

Bill of Lumber for 36-ft. Eclipse Tower.

4	pieces, - 4 x 4 - 20	} Corner Posts.
4	" - 4 x 4 - 18	
1	" - 2 x 6 - 12	Platform.
1	" - 1 x 14 - 16	} Ladder.
4	" - 2 x 4 - 16	
3	" - 1 x 4 - 16	"
20	" - 1 x 6 - 16	Braces.
8	3/8 x 4 1/2 with Washers, for Splice Bolts.	
8	1/2 x 12 Anchor Bolts.	
20	lbs rod. Nails.	
2	" 2od. "	

DIRECTIONS

-FOR-

BUILDING TOWER.

First.—Splice the Corner Posts, lay them side by side, and square them off to length as shown in left hand side of cut.

Second.—Space off the Posts for the braces, marking square across the four sticks at once, according to the distance given in the cut. The first mark (5 ft. from top of Sticks) is for top edge of Platform Sill, and for 10 ft. Mill; for (8 1/2 ft. or 12 ft. Mill, see changes required,) the second and third marks are for the top edges of the horizontal Girts. The fourth mark is for the lower point of first Brace or Cross. In building any height of Tower always bring this first brace to within 4 feet of the ground, and always put the Platform Sill at the distance from the top here given; the intermediate Crosses can be varied according to height of Tower. After spacing off, chamfer off that corner of each post which is to come on the inside. This is done so that the timbers will fit into the thimble sockets. (See end view of Tower at top of cut) Lay out two of the sticks in the form of the A Set the Tower-thimble No. 17 in at the top as shown in Directions for Mill. Spike on the Platform Sill, 5 ft down from the top, make the distance across at top of platform seventeen inches outside to outside.

Third. Spread the bottom of the "A" nine feet for a 36-ft. Tower and nail a temporary stay-lath to hold it in place. The rule for the bottom spread in all towers is one-fourth the height. Tack on the Girts, bringing the upper edge to the marks as before stated, use each of these Girts as a pattern to cut the other three by, two of which should be cut two inches longer than pattern to allow for lapping over the ends of the other two. Cut the Diagonal Braces, using the first cut as a pattern to cut the other seven by, which belong in the same section of the Tower as the pattern. On four of the diagonal Braces of each set allow an extra inch to lap over the ends of the other four to cover the joints. To get length of diagonal Braces measure across between the horizontal Girts diagonally from one corner to the other, and rack the corner Posts until the distance from one corner to the other each way are equal. Then scribe on diagonal Brace, using the first cut as a pattern for the other seven allowing an extra inch on the end of four Braces, top and bottom in each section, for lap to cover up the joints on the other four.

Proceed in the same manner with each section in the Tower, observing the following rule: that the diagonal Braces should all be of uniform length and cut, with the exception of those in which allowance has been made for lap. The two braces which form the cross on each of the four sides of the Tower should be exactly alike, and the Tower posts racked out or in to accommodate the joint.

