

Sylvie's Cello Bench

General Construction notes:

- the bench can be constructed from pine but is stronger and more robust if constructed from some light-weight hard wood. My personal choice is mahogany (it usually doesn't cost much more than clear pine).
- all the edges are rounded with a router before assembly.
- I finish the bench with a penetrating oil finish.
- the height of the bench (and the length of the legs) is determined by the height of the bench the student is using currently. The upper and lower leg sections will each be about 2 inches shorter than the height of the bench currently being used.
- I usually draw the curves on the cross brace and bottom of the legs using the bottom of a paint can or other container because each bench is usually a slightly different size and the curves should be relatively proportional to the size of the bench.

Materials list:

Part	Size (W x L x T)
top	11 3/4" x 19" x 3/4"
cross brace	7 3/4" x 13 3/4" x 3/4"
upper leg (2 pieces)	9 1/2" x 12" x 3/4"
lower leg (2 pieces)	11 1/4" x 12" x 3/4"
bolts and nuts (4 of each)	1/4" x 2"
brass wood screws (4 needed)	#8 x 1 1/2"

Legs:

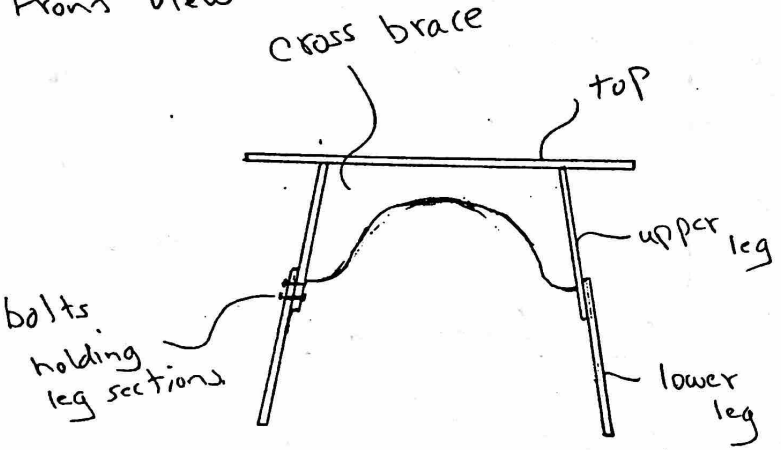
- the upper leg section is the same width for its entire length.
- the lower leg is tapered from the width of the upper leg section at its top to the width of the top of the bench at its bottom. The wider bottom gives the bench more stability when it is at its full height.
- the two rows of holes are 1 3/4" from the edge of the top section and are 1" apart. Drill the holes in the upper section first then use the upper section as a guide to drill the holes in the lower section.

Cross brace:

- the ends of the cross brace are angled at 10 degrees (100 degrees rather than 90). They

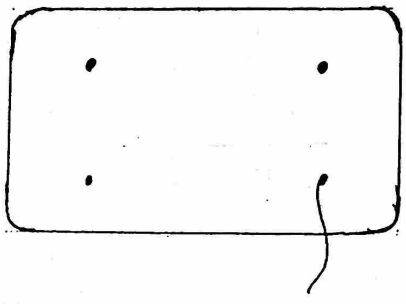
could be at 90 degrees but the slight angle increases stability and is more visually pleasing.
 - the cross brace can be attached to the legs by any of several joints (including a dowel joint or a mortice and tenon) but I prefer a sliding dovetail. It can easily be cut with a router and is very strong.

Front view



(D)

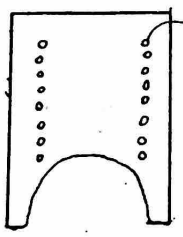
Top view



wood screw fixing top to leg (drilled at 10° angle to match angle of leg)

(B)

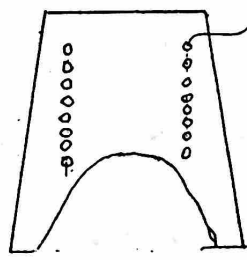
Upper leg section



1/4" diameter holes
 (note: rows are parallel to edge)

(C)

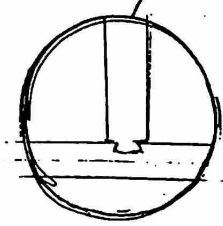
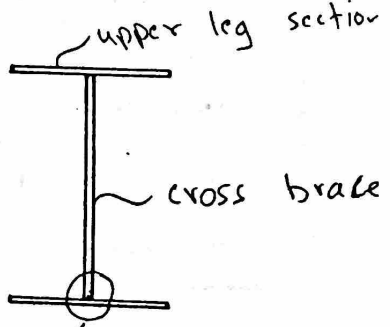
Lower leg section



1/4" diameter holes
 (note: rows are not parallel to edge)

(E)

cross brace and leg section



detail of joint