Photo 32: Before staining and varnishing the case, some missing carving must be replaced. Here Dave finishes the detail of a leaf to replace one that was missing.

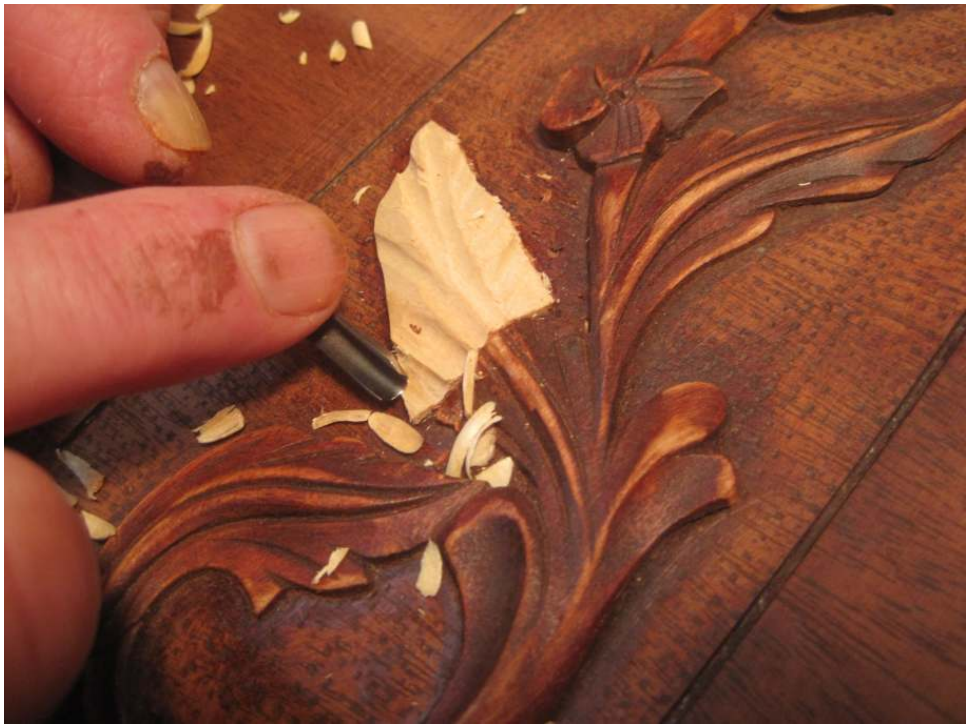

Photo 33: Basswood is used for its ease in carving. Staining will be done to match the new wood in with the old when the missing segments are finished.

