## **Canvas Building: Materials Needed**

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- Safety Glasses and dust mask.
- Brick molding
- Miter saw
- L-squares/Framing square 1 and 3 feet
  - Drill and 1/8" bit with counter sink bit
- Construction Screws 2 and 3 inches – square drive or torx drive (torx=star head – easier to use than Phillips head screws.)
- Interchangeable drill bit with counter sink
- And square or torx drive bit.









Staple gun(s)

• Canvas



• Gesso and 2" house painting brush



Sandpaper: 100 or 120 grit

### Note:

The most important aspect of canvas building is to build a frame that will hang perfectly flush to a wall. Each of the four sides and corners must form a perfect plane. If one corner rises out of that plane, the canvas will never sit well on the wall and always look slightly crooked.

Wooden boards are rarely perfectly straight and miter saws don't always cut true 45° angles. The following steps accommodate for these and other imperfections in materials and skills needed to make canvases that are flat and do not warp.

• Wood glue

bench.

4 quick grip bar clamps – to clamp stretcher bars to work

https://www.menards.com/main/tool s/hand-tools/clamps-vises/irwin-reg-6-quick-grip-bar-clamp/1964717/p-

1444436171849-c-9135.htm

Staples  $-\frac{1}{4}$  and  $\frac{1}{2}$  inch



# **Miter Boxes**

If you don't have a big, fancy electric miter saw, you can use handheld miter boxes. They are not as quick to use as and electric miter saw, but they are A LOT LESS \$\$ and they will get the job done.



## Canvas Building: Step 1 – Selecting and cutting boards



**Brick molding -** Select straight pieces to be mitered at 45° angles.

- Brick molding is an excellent material to use for stretcher bars. The face of it is beveled so that the stretched canvas will only touch 3/8 of an inch of the outer surface of the board.
- The wood is also kiln dried during is manufacturing. This will prevent future warping of the wooden bars (straight lengths of wood often warp as the sap in the wood dries).



• Brick molding can be bought at Menards, Home Depot, and Fleet Farm for about \$1 per linear foot

When selecting boards to work with, check for curves (warping) in the wood by holding one end of the board right up to your eye and look down the length of the board.

When cutting two boards the exact length – measure and cut the first board to your desired length. Then use that board as a template to mark the second board. If needed, cut the second board slightly longer than needed and then make successive cuts to trim the board to the exact length.



Use a miter saw to cut 45° angles. If you don't have a fancy power saw a handsaw with a miter box works and is much cheaper to buy.

# WEAR SAFETY GLASSES!



### Canvas Building: Step 2 – Clamping 90° corners



Apply glue to the facing ends of the two stretcher bars that will make a corner. Spread the glue evenly across the surface with a flat stick. Place adjoining bars at 90° angles on a flat workbench. Ensure a 90° corner with 3' Framing L-square. Clamp bars to workbench to hold them securely in place.



As you clamp the bars down, watch to make sure they do not move. If the bars are a little warped, the clamps will bend them to be flush with the workbench. If this happens, the wood will bend back to its former warped state when you've released the clamps.

If the stretcher bar you cut is slightly warped, make allowances for the imperfect wood to ensure that the finished frame will lay flat when hung on a wall. Place a clamp on the warped bar at its far end away from your 90° corner – allow the bar to raise up into the 90° corner (up to 3/32 of an inch) – then place the second clamp midway along the bar's length watching the framing L-square to ensure that the 90° corner does not move as the clamp tightens against the workbench. It's better to have the bars flush to the plane of the workbench than to have the corners match up perfectly.









If the joint between the two bars do not match up perfectly leave the gap. If the gap is 1/8" (or greater), use a shim, or slim slivers of wood with glue to fill in all or part of the gap.

It's more important to have a 90° corner than to have the stretcher bars match up perfectly evenly. Use the framing L-square to place the bars – don't rely on your miter cuts to be perfect 45° angels. The glue and screws (and shim filling) will hold the joint in place if you didn't cut the boards at perfect 45° angels.

### Canvas Building: Step 3 – Securing 90° corners with screws



Drill two (2) holes using a 1/8" bit. Countersink the holes so that the screws heads will be flush to the outer plane of the brick molding. Make sure that the holes drilled are parallel to the surface of the workbench. Drill the holes through the face of one board into the adjoining board.





Use 2" screw for outside hole. Use 3" screw for inside hole.



Using the drill as a screwdriver, inch the screws into place. First, drive the 3" screw 3/4's the way in, then the 2" screw all the way in (slowly). Follow that by driving the 3" screw the rest of the way. Inching the screws slowly into place will help ensure that the 90° joint does not shift as the screws move into place.

Do not tighten screws so much that they move the 90° corner you've created with the framing L-square. The bars must remain flush to the workbench as they are held with the clamps.

Repeat steps 2 & 3 for each of the remaining three corners of the frame.

### Canvas Building: Step 4 – Placing a crossbar



**B** - Measure across the inside of the frame between the two center marks.

**C** - Cut a straight 1"x4" pine board slightly longer than your measured distance. Then trim the board in small incremental cuts to fit the board exactly. The crossbar must not need to be forced into the frame and it must not move within the frame when wiggled.



A - Using the greater of the two sides of the frame, measure to the center of each facing side. Mark the centers with a pencil line. (Measure from the same side of the frame to find the center of each board.)



C - Lay the frame on the workbench with the beveled side that the canvas will wrap around facing the ceiling. Place the center bar with an L-square beneath it to elevate the bar 1/8".

**D** - Clamp the frame to the workbench. Drill 2 holes through the frame and into the crossbar. Drilled holes should be parallel to the workbench surface. Secure the crossbar with 3" screws. Watch to make sure that the crossbar does not move while placing the screws.





Not explained here, but a pocket hole jig is also very useful in securing crossbars. See... <u>https://www.menards.com/main/tools/power-tools-accessories/pocket-hole-jigs/kreg-reg-r3-pocket-hole-jig-system/r3/p-1444437282408-c-10090.htm</u>