

The Art of Dollhouse Miniatures

Complete Instructions
and Scale Plans

Miniature Garden Lawn Chair



by The Dollhouse Miniatures Craftsman
Al Latwaitis

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and
1" Scale Plans

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General Comments

When I began designing 1 inch scale miniatures, I realized that many of the kits available for DIYers were a bit complicated and required some skills to even get started.

I also noted that there weren't many items for the outdoor portion of miniature dollhousing. So I decided to test my skills at designing and making outdoor furniture in scale. This miniature lawn chair was my first outdoor miniatures furniture design.

The plans are actually modified from the full sized plans I designed for my son's lawn furniture. I modified them to make cutting and assembling of the pieces easier. Because the miniature parts are held together with glue, and I don't expect any 200 pound gorillas to be sitting on them, I was able to eliminate the dovetailing, lap joints and screws used on the "real world" furniture.

As with any modeling kit or assembly instructions it is always a good idea to go through the instructions ahead of time. Look carefully at the images as you read through. They will help you get a clear picture in your mind as to what's coming as you progress.

When you get down to the nitty gritty of actually making your miniature lawn chair, read two steps at a time. Then come back to the step you are working on. Why? I find it gives me a more clear picture as to why I'm doing a given step the way I'm asked to in the instructions. The steps are in the order they are for a reason and this just helps you understand the "why for" more clearly.

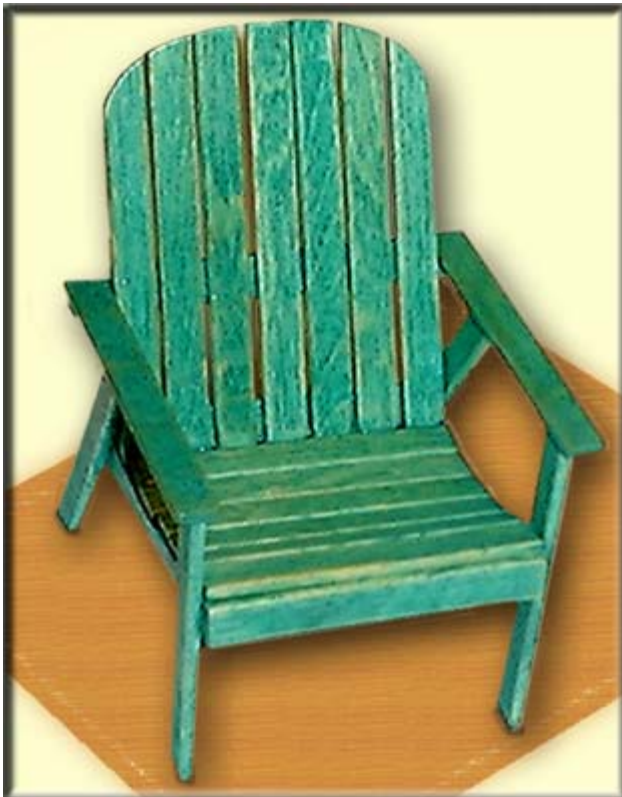
The step by step process is also written so as you complete one sub-assembly, as the glue cures, you can be working on another part of this miniature chair. If your anything like me, and Larry The Cable Guy, you want to "Git 'er Done".

This little chair is not very complicated and doesn't require much in tools. **Your basic tools** should get you through this project in good shape.

- ⇒Ruler
- ⇒Metal Straightedge (Carpenter's Square)
- ⇒Xacto Knife
- ⇒Emery Board
- ⇒220 grit sandpaper
- ⇒10-12" dia styrofoam plate or equivalent
(for marking curve)

The only material you'll need is **Skinny Craft Sticks** found in most craft stores or department stores with a craft department. This mini lumber is 1/4" wide x 3/32" thick and about 5 3/4" long. (approx. .635cm x .236cm x 14.6cm).

I stained my miniature lawn chair but you can certainly paint yours to your liking.



Cut the Parts

The **cutting** of the pieces is pretty straightforward. I use an Xacto knife making several passes for each cut. When cutting the angles on the back legs, several passes (cuts) becomes very important as the wood is a hardwood and has a tendency to split. Also several cuts is safer when using the sharp xacto knife. Once you have made a few passes over the face of the leg, take you razor knife and cut into the edges where the cross cut meets the edge. This will help prevent splitting the wood at the sharp corners.