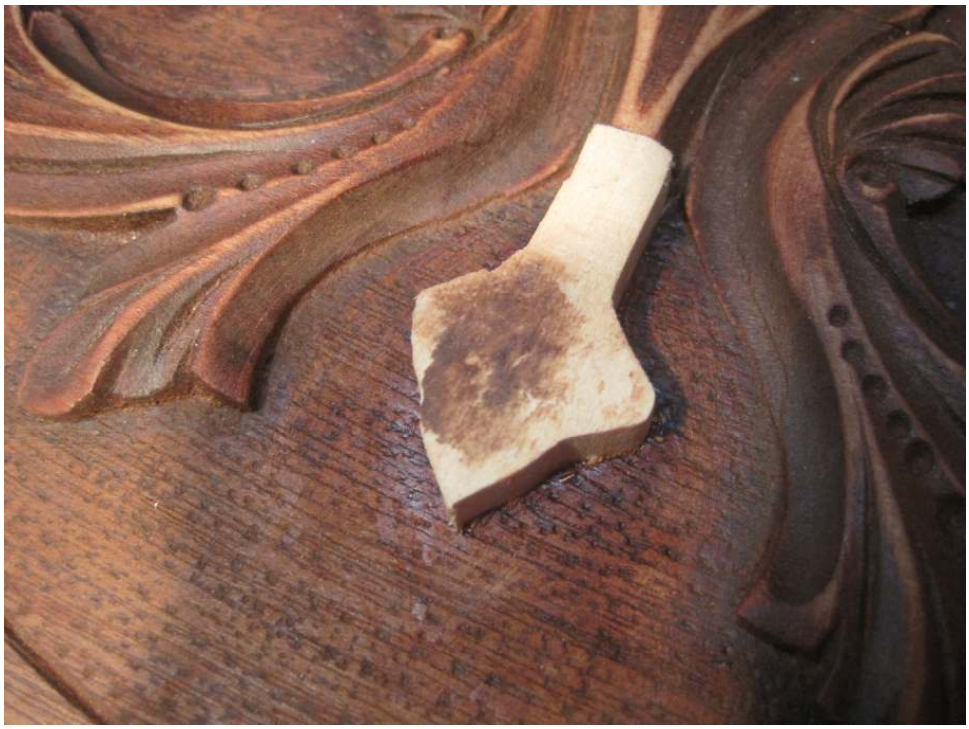

Photo 34: The first step is to cut the shape from basswood stock and glue it down to the background.

Photo 35: Once the piece is glued in place, carving is done using small specialty hand carving tools.

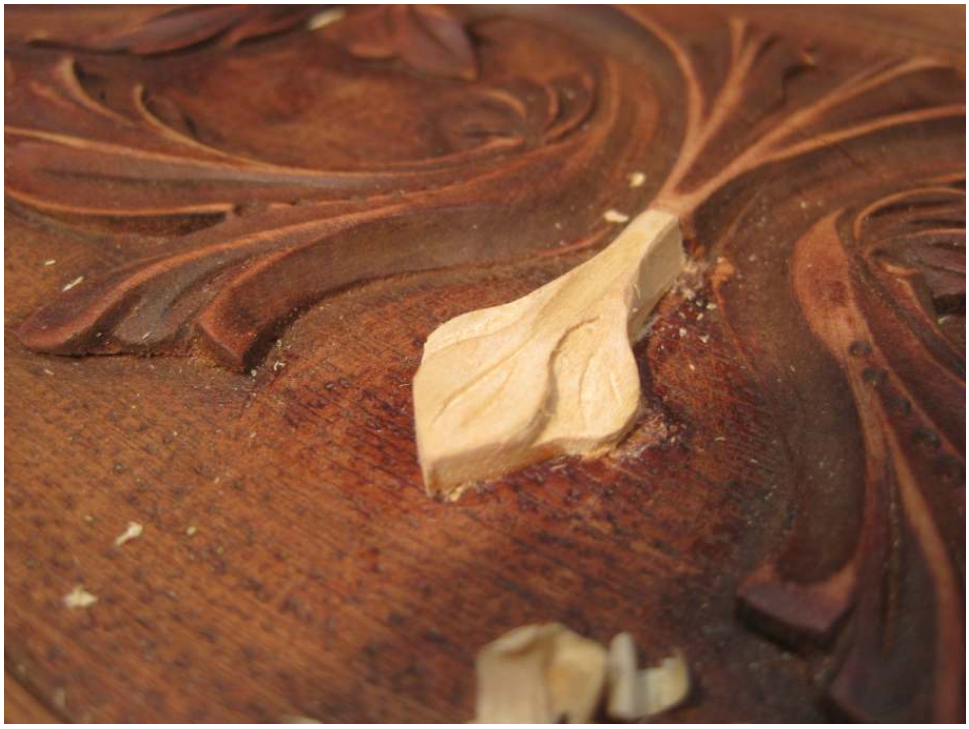

Photo 36: The finished leaves, with veins scribed in, will blend in once stained and varnished to the point where it will be nearly impossible to distinguish the new from the old.

Photo 37: Dave begins first coating the case of the piano. This curved section of the arm is covered with new veneer.

