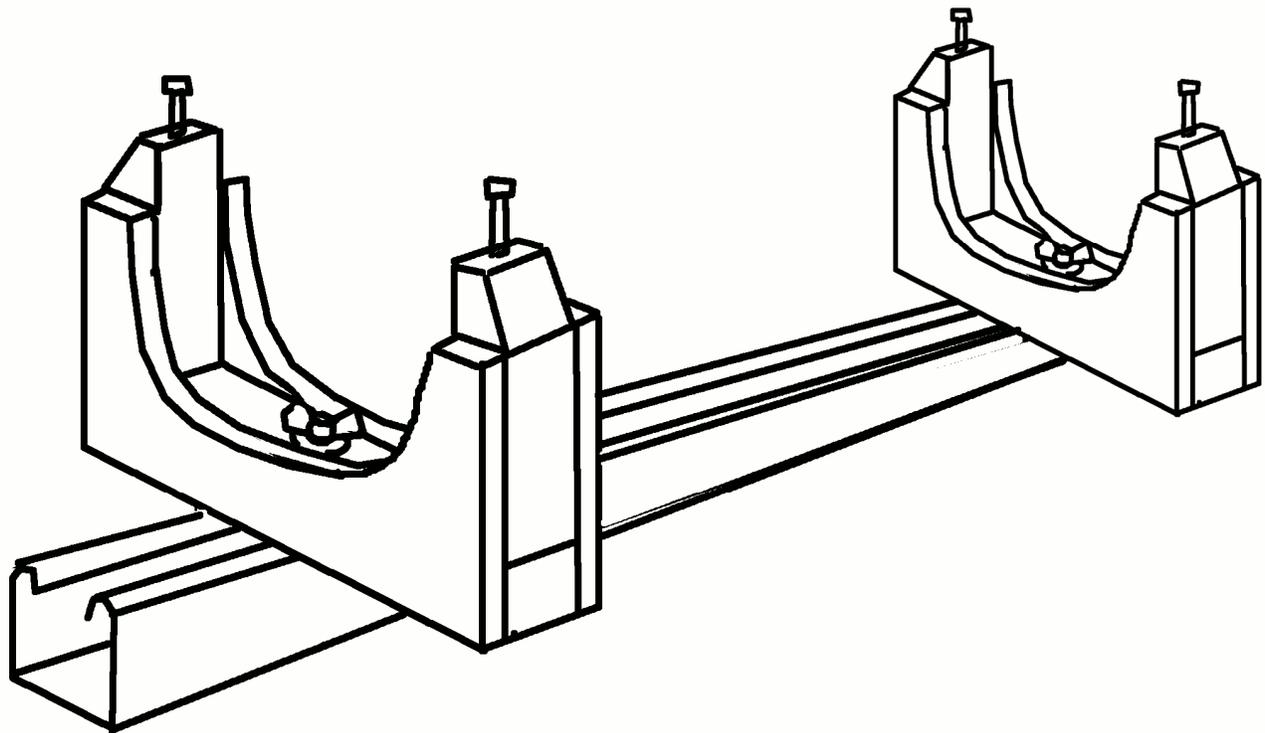




Making a Bowstring Jig



Tools that you will need for this project:

Coping Saw

Phillips head screw Driver

Wood glue

Tape measure or ruler

Sanding block

Drill

7/16 Drill bit

3/16 drill bit

Square

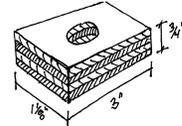


Occasionally your bowstring wears out. You have two choices you can buy a new one or you can make your own. In 4H we learn by doing so below are instructions on making your own bow string jig. It is a simple woodworking project and a great item to show at the fair. Not to mention real handy if you need to make a string.

Let us list all the things you will need to buy for your Jig. These dimensions are not set in stone they are merely guidelines. You can use 1/2" plywood or reduce or increase the size of the materials. These dimensions are just a good starting point.

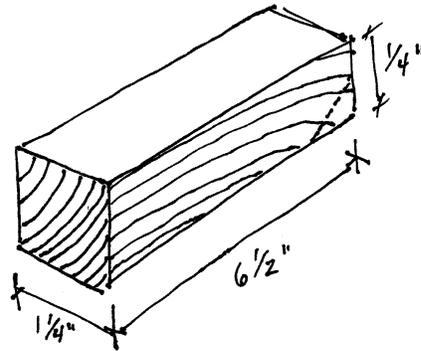
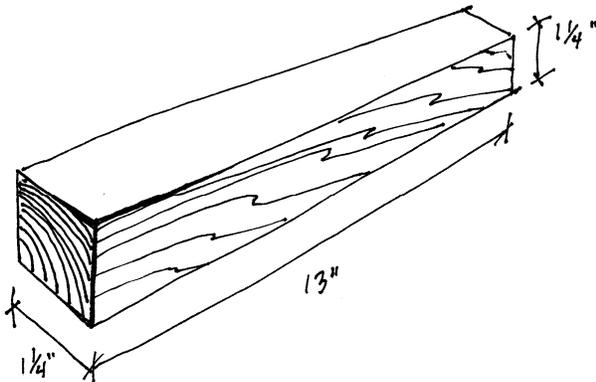
Plywood:

