

Tuesday, March 11, 2008

Folding Wall-Hung Spray Booth Chapter V: Flexible Walls

Hello again,

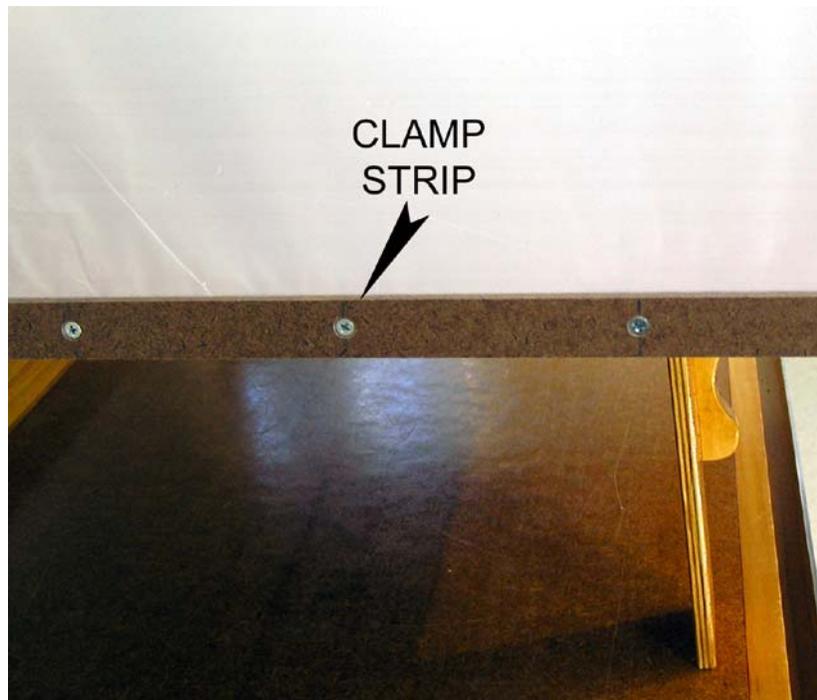
I finally found time to work on this project some more. Here is a shot of my folding paint booth with the platform lowered and the flexible walls extended:



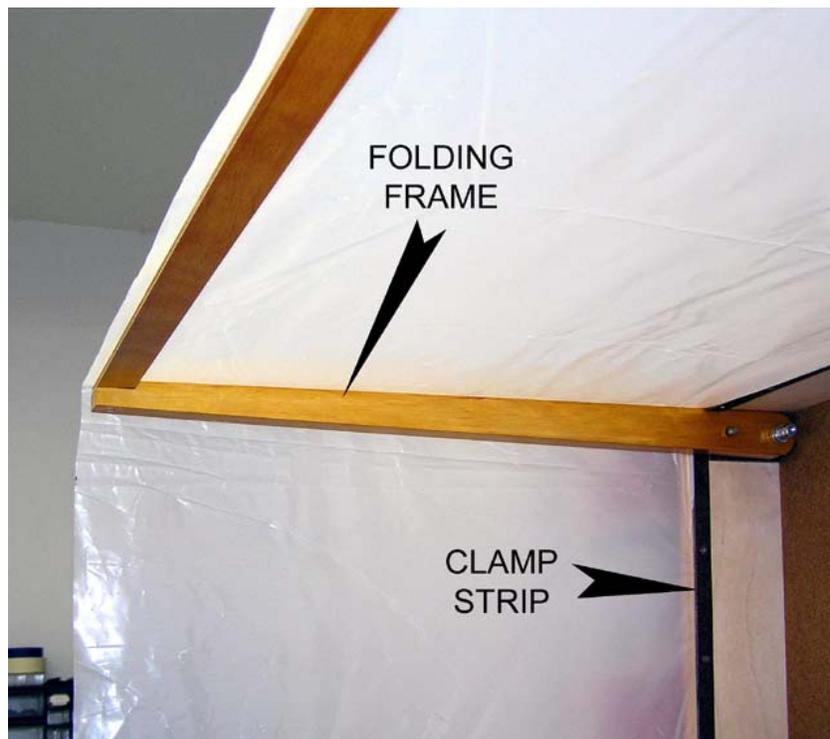
The walls and roof are a single piece of translucent vinyl plastic sheet, 3 mils thick. I cut a piece from a painter's drop cloth. The milky color of the vinyl allows plenty of light to enter, but diffuses it, so there are no harsh shadows in the painting area. This was an unplanned, but welcome bonus.

Preliminary experiments suggest there is "substantial" airflow through the vinyl tunnel—by which I mean you can actually feel a breeze! I'll *measure* the airflows after all the rest of the ducting is installed, but for now I think I'm on the right track.

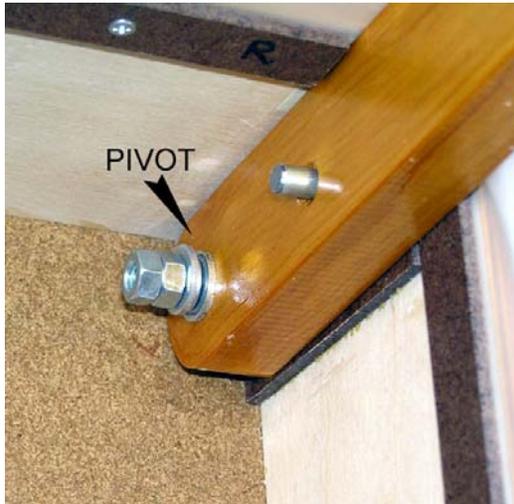
The vinyl sheet is attached to the platform edges and around the inside the cabinet with clamping strips of 1/8" tempered hardboard; screws are spaced about 3.5" apart:



The vinyl is supported by a simple wooden frame:



The frame pivots at the rear on two 1/4-20 hex bolts. When open, it's fixed in place with two locking pins. A lock washer compressed between two flat washers forms a spring which provides "just enough" drag to hold the frame open while the locking pins are inserted from outside:



I hack sawed the heads off two more hex bolts to make the locking pins. The knurled brass "knobs" are just decorative nuts I found in my scrap box:



Unlimbering the booth takes less time to do than to tell: lower the platform, raise the support frame, and insert the pins. To close, it's only necessary to pull the pins and lower the support frame into the case. Then, tucking in the vinyl as necessary, raise the platform until it latches. That's it!



Looking ahead, the next task is to fabricate a throttle valve for the blower exhaust, so I can reduce airflow after spraying, while the paint is drying. I'm not anxious to expel expensively heated shop air into the cold outdoors unnecessarily.

And after *that*, I'll run the exhaust ducting, install permanent motor wiring, pipe in the air supply, and...and...*lots* of fun ahead, yet. Stay tuned.