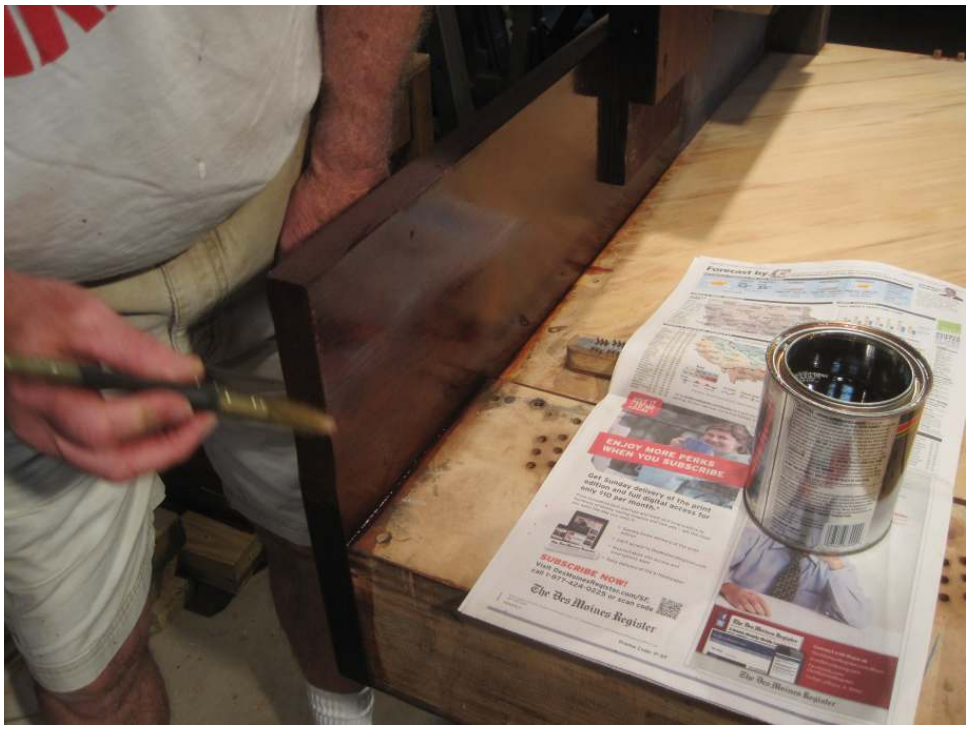

Photo 38: Dave varnishes the top and the inside of the sides of the piano.

Photo 39: The side and arm of the case with one coat of finish. This first coat will be rough to the touch when dry and will need to be buffed before the second coat is applied.

Photo 40: Buffing between coats is done with 400 grit wet/dry paper.

