Adjustable Picnic Table

Bill of Materials

Description	Amount
1-1/2″ square tubing	15′0″
1″ square tubing	24′0″
1″x 1″x 1/8″ angle iron	2′0″
15 gauge sheet metal	3-1/2 sq. ft.
1/4″ hot rolled round bar	1′4″
Chain	2′0″
Wood	6 - 2″x 9″x 12"
Wood screws	24
Wood stain	1 can
Paint	3 cans
Bolts and nuts	4 of each

1.) Cut four 29" pieces of 1-1/2" square tubing for the long legs, with an angle of 15° cut at each end so that the ends are parallel.

2.) Cut four 16" pieces of 1-1/2" square tubing for the short legs, with an angle of 15° cut at each end so that the ends are parallel.

3.) Cut four 22-1/2" pieces of 1" square tubing for the long spacing bars, with a 15° angle cut at each end so that the ends are not parallel to each other.

4.) Cut four 20" pieces of 1" square tubing for the short spacing bars, with a 15° angle cut at each end so that the ends arc not parallel to each other

5.) Cut two 53" pieces of 1" square tubing for the long spacing bars with a 90° cut on each end.

6.) Cut four 5-1/2" pieces of 1" x 1" x 1/8" angle iron.

7.) Drill two 1/8" holes in each angle iron spaced exactly 1" from each end and centered.

8.) Cut four pieces of 6-3/4" x 16", from 15 gauge sheet metal for the table rests.

9.) Drill four 1/8" holes in each table rest. The first hole is drilled 1" from the end, and the second hole is 4" from the center of the first hole.

The third hole is 6" from the center of the second hole, and the fourth hole is 4" from the center of the third hole.

10.) Measure down 1-3/4" from the top of the table rest and cut a 45° angle on each side so that it comes to a point. Then measure 6-3/4" from the top of the table rest and cut a straight line cutting off the point.

11.) Drill 1/4" holes in the pieces of sheet metal being used as the table rests. The first hole is drilled 3" from the top and 6" from the right side. This is the pivot hole. The second hole is drilled 4-3/4" from the top and 1-1/4" from the left side. This is the positioning hole. The third hole is drilled 5-3/4" from the top and 1-1/4" from the right side. This is also a positioning hole.

12.) Bend the table rests 1-3/4" from the top to a 90° angle.

13.) Cut four 4" pieces of 1/4" round bar for the positioning pins.

14.) Bend the positioning pins 1" from the end to a 45° angle.

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15.) Drill the holes in the long legs. The two 1/4 holes are centered 3/4" from the edge. The first hole is 1-1/4" from the end of the tube. This is the pivot hole. The second hole is 4" from the center of the first hole. This is the positioning hole.

16.) Weld 1-1/2"x 1-1 /2"x 1/8" plugs on the end of all legs.

17.) Clamp long spacing bars to the proper legs in a jig with the bar 1-1/2" above the bottom of the legs. Tack weld. Clamp short spacing bars 1-1/2" above the long spacing bar. Tack weld. Check for level and square. Weld the spacing bars.

18.) Clamp the long spacing bars to the long legs in a jig with the bars 6" from the bottom of the long legs. Tack weld. Check for level and square. Weld the spacing bars.

19.) Tack weld the seat rests to the short legs exactly centered with the angle facing out. Check for level. Weld.

20.) Put a bolt through the pivot hole on the table rests and through the pivot hole on the long legs. Put a nut on the end and tighten it down. Put a tack weld on the end of the bolt and nut so it won't get loose.

21.) Put positioning pin through the position holes. Tack weld a 6" piece of chain to the end of the pin. Tack weld the other end of the chain to the long legs, 8" from the top of the legs.

22.) Paint all metal parts with a rust preventative. Paint with a finish paint.

23.) Cut 6 boards 9″ in width and 6' in length.

24.) Paint boards with a walnut stain.

25.) Screw the boards to the rests with 1 /8"x 1" screws.