

My 1830's Grand Bellows Restoration Project

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Let me be very clear: I am not a professional maker or restorer of bellows. This was my first time trying to restore any kind of bellows and I am not totally pleased with my first attempt of doing it. Before I started on this project I sent off and got every article & book about bellows that I could find and they all turned out to be not much help in restoring my grand bellows.

Part 1

Here are a few things that I learned by trial and error.

1. Make sure you make a good pattern to use in cutting your leather. Make it a little larger (1/2" to 1") to cover any mistakes you make when putting it on. You can use a razor blade (utility blade) to trim any surplus. The best source of the pattern would be the leather you take off. I was unable to save any of mine because it crumbled in my hand when removing it therefore I made a paper pattern using newspaper that was taped together.
2. You will need a good stand to hold your bellows while you work on it. I made one that you could put your bellows horizontally in it. One of the Williamsburg smiths uses one that holds the bellows vertically. I don't know which is better.
3. Make sure both metal rods in the center board are removed. I was unable to remove one of the rods without breaking the board and this was a problem when I made the paper pattern and a serious problem when I put the leather on.
4. What kind of leather to use? The only thing that I will say here is to make sure it is soft and flexible. Mine was not which made it harder for the bellows to open and close.
5. You will need two sides of hides. I used a local shoe repair shop to sew them together. Make sure that they are marked correctly using your pattern before sewing.
6. Before putting your leather on make sure the bellow boards and floating arms are open and braced firmly and evenly distanced apart. Be sure the center board is level.
7. If you have any holes in the leather made by nail holes, I found that Gorilla Glue does the job because it expands and the leather seems to stick together unbelievably well.
8. Another mistake that I made was the fulcrum pole. I cut a small pine tree down, that was about 3" diameter at the bottom, skinned the bark off and cut it to about 13'. Because of its size, and being wet the weight caused the bellows to start closing on its own. I did not realize this was a problem until I first made a fire and was using the bellows for the first time and, with every pull of the rope, I would hear a pop near my fire pot.. I noticed with each closing of the exterior flap, this would happen. The exterior flap was continually opening and closing prematurely (chatter) because of the weight of the pole would not let the flap stay open causing fire fumes to back feed into the pipe to the bellows and then explode. I now understood how bellows could explode and they do! Also being green wood it had too much flexibility in it that required more room for it to operate properly. My new pine pole is now 2" at its thickest end, dried out and not too heavy.