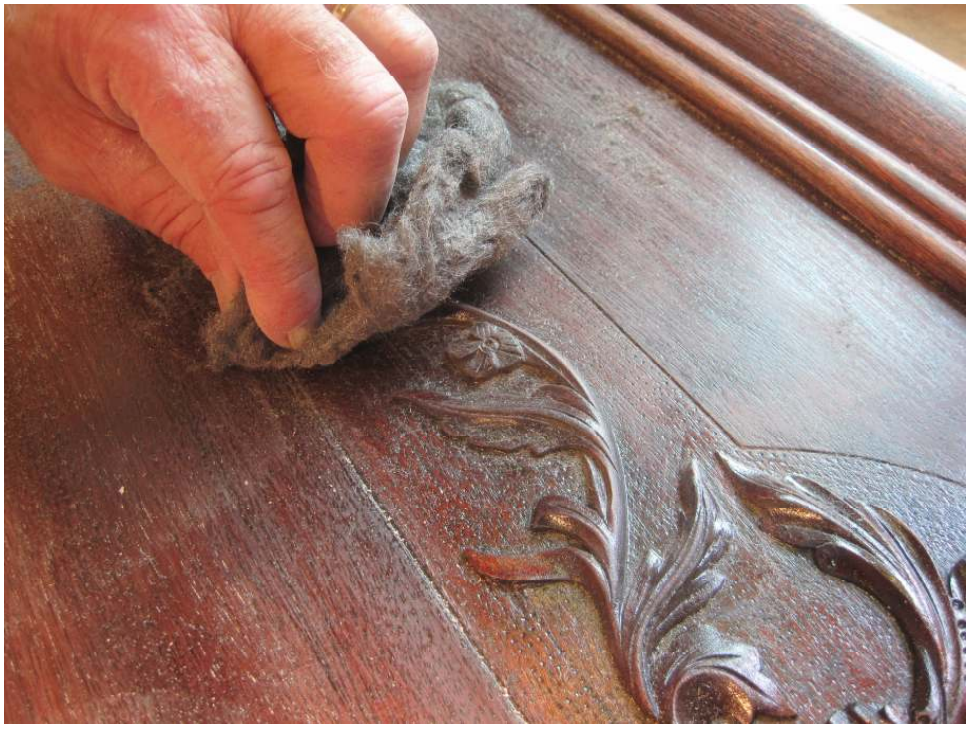

Photo 41: Intricate carvings are buffed with steel wool. The entire case gets 3 coats of finish for beauty and protection.

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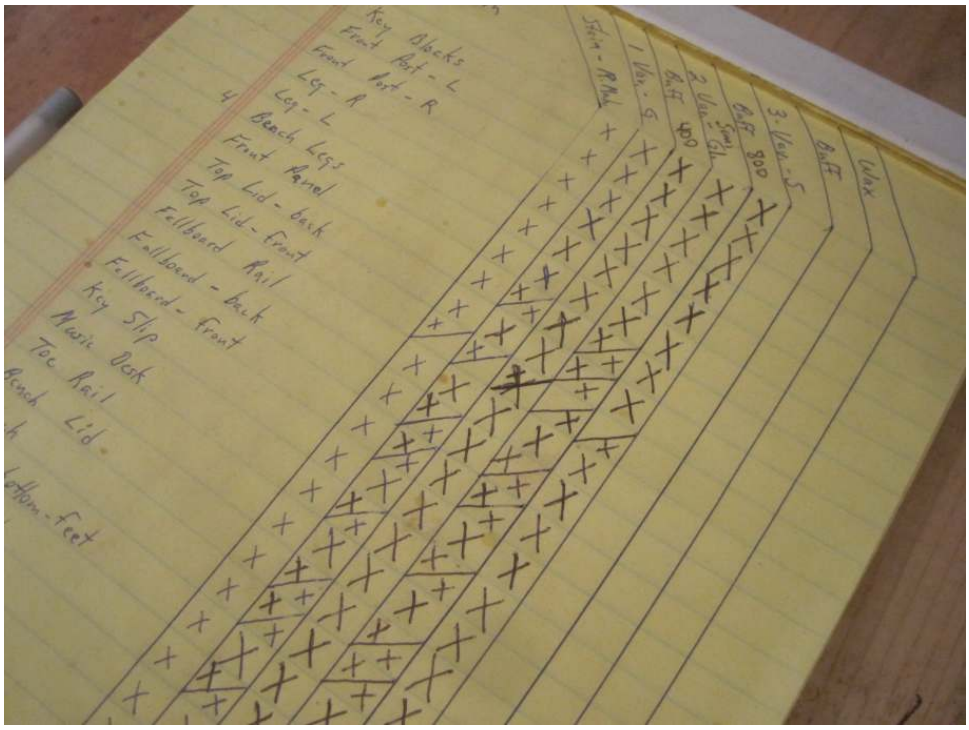

Photo 42: As Dave works on finishing the case parts, he keeps track of what steps have been done on this sheet. With 25 separate case parts, and 8 steps apiece (totaling 200 individual steps), it's easy to lose track of where you're at if you don't keep a list.

Photo 43: During the finishing process, case parts are stored on a piano parts trolley. In this photo, parts which have been buffed following the first coat of varnish await a second coat of varnish.

Photo 44: During times that a finish coat is drying, Dave turns his attention to the keytops. After removing the old ivory tops for safekeeping, Dave runs the keysticks through the table saw to shave off a bit of the wood to allow for the new, thicker tops, and to provide a consistently level surface for the new keytop material.

