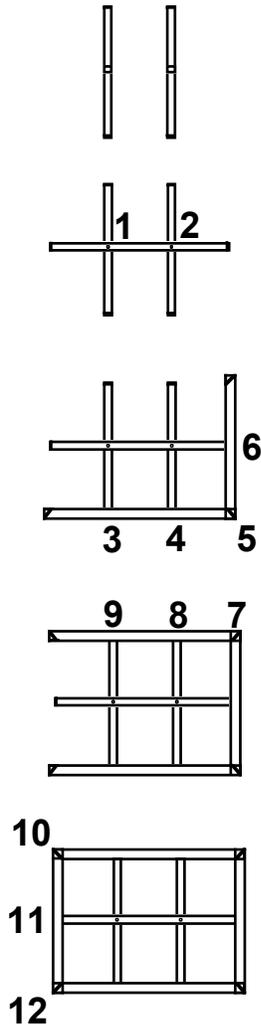
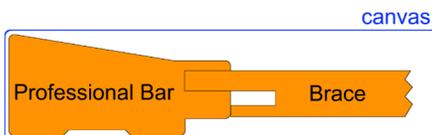
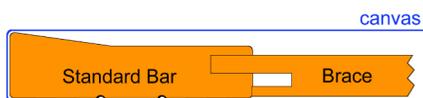


Assembly of a Typical Stretcher Frame



1. Clear a flat surface on the floor or table large enough to assemble the size of frame you are working with.
2. Assemble the frame components following the sequence shown on left or as labelled on the frame.
3. Start by assembling the cross braces. If your frame has intersecting braces, fasten the braces together with the hardware provided (see photos on reverse side).
4. Continue by assembling the four stretcher bars in the sequence shown in drawings.
5. When all joints are flush and pushed together tightly, check the dimensions of the frame. Also, check the squareness of the frame using a large carpenter's square or by measuring the diagonal dimensions of the frame, which should be equal to within 1/8 of an inch.
6. Once the frame is assembled and squared it sometimes helps, especially with larger frames, to drive two staples across all of the bar-bar and bar-brace joints on the back side of the frame (see photo on reverse side). These staples help to make the frame rigid and remain square during the stretching of the canvas. The staples can be left in or removed after the canvas is attached. The staples, if left in, are not strong enough to interfere with the keying-out of the joints.
7. Your frame is now ready for stretching the canvas. After the canvas is stretched, place the keys (wedges) in the four corners of the frame (2 keys per corner) and at the ends of each brace. The keys can be tapped in with a hammer in to create a well tensioned, firmly stretched canvas.



CAUTION: When gesso is applied to raw canvas, very high tension forces can develop due to the shrinkage of the wet canvas, especially in large canvases. To avoid excessively high strain and potential warping of the frame, do not stretch the raw canvas too tightly at first with the keys. Applying gesso will tighten the canvas and provide you with a firmly stretched canvas base for your painting.

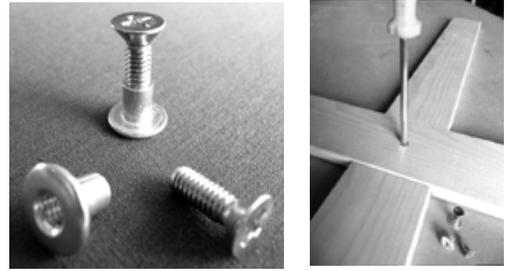
Please feel free to contact us anytime if you have any questions.

Upper Canada Stretchers Inc.
1-800-561-4944 • info@ucart.com

See reverse side for helpful tips on using our stretchers

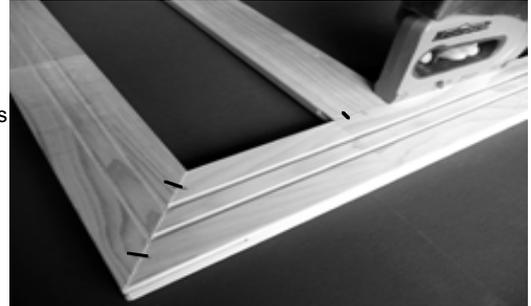
Instructions for using hardware for fastening cross-braces

1. Insert T-nut through hole in the brace from the back side of the frame
2. Thread Phillips screw through the brace on the canvas side of the frame into the T-nut and tighten until the head of the screw is flush with the surface of the brace.