- 4 pieces 13" x 7 1/2" x 3/4" **Plywood Support pieces**
- 2 pieces 1 1/8" x 3" x 3/4" **Retainers**



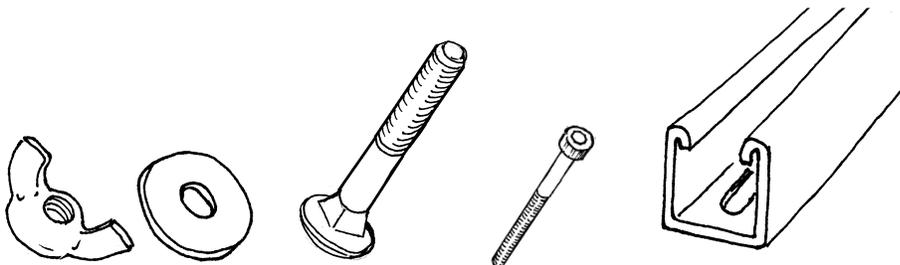
Hardwood:

- 2 pieces 1 1/2" x 1 1/2" x 13" **Base wood**
- 4 pieces 1 1/2" x 1 1/2" x 6 1/2" **Risers**



Hardware:

- 2 Wing nuts for the 7/16" bolts
- 4 washers 1 5/16"
- 2 bolts 7/16" x 3"
- 4 Allen head bolts 1/4" x 3" (1" of the area below the head cannot be threaded.) **String bolts**
- 1 piece of uni-strut 68" long. (you can find it in the electrical area of your hardware store)



Tools you will need.

Drill

3/16" drill bit

7/16" drill bit

Coping Saw

Wood Glue

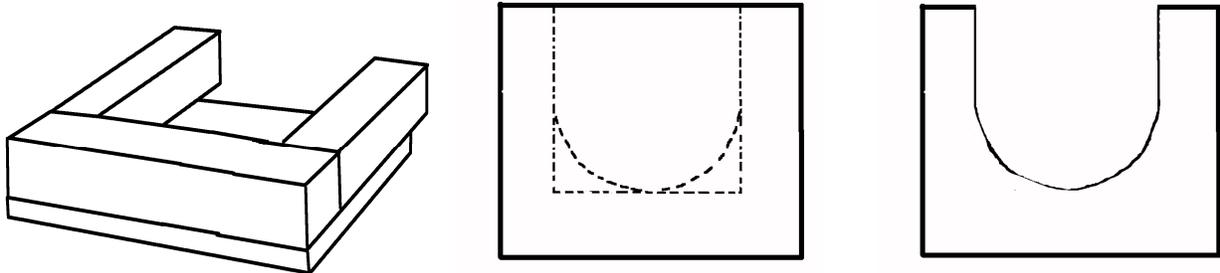
Philips head screw driver

Step 1

Cut all your pieces of Wood to size. Listed on the parts list

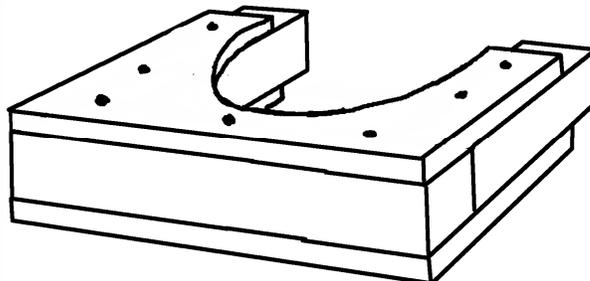
Step 2

Place the larger piece of plywood on the table and then arrange the three pieces of hard wood on them. Trace the area between the hardwood onto the plywood supports. Now hand draw an arch in the bottom corners to create a circular bottom to the U-shape. Now cut out the center U-Shaped area with a coping saw. Repeat this process with all four plywood support pieces.