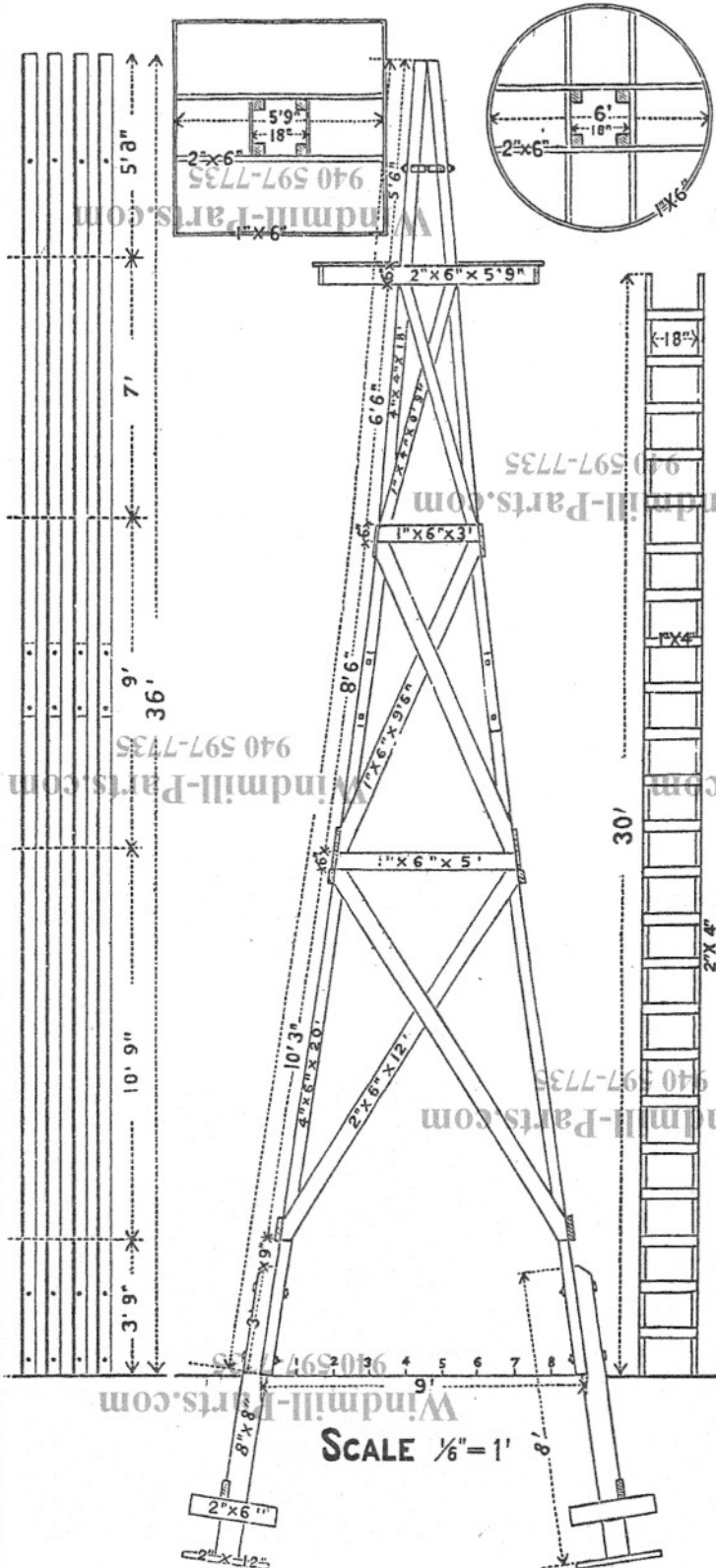
When the two "A's" of the Tower are completed, turn them up edgewise with Braces outside, and chamfer-end for Tower-thimble on the inside. Put in the four bolts around the Thimble, No. 17, draw the four Posts snug together, and proceed to put the other two sets of Braces and Girts on. Finish the platform, as shown in cut, and raise the Tower up bodily by pulleys and ropes. Before anchoring level the Tower with a spirit-level on the lower Girts. The Anchor-posts should be at least eight inches through at the bottom, and go into the ground at least five feet, and have a cross-piece on bottom, so Tower cannot pull up or sink down. Never drive in the Anchor posts, but dig holes and set them down level. After building the ladder as shown in the cut, nail it to side of Tower most convenient. Put the mill together as shown in directions for Mill.

Change in Tower for 8 1-2-ft. Mill.

Commence down four inches from end and shave off the two inside sides of each post so that the 4 posts will be 7 inches square on top. Next shave off the inside corners of posts commencing down 2 ft. 9 inches from top end, and shave gradually deeper till at the top ends it will receive the Thimble No. 17, notch it for Lugs on the under side of Thimble flange, and then they are ready for castings. The Tower may be erected according to instructions in accompanying cut, except the top of platform will be 4 feet 6 inches down from top of post and but 16 inches square outside at top of platform.

Change in Tower for 12-ft. Mill.

Place Thimble No. 17 in its place, preparing the Tower same as in 10-ft. Mill only make Platform 6 ft. down from top of Posts and have the posts 20 inches outside to outside at Platform, and 4x6 for bottom posts are generally used.



SCALE 1/6" = 1'