Photo 45: The keys on the keyframe ready for the installation of new keytops.

Photo 46: Dave applies a coat of contact cement to the keystick. The wooden surface will receive two coats of cement (to allow for absorption), and the keytop itself will be coated once.

Photo 47: The first octave of keytops glued in place.

Photo 48: Dave files the sides of the new tops. The keytop material is slightly oversized, and must be filed flush with the sides of the keysticks.

Photo 49: Close-up of filing work in progress.

Photo 50: The keys on the left have been filed and buffed to give a satin appearance.

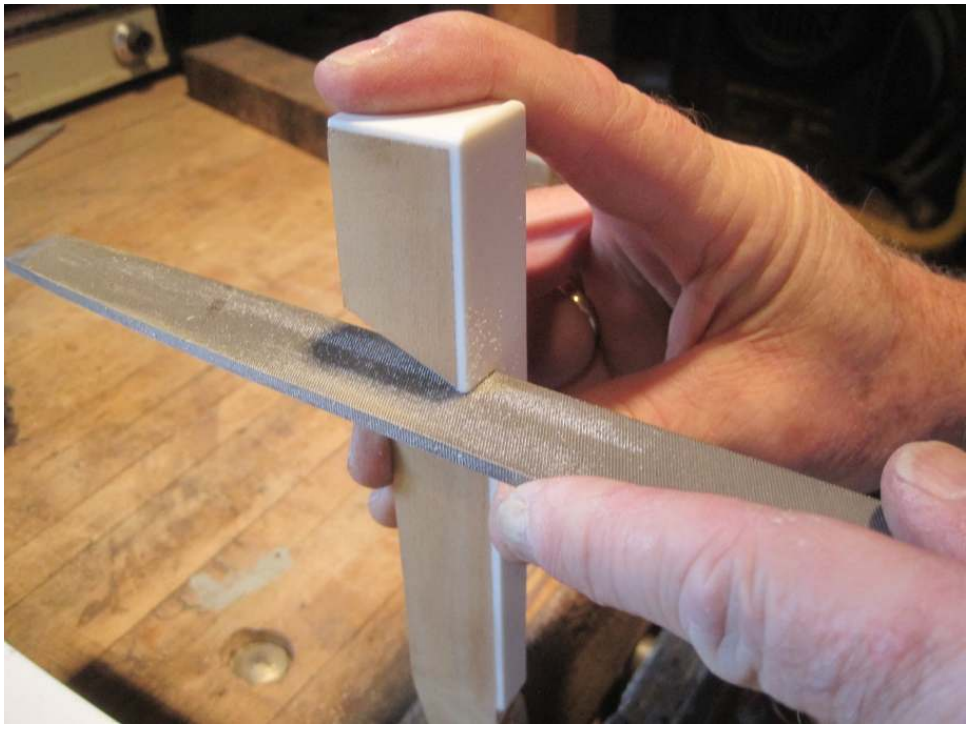

Photo 51: After the sides are filed flush, the notches around the sharps are also filed to remove excess keytop material.

Photo 52: When correctly done, the distance between the notch and the front of the sharps is equal to the width of a dime. .

Photo 53: The entire set of new keytops, installed, filed and buffed.

Photo 54: The original ebony sharp keys are buffed using a buffing wheel and a special ebony polish

Photo 55: With the keys and the sharps prepared, the entire set of keys is put into storage and covered with plastic until the piano is readied for its return.

Photo 56: While Dave works on the keytops and the body of the piano in the big room of the shop, I focus on the piano action in the front room. The new hammers from Schaff are unpacked and are ready to install.

Photo 57: The only original hammers left are ones intentionally left at the end of each section to serve as guides for the new parts.

Photo 58: Before hammer replacement can begin, a few more things must be removed from the action to allow access. The hammer rest rail is first taken off, which accounts for the uneven line of hammer shanks in this photo.

Photo 59: The dampers must also be taken off. Here, the bass dampers have been removed, numbered and stacked up out of the way.