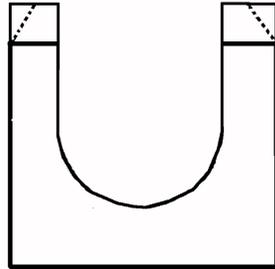
Step 3

Place one of the U-shaped pieces flat on the table and then apply liberal amounts of wood glue. Place the three pieces of hardwood onto the glued on and the plywood. Now add glue to the tops of the three pieces of wood. Lay the second U-Shaped plywood on top. Use the sheetrock screws to hold the all the pieces together. As you are assembling them make sure the parts are all at right angles (90 degrees). The more accurate you are with the construction the better the jig will perform



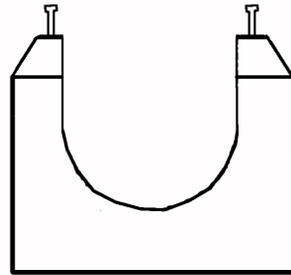
Step 4 Shaping the risers

This step is optional but after you have used your jig for a while you'll notice that it's easier to wrap the string if the outside corners are gone. On the top of the half the riser hardwood mark the halfway point. Draw a line from there to the point where the plywood ends. See the dotted lines in the illustration. Now using your coping saw cut the corners off along the dotted line.



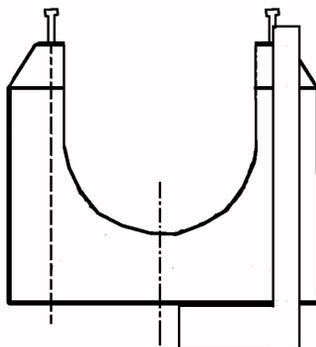
Step 5 Adding the string screws

Still looking down at the top of the jig mark the exact center of what is left of the top of the riser. Now using your 3/16 drill bit drill straight down the riser 2 1/4". Now insert the 1/4" Allen head string screws into the holes you just drilled and thread them in. You may need to tap them with a hammer to get them started. They should be snug and tight.



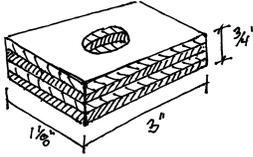
Step 6 Drilling the center hole

This is the most critical step of the whole jig and it will be a lot easier if you were accurate in your construction of all the former steps. The object is to drill a 7/16" hole down through the base hardwood in the exact center between the 2 string bolts you just installed. To achieve this, with a square set square to the bottom of the unit draw a line that would go through the center of the string bolt. All the way to the bottom of the unit. Do this on both sides. Now measure the exact center between the two lines and draw the center line. Transfer that to the center of the hardwood base and drill down through it with the 7/16" drill bit. Repeat for the second unit.



Step 7 Retainer blocks drilled

Find the two retainer blocks made of plywood. Mark the center of those blocks and a 7/16 hole through the center of those.

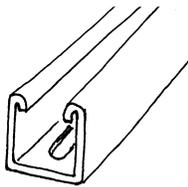


Step 8 Sanding and painting

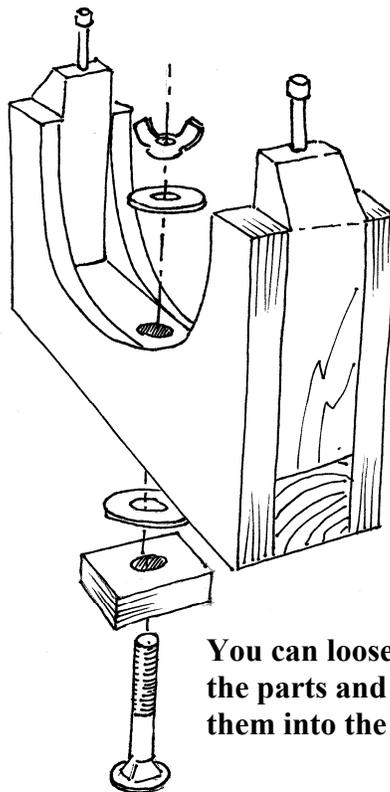
Using your sanding block, remove all the sharp edges and smooth all the surfaces. The smoother you make it the nicer your jig will look after painting. My preference is to use spray paint since it is easy and requires no clean up.

Step 9 Final assembly

Take your two completed units and insert them into the Uni-Strut. See the illustrations for the correct order of the parts and hardware. You may want to glue the 7/16 carriage bolts into the retainer blocks.



The Uni-Strut



You can loosely assemble the parts and then insert them into the Uni-strut



Uni-strut with the unit attached.

Step 10 Adjusting

Set one of your units at the end of the Uni-Strut and tighten it down. Note that when you loosen the wing nut you can slide the second one to any position on the Uni-Strut. This should allow you to match any string length.