Using staples for temporarily securing the frame

1. Before stretching the canvas, you can use a staple gun or an office stapler to apply two or three staples across each bar-bar joint and brace-bar joint. This helps keep the frame square while stretching the canvas.
2. After the canvas is stretched, remove any staples that are visible. You can leave any staples covered by the canvas. They will not interfere with the keying-out of the frame.



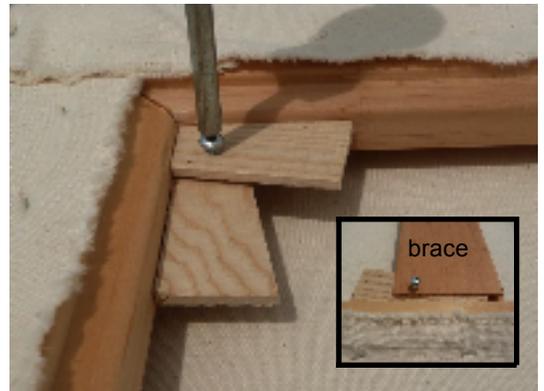
No more loose keys!

We've discovered a very simple solution to holding the keys in place.

To help prevent the keys from falling out when transporting the canvas, you can "lock" the keys by using a small self-drilling screw as shown in photograph. Using a screw driver or cordless drill, drive a screw through the centre of the corner keys or brace keys. The screw drills a small hole and will not split the keys. In the future if you need to key-out the canvas, simply remove the screw, tap the keys in further and install the same screw in a new location.

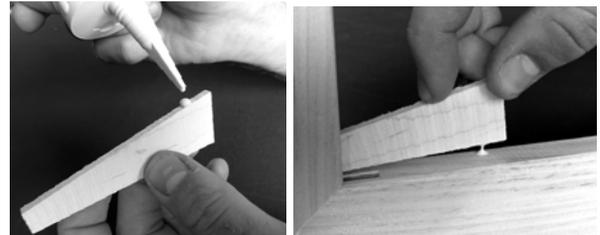
We recommend you use the following screw (available at Home Depot). We can supply you with these for \$0.10 each.

Drill-X Self-Drilling Screws
3/8" long #6 Pan Socket Head
Use No. 1 Robertson screw driver



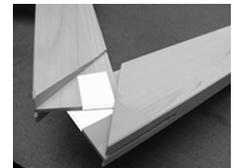
You can also use wood glue to hold keys in place.

A small drop of glue can be applied to the bottom edge of the keys before inserting into the frame. This will prevent the keys from falling out during transportation. By tapping on the key with a hammer the glue will easily break allowing for further keying of the frame in the future if necessary.



Increasing the friction in loose joints

If you prefer a tighter fitting joint it is easy to increase the friction by simply applying a piece of masking tape (any tape will work) to the tongue of one or both stretcher bars being assembled. The tape strips will not interfere with the keyed expansion of the joint.



Finger-jointed clear white pine for greater stability

To improve the structural stability of our stretchers, we use finger jointed clear white pine for many of our Standard and Professional stretcher bars and braces. Finger jointed wood is widely used in the window and door manufacturing industry where straight components are critical.

Our finger jointed wood is made of short lengths of clear pine which are finger jointed and glued together to produce very strong, straight and stable bars. The superior strength and straightness comes from the random grain pattern which is created by gluing blocks of wood end to end. We offer our customers the choice of finger jointed wood or solid wood. If your primary concern is stability, straightness and flatness then we recommend finger jointed clear white pine. For those of you who prefer the look of solid pine stretchers we are happy to make these as well.

