Construction Trades Virtual Learning

Project Book 2

Lesson 14

April 23, 2020

Construction Trades
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Objective/Learning Target:

What You Will Know

- How to build a notched-top sawhorse
- How to build an I-beam sawhorse
- How to build a beveled top sawhorse

Building a Notched-Top Sawhorse

What skills and tools do you think we will use to build the notched-top sawhorse?

Building a Notched-Top Sawhorse cont.

What's New

Stair Gauge Clamps

- Typically used in pairs
- Often used in combination with a framing square

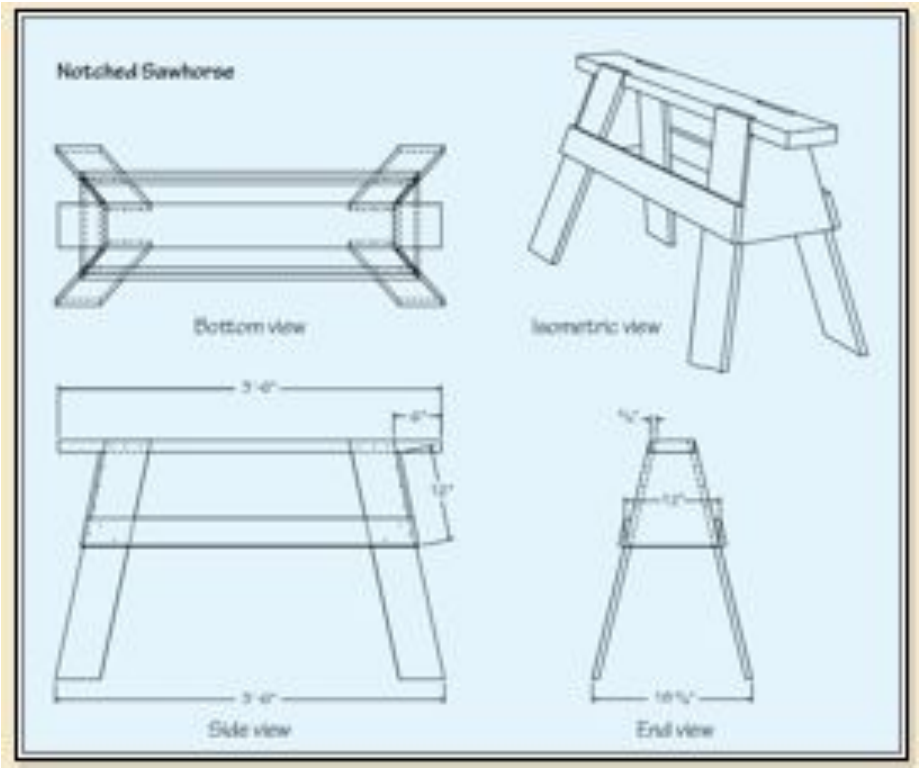
Compound Angle Cut

- Combination of two angles
- Must be carefully measured and cut accurately

Building a Notched-Top Sawhorse cont.

Cut List

- How many pieces should be on your cut list?



Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Legs

- Hold the handle of the sliding jT-bevel against the edge of the 1 x 4 and align the blade with the line drawn
- Set the base plate of the circular saw for a 12” bevel

Tip

- Be sure the saw is set to the correct depth as well

Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Legs cont.

- Mark the lets 1, 2, 3 and 4

Question

- **Why should the legs be marked?**

Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Top

- Set the sliding T-bevel at the angle used to lay out the legs and mark a line on each side of the board at the marks.

Tip

- Be sure to place he blade of the T-bevel so it is angled back toward the end of the top board on each side when marking the angle

Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Top cont.

- Align the edge of the leg cut earlier with a line made in step 3 and draw a fine line on the other edge of the leg. Mark this gain with the number on the leg used to trace the gain.

Tip

- The marks made in the previous procedure will be used to help make sure the legs match the cutouts.

Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Top cont.

- Cut the gains using the hand saw, staying on the waste side of the angled lines on the edge of the board.
- Make additional saw cuts between the cuts made in step 12 to create relief cuts.

Building a Notched-Top Sawhorse cont.

Procedure - Lay Out and Cut the Top cont.

- Use a wood chiseled to remove the waste material of the gain and to smoothe the gain.

- **Tip:** Test fit the legs in the gains and correct any errors.

Building a Notched-Top Sawhorse cont.

Procedure - Attach the Legs, Gussets, and Side Spreaders

- Align two legs in the gain on one side of the top board. Be sure the leg tops are flush with the top board.

- **Question:** Why must the legs be flush with the top board of the sawhorse?

Building a Notched-Top Sawhorse cont.

Procedure - Attach the Legs, Gussets, and Side Spreaders

- Place the plywood end piece under the top board on one end, and adjust the legs to align with the end piece and clamp the end piece to the legs.

Building a Notched-Top Sawhorse Conclusion

Building an I-Beam Sawhorse

What skills and tools do you thin we will use to build the I-beam sawhorse?

Building an I-Beam Sawhorse cont.

Procedure - Cut the Legs

- Slide the stair gauges on the framing square and clamp the gauges to the square, keeping the square on the aligned marks.

- Draw a line along the tongue of the framing square at one end of the 1 x 4 x 12.

Building an I-Beam Sawhorse cont.

Procedure - Attach the Legs to the I-Beam Top

- Drill 3 pilot holes parallel to the top end of each leg.

