



Small Shop - Big Results

Rx for Mice—Pulling Out All the Stops!

Part 4: Finishing and Installing the Keyframe

By Chuck Behm

Central Iowa Chapter

Now that the keyframe of the 1915 Walworth upright (the piano which has been featured in the last several installments of this series) had been renewed, it was time to install new front and balance rail keypins. The keyframe would then be refelted before being returned to the awaiting keybed of the piano.

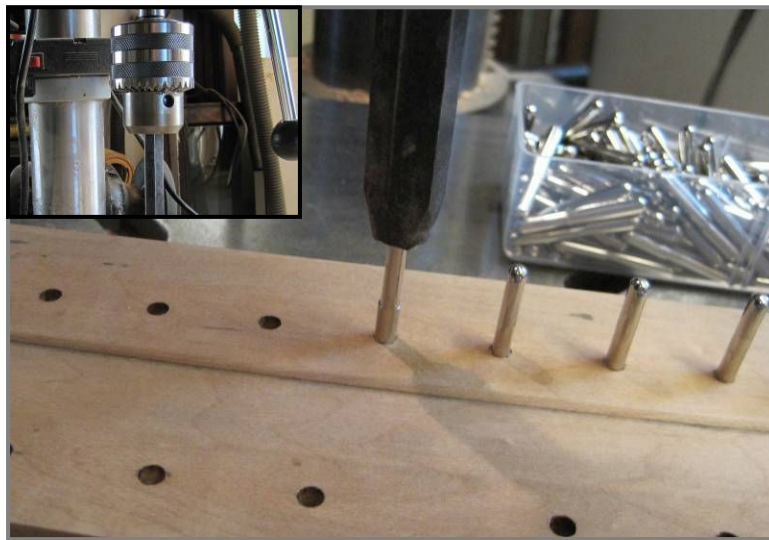


Photo 1: The drill press is used sans motor.

The new keypins for the front rail, which were selected to match the length of the original pins, are installed first using a tuning pin punch (Photo 1) which has been tightened into the chuck of the drill press (Photo 1 insert). The stroke of the drill press is set so that each pin is pressed in to exactly the same depth. The method also insures that the downward travel if the pin is precisely perpendicular to the rail, guaranteeing that no elongation of the hole is caused.

Safety tip: By now, if the suggestions made in the previous segments of this series concerning safety had been complied with, the risk factor concerning the Hantavirus threat would be at a minimum. Still, it would most likely be prudent to continue wearing latex gloves when handling the surfaces which had been thus treated. Specifically, in the case of the featured piano, the front and balance rails, and the keybed area in general would be wisely handled with gloves.



Photo 2: Balance rail is clamped into place.

Once the front rail pins are installed, measurements are taken as to the exact placement of the balance rail (using the old front-to-back supports as a guide) and the rail is glued and clamped into place (Photo 2).

While this work was going on, by the way, work on the action of the piano was proceeding simultaneously on another bench in the shop. The advantage of having several related projects going on at the same time is that when drying or curing time needs to be allowed for, the technician may switch focus to another part of the overall restoration project instead of being forced to remain idle.



Photo 3: Important measurements.

Documentation of important measurements in a restoration job should be made for future reference. In this case (Photo 3), the original height of the balance rail pins was

recorded on the bottom of the balance rail. I've found that writing such measurements on the odd scrap of paper is a mistake, in that chances of finding the information when needed are slim.



Photo 4: Using the old back rail as a template.

In addition to recording important measurements, another recommended practice is to save old parts for reference purposes until the entire project is completed. The old back rail, for example, serves as a template for marking the screw holes that will secure the keyframe to the keybed (Photo 4).

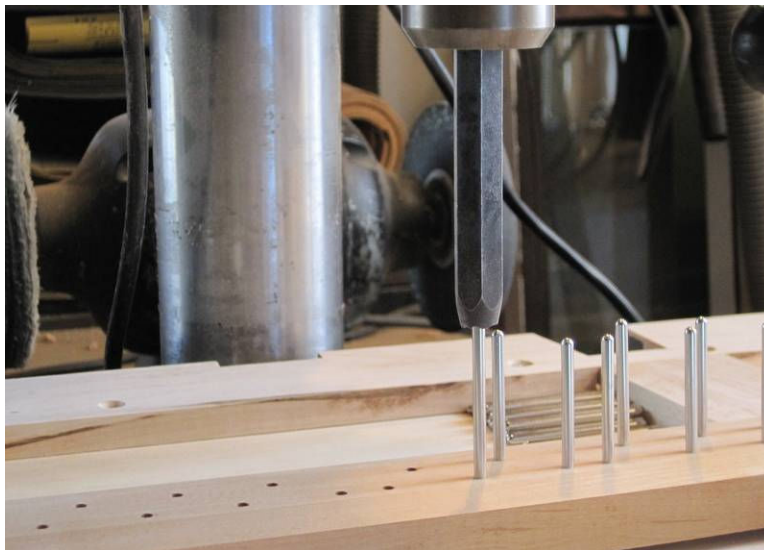


Photo 5: Balance rail keypins being inserted.