Photo 60: The action is laid on its back on the bench (to make squaring up the hammers easier) and the process begins. The first step is to match the strike line of the new hammers and match with that of the old hammers.

Photo 61: Hammers are glued on with hot animal hide glue.

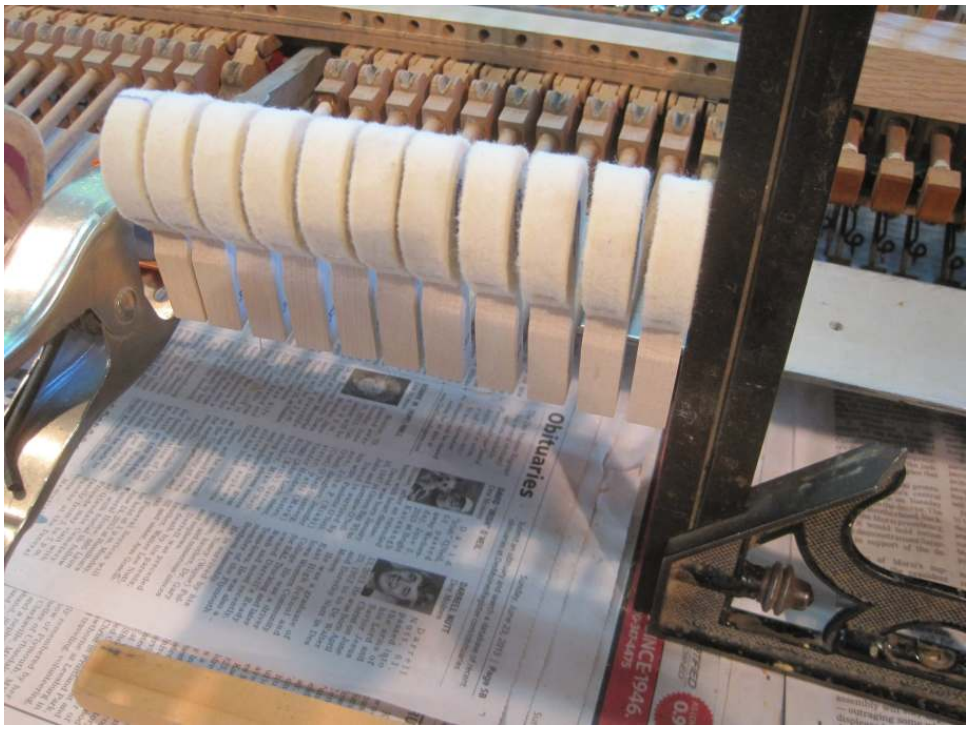

Photo 62: Hammers are squared using the top of the bench for reference.

Photo 63: Using the end hammers of the section for reference, the in between hammers are checked with a straight edge for an even line.

Photo 64: Done correctly, the hammer line should be perfectly straight.