You'll note the dotted lines show where to make your cuts when laying a full strip of miniature lumber over the drawing.

Try to make each cut as square as possible. This will just help you as you glue the pieces together.

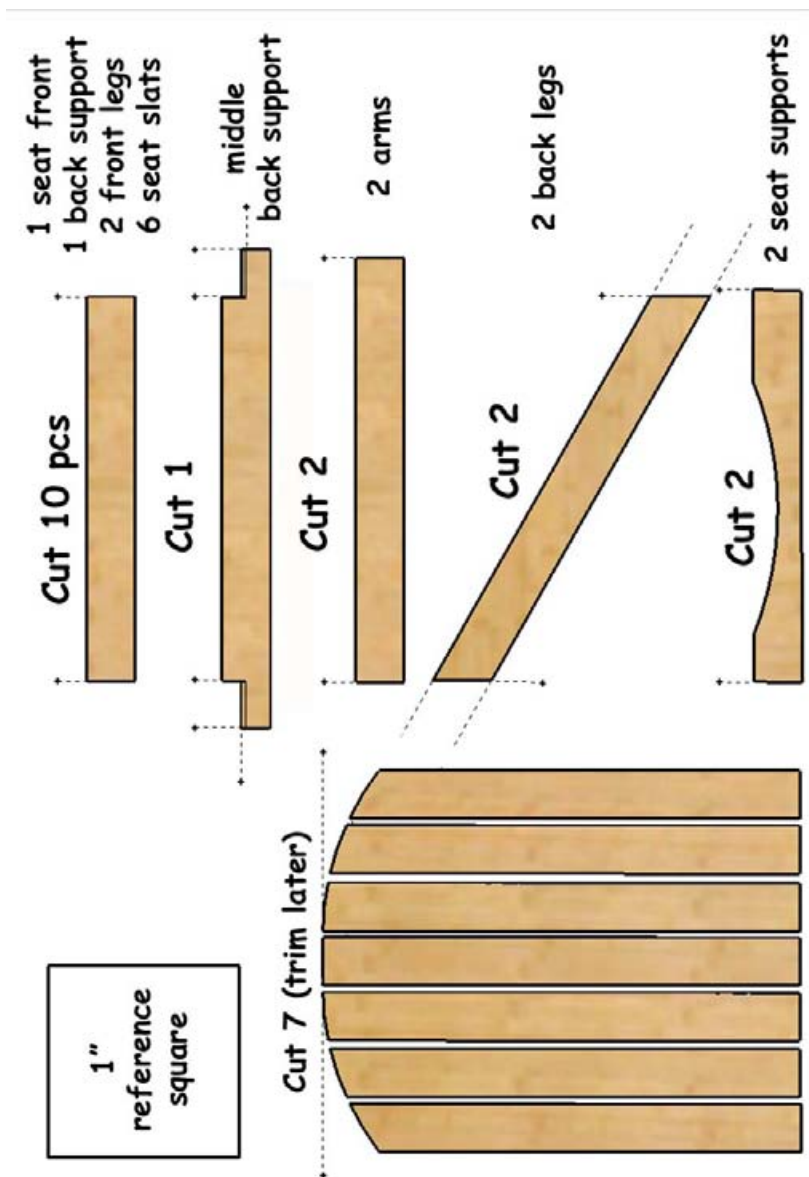
When cutting the wood for the legs I take a little more care to be sure the legs are the same size - we can level them when we're all done, by sanding them on a flat surface, but being careful here makes that task easier, if it's required.

I cut the back uprights as long as the longest one and sand them to shape after the back sub-assembly is done.