The drill press is again used, this time to insert the balance rail keypins to the correct 1 ½" height (Photo 5). To prevent the floating rail from flexing, a shim is placed under it while the pins are being pressed into position.



Photo 6: New back rail cloth.

With all the balance and front rail keypins inserted, the keyframe is taken to another bench for refelting. The back rail cloth, chosen to match the thickness of the original cloth, is first cut to length (Photo 6).



Photo 7: Gluing the back rail cloth.

With each segment of cloth flipped upside down, a bead of Titebond glue is run and spread out along the back edge (Photo 7) which, when flipped, will be the front edge. The cloth is thus glued in the front, and unglued in the back where the weight of the keys rest. Being unglued, less sound is transmitted into the body of the piano when the key is released.



Photo 8: New front rail felts.

New front rail felts are installed (Photo 8). A few of the original felts had survived the mice, and were found to be a bit thinner than the standard medium thickness, thus the use of thinner felts. Whenever possible in regards to felt, I use the closest approximation to the original available.

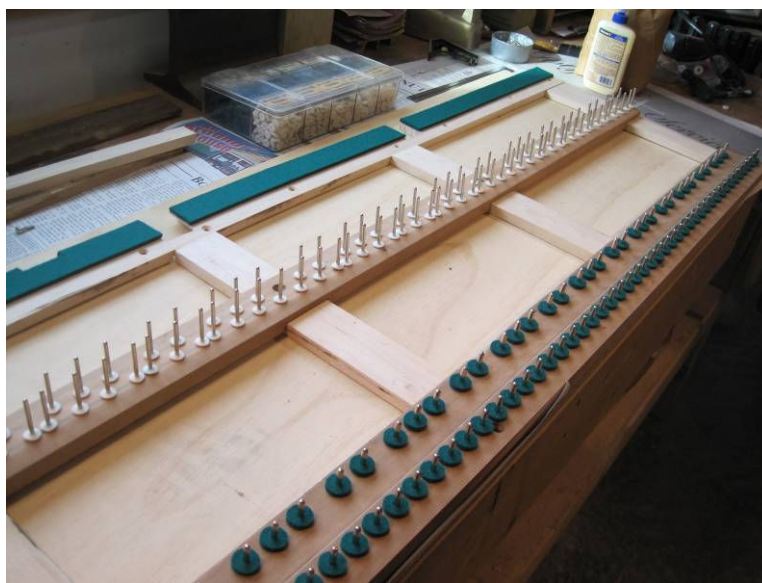


Photo 9: The restored keyframe, complete with felts.

As this stage of the restoration process is reached, I find that this work is immensely satisfying. When things start going back together, the beauty of the construction of the piano just thrills me—an invention with the sole purpose of allowing for man to express himself musically, with a range that no other instrument gives. There are many technicians, I realize, who consider what we do a colossal waste of time, in that more money may be made tuning and servicing new pianos. So be it.

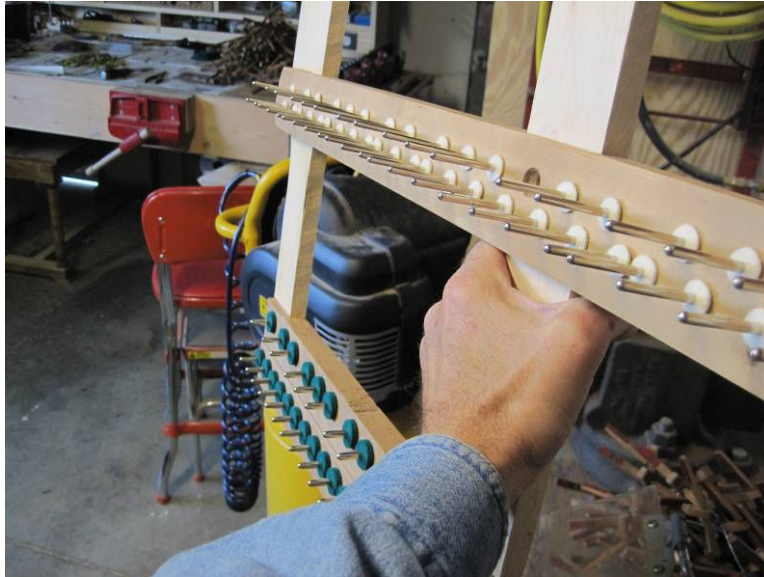


Photo 10: "Hey, look what I found!"