  Tip: Be sure to drill perpendicular to the work piece

Building an I-Beam Sawhorse cont.

Procedure - Attach the Legs to the I-Beam Top cont.

- Attach the leg to the I-beam top with 3 1 ⅝” construction screws.
- Fasten with 2 1 ⅝” construction screws.

Building an I-Beam Sawhorse cont.

Procedure - Prepare to Attach the Gussets

- Trace the outside edges of the legs on the backside of the plywood.
- Attach the gusset to the legs with six 1 ⅝” construction screws.

Building an I-Beam Sawhorse cont.

Procedure - Attach the Top 2 x 4

- Join the ends and edges with four 1 ⅝” construction screws. Use two per side from the underside of the 1 x 4 of the I-beam.

I-Beam Sawhorse Conclusion

Beveled Top Sawhorse

What skills and tools do you think we will use to build the beveled top sawhorse?

Beveled Top Sawhorse cont.

What's New

Stair gauge clamps

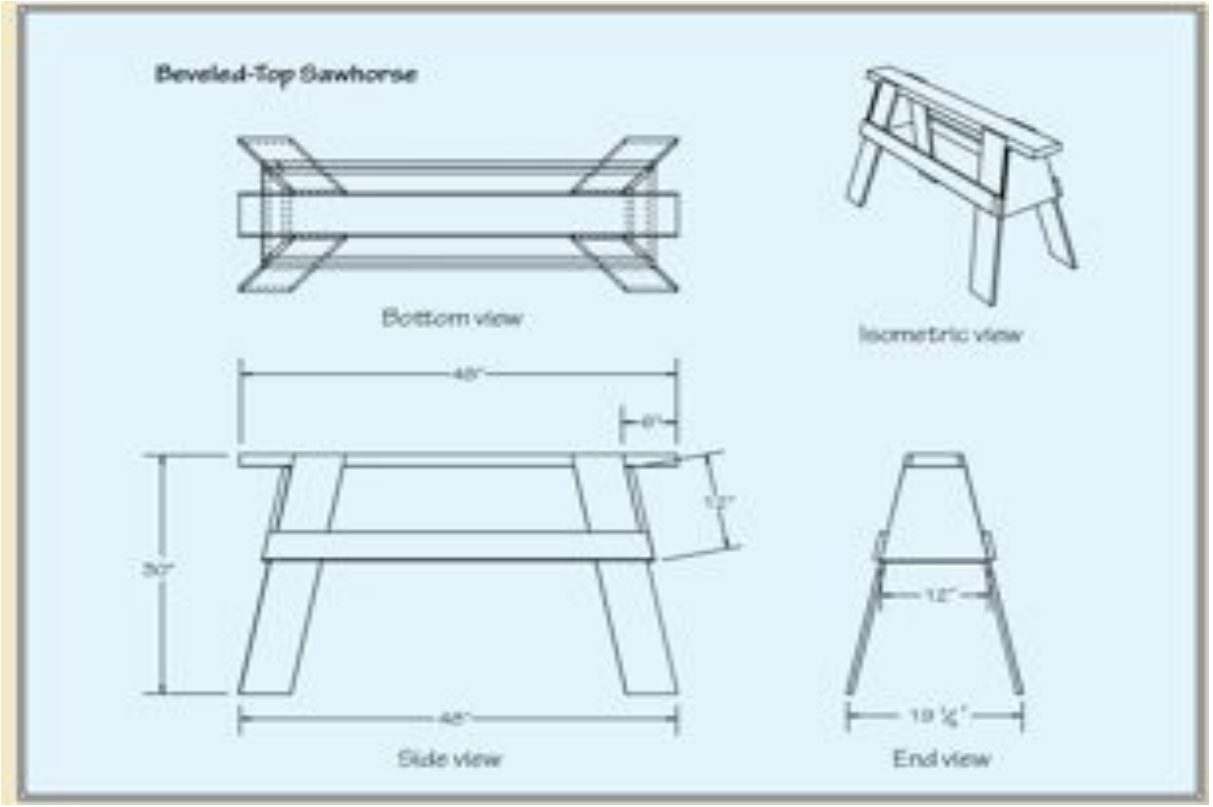
- typically used in pairs
- often used in combination with a framing square

Compound Angle Cut

- combination of two angles
- must be carefully measured and accurately cut

Cut list

How many pieces should be on your cut list?



Beveled Top Sawhorse cont.

Procedure - Lay Out and Cut the Legs

- Draw a line along the tongue across the 1 x 6
- Hook the end of the tape measure on the long point of the cut made and measure along the edge of the 1 x 6a distance of 2’ - 7 ¼” and place a mark.

Beveled Top Sawhorse cont.

Procedure - Lay out and cut the top

- Set the base plate of the circular saw to an angle of 12 degrees and cut a 12 degree bevel the length of both sides of the top board, maintaining a 5 ½” width on one face of the top board.
- **Tip:** The edge of the board will be used as the cut line on the long point of the project.

Beveled Top Sawhorse cont.

Procedure - Attach the Legs, Gussets, and Side Spreaders

- Align the 12” mark on the body of the framing square ane the 2 ⅝” mark on the tongue of the framing square with the edge of a piece of scrap material and draw a line along the tongue.
- Set the sliding T-bevel to the line drawn in previous step

Beveled Top Sawhorse Conclusion