



Small Shop - Big Results

Repairing Serious Damage – Part 1

By Chuck Behm
Central Iowa Chapter

In the piano restoration business, you see all sorts of curious repair work done on the pianos that come into your shop. The various procedures for filling in large gouges and missing case wood have always intrigued me. All too often, fillers of one sort or another are used with varying degrees of success. To me, however, the only correct way to repair a gouge (at least on pianos done in a natural finish) is by replacing the missing wood with a matching wood patch. On fairly small gouges, we use a simple approach and fit a replacement piece of solid wood which matches the veneer used on the instrument. For larger gouged out areas, we will fit a core piece of oak, then overlay that with crossbanding (if present on the original) and the finish layer of hardwood veneer to match the case.

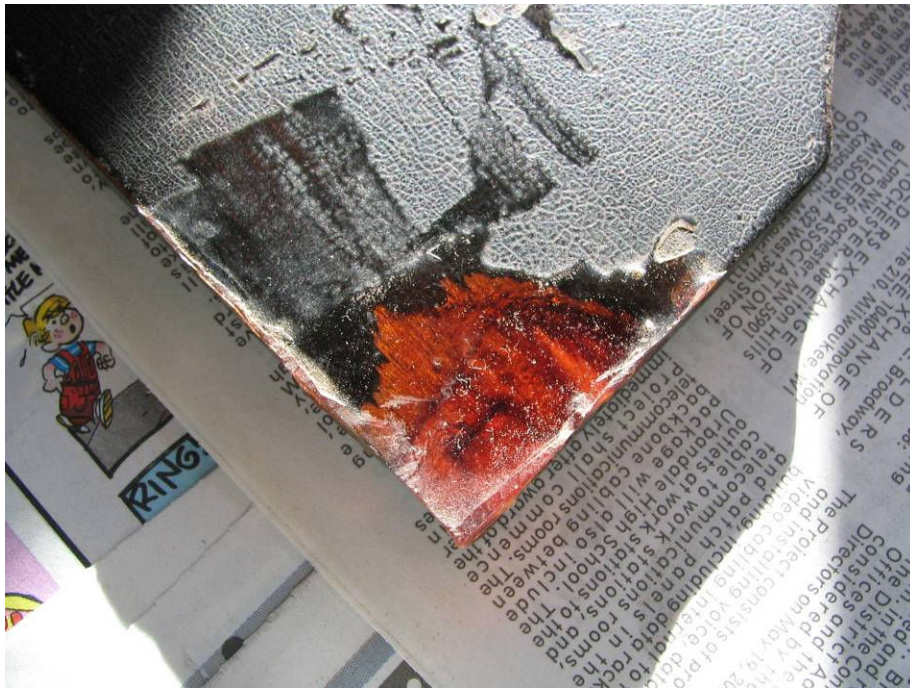


Photo 1: Gouge filled with unknown glass-like amber substance

The “repair” done to a grand music rack in Photo 1 illustrates the problem and its solution. Underneath the hard amber substance can be seen the jagged wood where the corner had been ripped away. If the missing piece were lost, as it apparently was in this case, matching that uneven surface would obviously be extremely difficult, thus the use of filler. The solution is to remove more of the wood around the damaged area in a way that gives a more precise area to replace. That removal of the ragged edge of the damaged area may be done by using either a router or a band saw, depending upon the circumstances.