A Note About Gluing

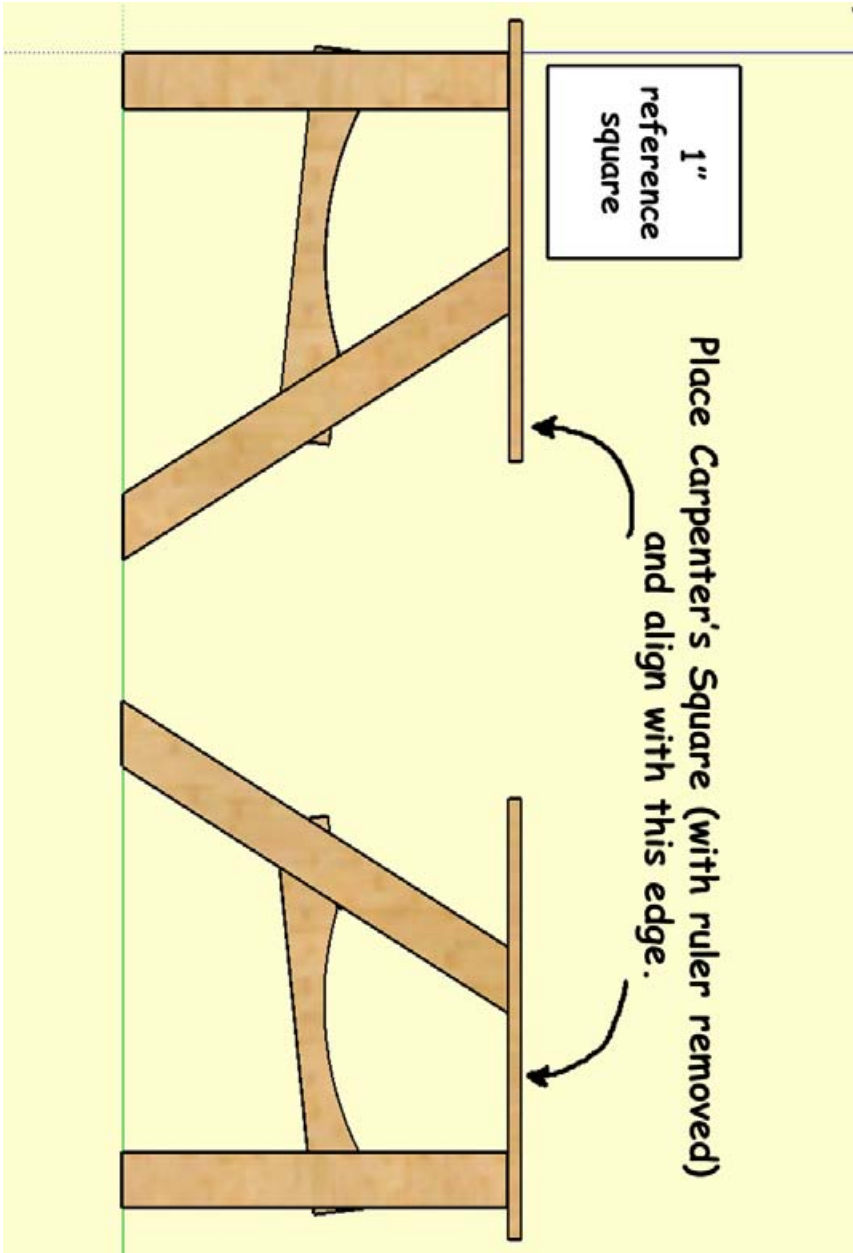
I use **Loctite's Gel Control Super Glue** for just about all of my small wood projects. It provides just enough time to get the pieces into position, sets fairly fast (10-15 secs) and gives a real strong bond. You will get some of this on your fingers and I don't have a super answer how to get it off. After a few times of washing your hands, and with the moisture from your skin, the glue will just peel off. I do work on a piece of wax paper as the glue has less tendencies to stick to it. I've also worked on a piece of glass which if the glue gets on the glass a razor blade can be used to clean it off.

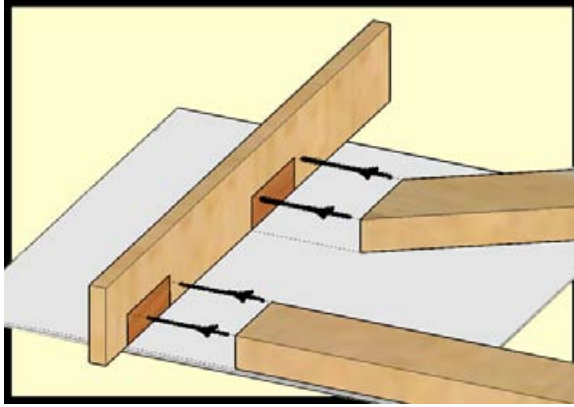
Print this page. Then measure the 1" Reference Square.
Adjust the printer's printout percentage if necessary.



Side Sub-Assembly (Arm, legs, seat support)

When I refer to left or right it is when we're looking at the chair from the front.



