

## Paul Unger's Bass: The Second Hundred Hours

(in true chronological order)

**[January 3, 2010]**

Happy New Year!! For those of you who have idealized violin makers as a bunch of ectomorphs working with exquisitely small and refined tools doing precise joinery while listening to obscure early music performances on their local NPR stations, here comes your ugly truth for the day: Bass making isn't for sissies! It comes down to me, a gouge, and a huge table of hard maple big enough to seat three. We meet on a heavy bench in a remote room. None of us comes out alive. Makers have a special and esoteric name for this part of the process. It's called "hogging out," and it's truer than I like to admit. And all we have to look forward to when we finish hogging out one side is flipping the piece over and hogging out the other. I thought you might like to see the tool I use, a 7-sweep fishtail gouge that was made for me by the late Dave Brewster. I'm holding it upright to allow the blade to cool because it starts smoking after a while (just kidding). Using it beats up my hands thoroughly, but not as much as the tool I used to use, which was an electric chain saw! The tingling in my fingers after a few hours of chain sawing was enough to convince me that the time saved was not worth the potential neurological damage. Here the rough outline can be seen as well as the beginning of the outside arching. We're at about 100 hours now.



**[January 17, 2010]**

Rubbing It In! Here's a shot of the top for Paul's bass taken right after I joined it. I typically use a rubbed joint, which means that while the glue is wet, the boards are rubbed and pressed together, which forces out the excess glue and air. After that, the weight of the wood and atmospheric pressure keeps the joint closed. As the glue dries, the halves are drawn together so firmly that the glued joint becomes stronger than the wood itself. Ah, but here's the rub (pardon the pun). The hot water in the glue causes the wood to initially swell, which can actually push the pieces apart. So I leave two little "ears" at each end of the board that serve as a good place to put clamps to



position the pieces and counteract any swelling. These ears also serve as a convenient grab points for me so that I can maneuver the bulky boards without getting oils from my hands on the surfaces of the joint. Gluing up boards this size is a two-man job in most shops. Since I work alone, I really have to fly to keep the joint warm, the glue liquid, and pieces in place until everything is in position. I figure that I am successful if I have as much glue on my clothing as I do in the joint.

The tree that gave this piece of spruce for the top was about 125 years old when it was cut. I've had the wood about ten years, so all things considered this tree likely was a seedling in the forest around 1870. Looking at the fine growth rings, I can see that for the first 75 years, summers were of similar length and winters were cold. Then, for the last 50 years, the growth rings broaden and become larger than the summer wood between them. This tells me the wood was growing during much of the winter, although slowly. These rings can be seen as darker bands down the center of the wood, and they will add strength because they occur at the center of the belly between the ff-holes, where maximum strength is needed for a five-stringer.

**[January 24, 2010]**

The back and top, now roughly arched on the outside, are tack-glued to the rib blocks that are tack-glued to the mold. If this sounds like an impermanent arrangement, it is. The object of this step is to bring the overhanging edges of the plates very close to their final distance from the rib assembly. After that, the edges of the rib overhangs will be brought to their final height, which will create a little shelf or platform around the perimeter of the plates. This is where the purfling will be inlaid, and after that, the final arching of the plates will be done to incorporate the purfling. Things start looking nicer at that point.

This assembly is quite heavy at this point since the mold is still inside and the plates are nearly at full thickness. I haven't actually weighed it, but the grunt factor every time I have to lift it suggests something in the neighborhood of 40 to 45 pounds in a very clumsy-to-hold package. This photo gives an indication of the bass' size, although it will look a bit svelter once all the edges are correctly distanced. You can also begin to see the figure in the maple back for the first time. Time invested to date is about 135 hours.



**[February 5, 2010]**

Here's a picture with semi-dramatic lighting intended to show how the body of the bass looks at this stage of construction. The rib overhangs are now at their final dimension. You're looking at the back of the bass, so the overhangs you see are those of the top, thrown into relief by the lighting. The picture and the light makes the overhang look a little greater than it is.

If you look closely at the perimeter of the bass back, you can see the purfling shelf all the way around. Finishing this shelf also brings the edge thickness to its final dimension. I'll go over the corners one more time to make them as uniform and harmonious as possible. The top is in a similar state at this point.

Since the shelf establishes so many of the fine points of how the outline of the bass will look when finished, working on it tends to be a slow task, especially on the hard wood of the maple back. Total time in the project at this point is about 165 hours.



[February 10, 2010]

### Baggin' It!

While I'm engrossed with tedium working around the shelf of Paul's bass, I thought you might enjoy this shot of me holding a bag of wood chips and shavings that came out of this bad boy. It is amazing how much wood there is to take out of a bass. Or maybe it's just depressing and I'm having too much fun to realize it. :-) Believe it or not, this is the second bag of this size going to the compost heap, and there will be at least one more coming after it. The bags, by the way, are 55 gallon drum liners. With the recently ended Super Bowl 44 still in mind, it occurred to me that not many players can get three sacks in one game, but I do it all the time.

I think the Redskins need me.



[February 21, 2010]

Bob Gets in the Groove! Here's the back of the bass with the purfling inlaid. The left half of the purfling has been trimmed and I've started the sinking around the edges. The purfling on the right side hasn't been touched yet, so it looks darker (probably because it has been beaten with a hammer to seat it in the groove). This is a totally messy job, and I usually get so splattered with glue that I have to put my clothes in the washer afterward. I rather like the way the instruments look at this point, though, because they are obviously leaving the "slab of wood" stage and becoming more like a musical instrument. A lot of guys use small, guided routers to cut the groove, which saves a lot of time when the groove length is measured in yards. I do it the good old-fashioned way with a purfling knife to score the cut lines, followed by deepening the cuts and then picking out the space in between with (you guessed it) a purfling picker! I use an X-Acto knife because the heavy-duty blades are easy and inexpensive to replace should the tips break, which can happen more often in the heavy and dense maple of the back. The arching and the sinking at the purfling will be connected and then the entire back will be smoothed with scrapers. After this, I won't work on the back again for a while. Next step is to do the same on the top. It's faster in the spruce, but in some ways more difficult. Time in the project at this point is about 190 hours.

