18 rests.

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent:

1. The combination of the standards, each composed of sections and each section being composed of planks secured together at an angle, with their ends coming evenly together, said sections being jointed together, with the joints of one standard arranged intermediate of the joints of the opposite standard, and girts securing said standards together, substantially as set forth.

2. The combination of the standards, each composed of sections jointed together, the joints of one standard being arranged intermediate of the joints of the opposite section, and girts secured at said joints to one standard and between said joints to the opposite standard, substantially as set forth.

3. The combination, with the sections of standard, of the binding-plates 3, secured to the contiguous ends of said sections and having the wings 7, covering the joints between said ends, substantially as set forth.

4. The combination, with the sections of standard, composed of two pieces put together at an angle, and the girts 4, having their ends meeting in the angle of said sections, the binding-plate 3, covering the ends of said pieces on the outside and having wings 7, covering the joints between the ends of said pieces, the angle-iron 5, arranged on the meeting ends of said girts, and bolts passing through said plates and angle-iron and also through said girts and sections, substantially as set forth.

5. The combination of the standards having rabbets at their upper ends, the plates 12, fitting in said rabbets, the plates 13, fitting over plates 12, and bolts passing through said plates and standards, substantially as set forth.

6. The combination of the planks 1 2, secured together at an angle and having rabbets 11 in their contiguous edges, plates 12, having their ends fitted in said rabbets, plates 13, fitted over plates 12, plates 14, fitted over plates 13, and bolts passing through said plates and planks and binding said parts together, substantially as set forth.

GEORGE CORBETT.

Witnesses:
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BEN R. HAGAR.