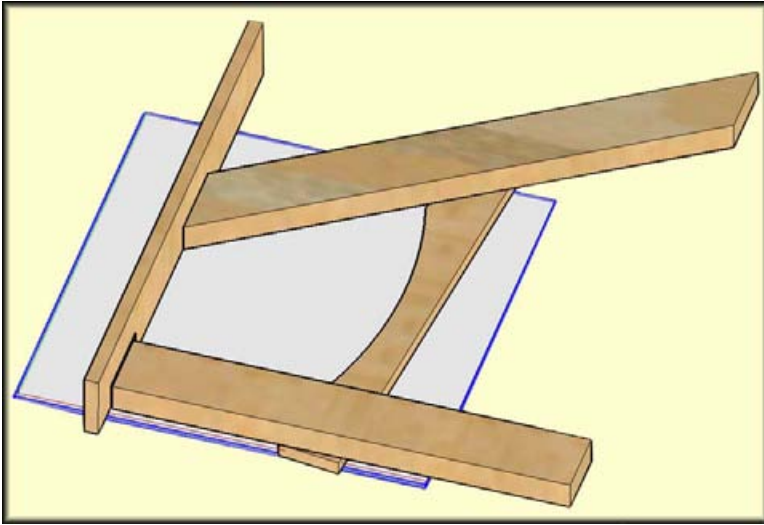


Using the side view drawing as a guide, stand the arm on edge and align with drawing. You'll need something with some weight to it as a backup edge (backstop) to keep the arm on edge and square as you glue the legs to the arm. I use a carpenters square with the ruler removed and align it to the top of the arm, over the drawing.

Apply a small amount of glue to one end of the front leg and glue to the arm. Use the drawing for alignment and the square as a backstop to press (glue) the leg against the arm. Hold until the glue is set. About 15 seconds. (I know it seems like a long time but its not - read the next step in the instructions as you hold and you'll be ready.)

Attach the rear leg in the same way. Note: The rear leg will want to slide forward on the arm towards the chair front when you apply pressure to the leg against the arm.

Allow the glue to set on both legs for a few extra minutes because we will be attaching the seat supports and don't want to move the front legs out of alignment.



Note: in this next step the longer straight portion of the seat support goes to the rear of the arm assembly.

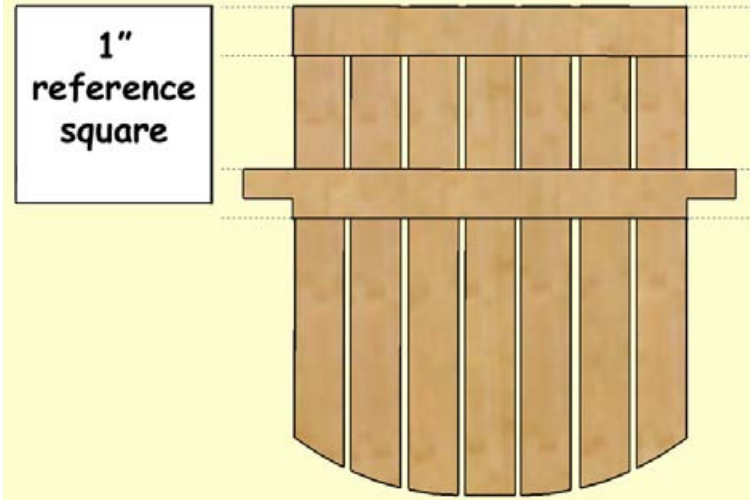
Align a seat support to the drawing and apply a drop of glue at the intersection of the side to the support.

If you moved on to the second arm/leg assembly you should be ready for the first assembly when your done with the second one.

I leave the carpenters square in place, align the legs and arm to the drawing, tilt them up slightly and slide the seat support into place. There is plenty of time before the glue sets so don't panic. If you are concerned, practice before applying the glue. Look at the drawing to be sure you're placing the seat support on the correct side.

Repeat this for the second side. Set everybody aside while you move on to the back assembly.