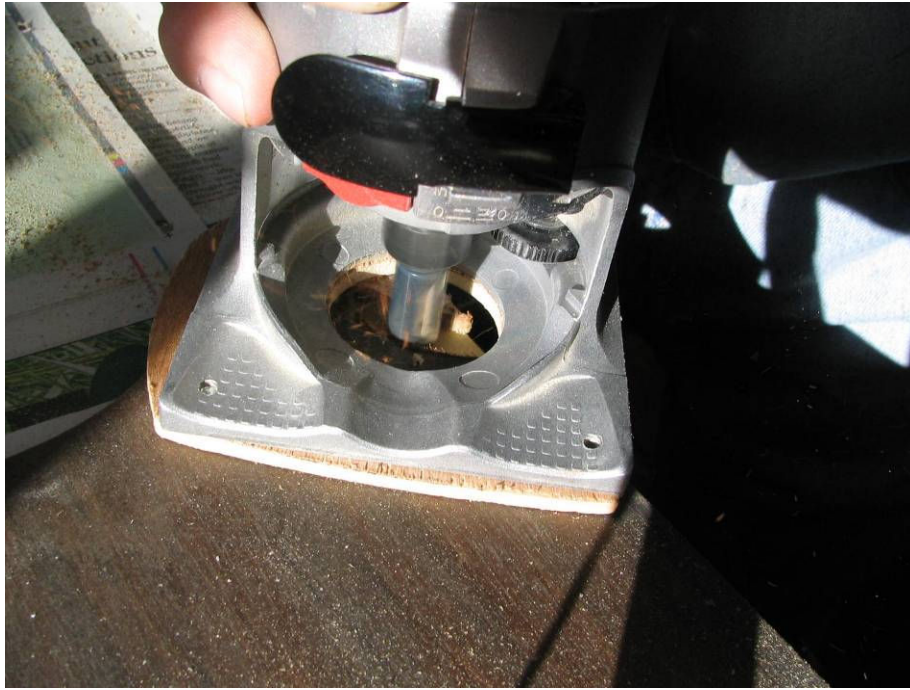


Photo 2: Cutting away the bad area with a small router

In this situation, the back layer of veneer was intact, so a router was used to remove wood from one side only. For this small of an area, I chose to use the router freehand (Photo 2), and made the cut deep enough to remove all the damage, while still leaving the veneer on the opposite side of the music rack. The result was a more defined shape to replace with new wood (Photo 3), making the repair much easier than before.



Photo 3: A much more fixable repair

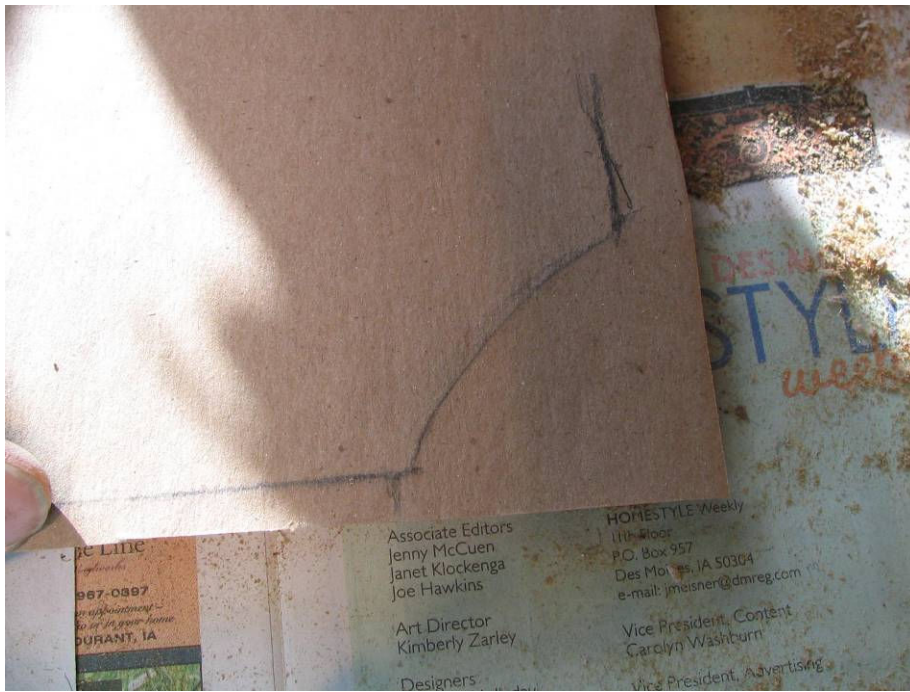


Photo 4: Marking the line

To make a pattern for the patch, a tracing is made. Cover the area to be repaired with a sheet of paper, and use the flat side of a pencil to rub against the edge to mark the line of the patch (Photo 4). Cut the paper along the line, and use the resulting pattern to draw the line for the patch on the wood to be used (Photo 5). In this case, since the veneer of the piano was mahogany, I used a piece of mahogany stock, milled down to the exact thickness of the routed out area, for the replacement.



Photo 5: Transfer the shape to the new stock

The patch is cut on a scroll saw or band saw. (I find the finer blade of the scroll saw easier to use for such a small piece.) Stay just to the outside of the pencil line for a perfect fit. Once the repair piece is cut, check for fit. Make any final adjustments to the fit with 100 grit sandpaper, then glue and clamp the repair piece in place (Photo 6). Use scrap wood to protect the work piece from the jaws of the clamps. Let dry overnight. Lightly sand out, and the repair is ready for staining, as seen in Photo 7.



Photo 6: Clamped in place



Photo 7: Ready for stain

Next month, a more challenging repair to an extensively damaged piano (see this month's Tuner's Life segment) will be tackled, where the oak core will first be repaired, then the overlying veneer fitted and stained to match. Until then, do good things.

Chuck Behm is the owner of River City Piano Restorations in Boone, Iowa. He can be contacted at behmpiano@gmail.com.