The refelted keyframe is now taken to the room where the piano itself is being reassembled (Photo 10). In all, during the restoration process, five benches in three rooms of the shop are utilized. By spreading out the project in this manner, there is always something to be worked on. Also, it allows for a change of pace whenever one job begins feeling monotonous. Variety is, after all, the spice of life.

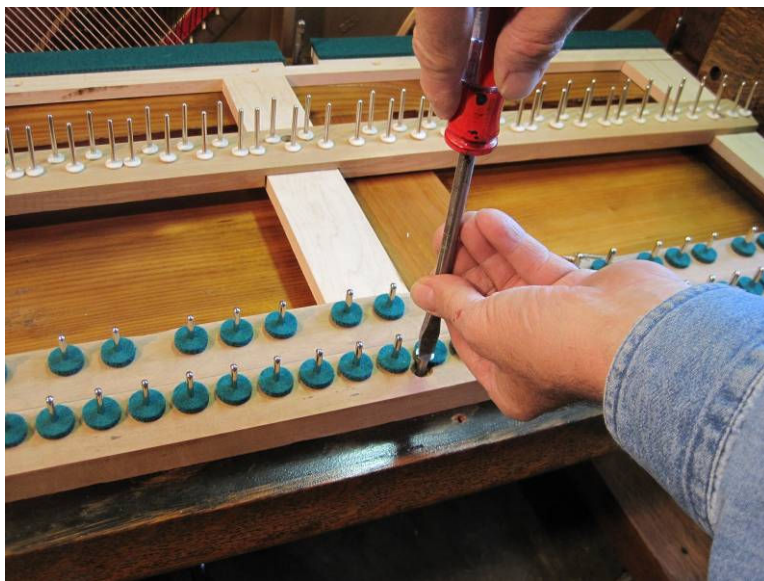


Photo 11: Securing the keyframe.

The keyframe is screwed down to the keybed (Photo 11). The screw heads have all been polished for as a finishing touch. Some details are nice to do, even if no one except another technician sees them. To me, those hidden reminders of pride of workmanship mean a great deal. After all, we're not just slapping together a utilitarian household appliance. A piano is much more than that, and it should be assembled with respect and pride.

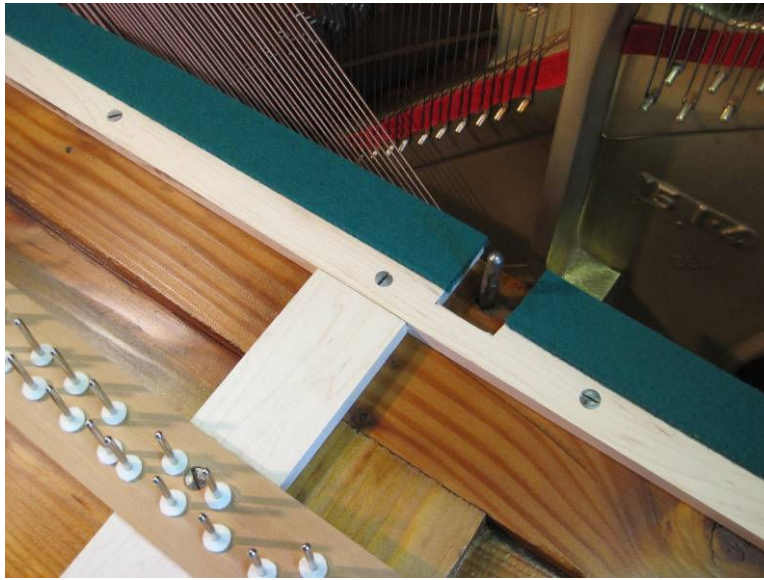


Photo 12: Blending old with new.

I am thankful at this point that I replaced the mouse-chewed basswood parts of the keyframe (Photo 12). I would much rather look at the finished product and feel that I went above and beyond the call of duty, than to be embarrassed that I didn't do things right.



One more step of the restoration process is thus completed (Photo 13). Work on bringing back the keys to life will continue. To see how far things have come, refer back to Photo 5 in the first segment of this series.

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