Back Assembly

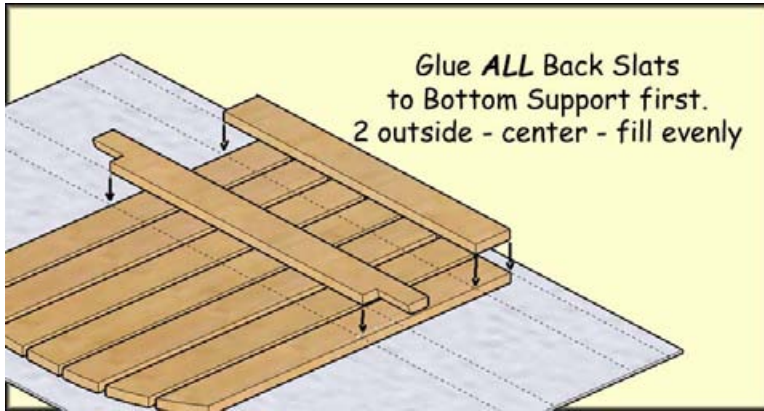


There are two ways to assemble the back. If you have some double faced tape, spread two strips across the drawing so that you can still view the images of the supports. Align the slats to the drawing and press down so the tape holds them in place. Place a small drop of glue on each slat at the bottom and attach the bottom support.

Now repeat the process for the center back support. try to keep this support at a right angle to the sides. This will effect the location of the back at final assembly.

Note: You'll want to keep this sub-assembly as square as possible so it fits easily into the seat sub-assembly which you'll be completing next.

(See page 11 for an Alternate Method for Assembling Back)



Alternate back assembly instructions: Align two back slats to the two outside slats on the drawing. Place a touch of glue on the bottom parts of each, curl your hand around from the top and hold them against the drawing. (You could tape these two slats to the drawing to help hold in place.)

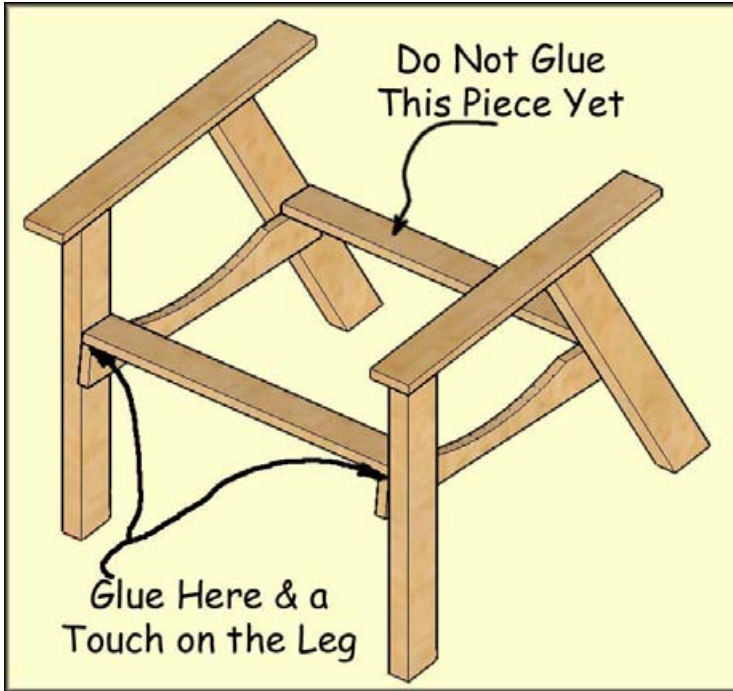
Now take the bottom support piece and place it across the two slats. Align and hold for 15 seconds or so until the glue sets. As the note above suggests, keep this group as square as possible.

With a pencil, locate the center and put a light mark on the bottom support. Again a touch of glue on a back slat and slip under the support. Align to center and as square as possible. Hold until glue sets.

Now its just a matter of gluing in the remaining four slats, as you did the center one, evening out the spacing as best you can. Let this cure just a little longer so you're sure the parts won't move when you glue the other support across the back as shown in the drawing.

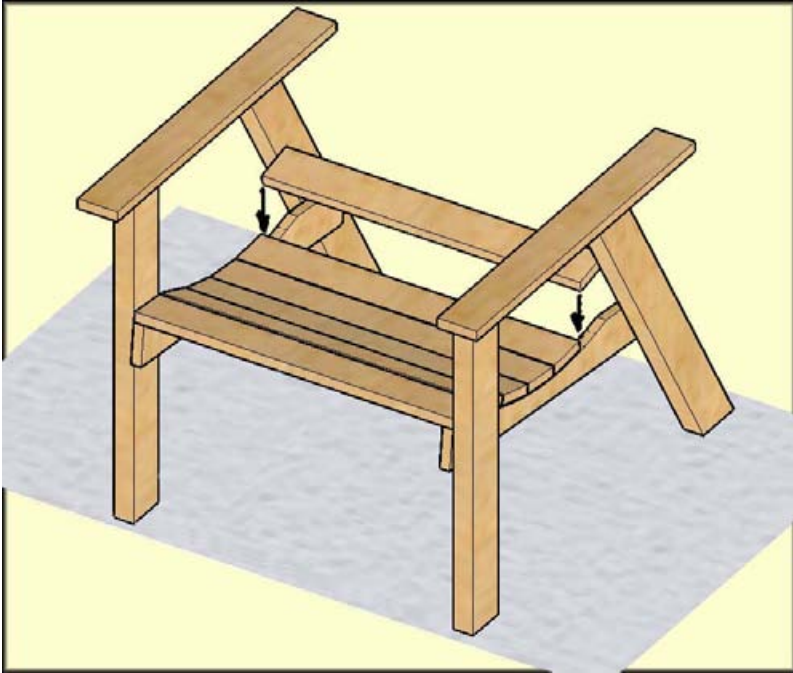
If this cross brace doesn't line up exact then squeeze the two outside slats in slightly and hold until set. If the misalignment is the other way around, too narrow, don't fuss. It will not interfere with the final assembly and won't be noticed once the chair is complete.

Time to complete the seat sub-assembly.



Looking at the drawing, place a small bead of glue in the valley where the front leg meets the seat support. Don't over do it because the glue will extrude out around the joint. Place one seat slat here and hold.

Place a second seat slat in the back, as shown, but don't glue it. We're only using this piece to square up the front and making sure there's enough space for the back assembly. There will be some flexibility for the back but this will ensure the least amount of pushing and pulling. Read the next step while you wait for the glue to set. I know, ugh!

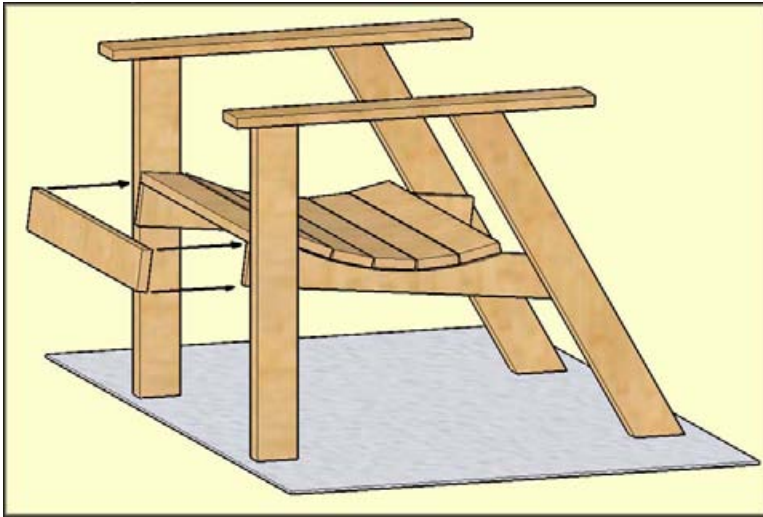


Once the first slat sub-assembly is ready, remove the loose seat slat. Now run a small bead of glue down each curved section of the side seat supports. Be careful now, not too much. Then, one by one, place a seat slat onto the seat supports. Butt them up against each other. You do not have to glue the slats to each other, the glue on the supports is plenty to hold everything.

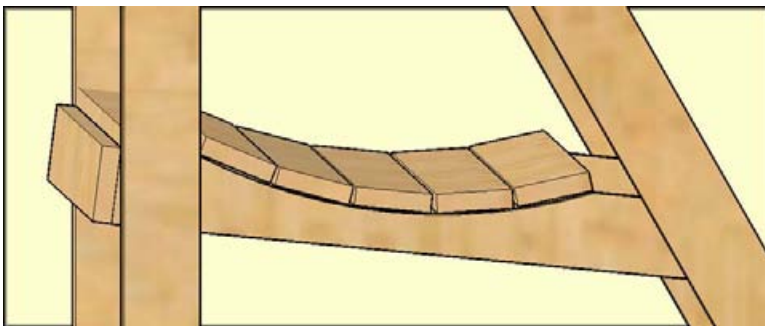
If the sub-assembly is sprung in slightly from gluing the first slat, leave one slat loose in the back as before. If it is sprung out slightly then install all of the slats and squeeze the back together slightly while the glue sets.

You want the ends of the seat slats to line up with the outside edge of the supports. You will have a tendency to grab the outside edges of the slats to align them - No, no. Super glue is a bear to get off your fingers. If you do get some on your fingers, pinch a piece of tissue paper between them and roll it around to absorb the glue. Don't close your fingers together without the tissue because you'll glue your fingers together.

Instead of using your fingers to slide the pieces, use a straight pin or a large safety pin, poke it into the face of the slat and use it to move the piece back into place. Don't stab it. Use just enough pressure to move the slat. The pin dimple probably won't even show up and you can always touch with a piece of sandpaper later.



Now just take the last seat slat and glue it across the front of the chair. A little dab of glue on the end of the side seat supports are all you need. Yep, hold until the glue is set.



This is what we should be lookin' like.

Now - Back to the Back.

Now we can complete the back and finish assembling the chair - we're almost done.

Find something round, about 10 inches or so in diameter. A styrofoam plate will work. Align the plate over the back assembly and draw a light pencil line as a guide to sand or cut to. I have a small table top belt/disk sander that I use so I place my guideline on the back side of the assembly. This allows the back to lay flat on the table as I carefully work the piece against the disk and sand my curve.

If you are without a sander you can very carefully take the razor knife and trace around your guide. Make a couple of careful passes and then remove the guide and follow the groove you have started. Just take your time with several tracing passes until you're almost all the way through the wood. Then holding the knife a little more vertical continue to make tracing cuts until you're though.

Take an emery board and clean up/dress up your cuts. As you can see from the picture and drawings I rounded off the two outside slats a little more severely. I am trying to make a smoother transition from the curved back to the straight sides. This step is not necessary if you care to leave it out.

Additional sanding info is available [here](#).



Final Assembly

For the final assembling of the back to the seat you'll want to test fit before applying any glue. Place the bottom of the back between the rear legs, resting on the side supports and butt it up against the rear seat slat. Now tilt the back up until it slips under the rear end of the arms. Ideally we should have the back's middle support fit snugly under the arms and even with the edge.

If the support does not slip under then remove a little material from the support. You can do this by using your emery board, sanding the tang of the support down on each side until it slips under.

If the support slides too far under the arm towards the front, it becomes decision time. Just a little of the arm sticking out the back? I call it "good enough". The back is way too upright? Then when I glue the back in place I just glue the edge of the back to the inside of the arm. If the gap between the tang and the underside of the arm is great enough to drive you crazy, then cut a small piece of wood to

fill in the gap. Otherwise call it "good enough" - odds are you're the only one who will ever know it was supposed to touch the arm.

(To fill the gap - glue the small piece in place, on the tang, before gluing the back to the chair sub-assembly. Then using the emery board, sand to fit.)

Once your fitting exercise is over, run a small bead of glue along the back of the last seat slat. Add a touch of glue to the back support tang. Align in place and hold until set. This is probably the longest 15 seconds of the whole job - but its also the last one.

Done.

Set it down, lean back and admire your work. Not too bad is it. Ya did good, congratulations.



Finishing Your "Miniature Garden Lawn Chair"

You can have a lot of fun **finishing these miniature chairs** by staining them with a color stain. I chose to stain my miniature lawn chair because I love the wood grain, but you can certainly paint this little fellow and he'll look just as good. I thought the green stain was a nice touch, so that's how I did mine.

Look over the chair with an emery board in hand and if you see anything, such as a rough edge or excess glue, dress it with a few light passes of the emery. On the flat surfaces take a light pass with some of the finest sandpaper, wrapped around your finger - remember to go with the grain as best possible.

Now apply your chosen finish, **paint or stain**, following some of the guidelines outlined on my web site "The-Art-of-Dollhouse-Miniatures.com"

And as always, I recommend spraying on a light coating of clear polyurethane finish to complete your "Miniature Garden Lawn Chair".



I truly hope that you try this project and enjoy it as much as I did.

Thanks for the opportunity to share.
Al