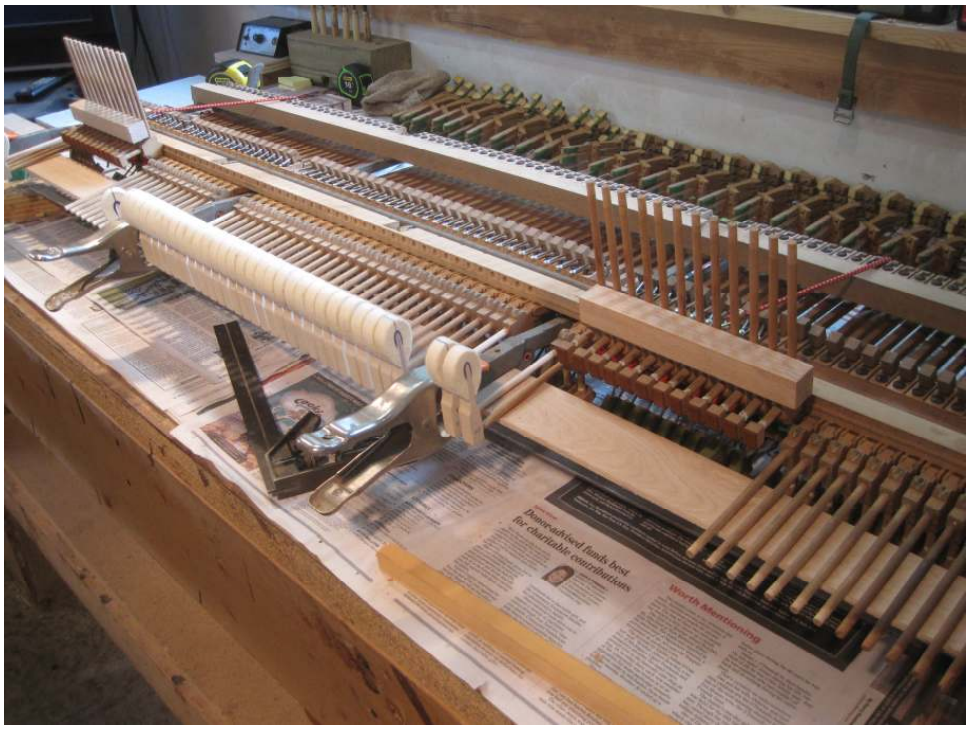

Photo 65: This photo shows the project in process. The middle section of hammers have been completed, and I'm just beginning work on the treble section. The red bungee cords keep the adjacent hammers up and out of the way to make gluing the hammer being worked on easier.

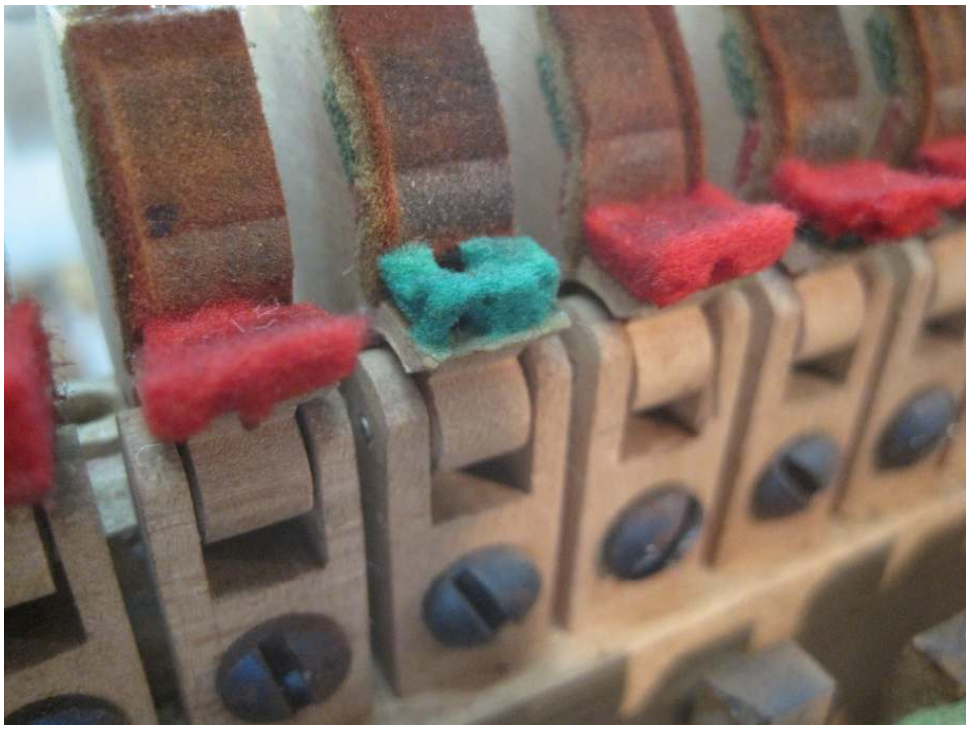

Photo 66: With the action disassembled to this degree, other issues come to light. I noticed that the hammer butt felts were badly worn and moth eaten, and in some places had been replaced.

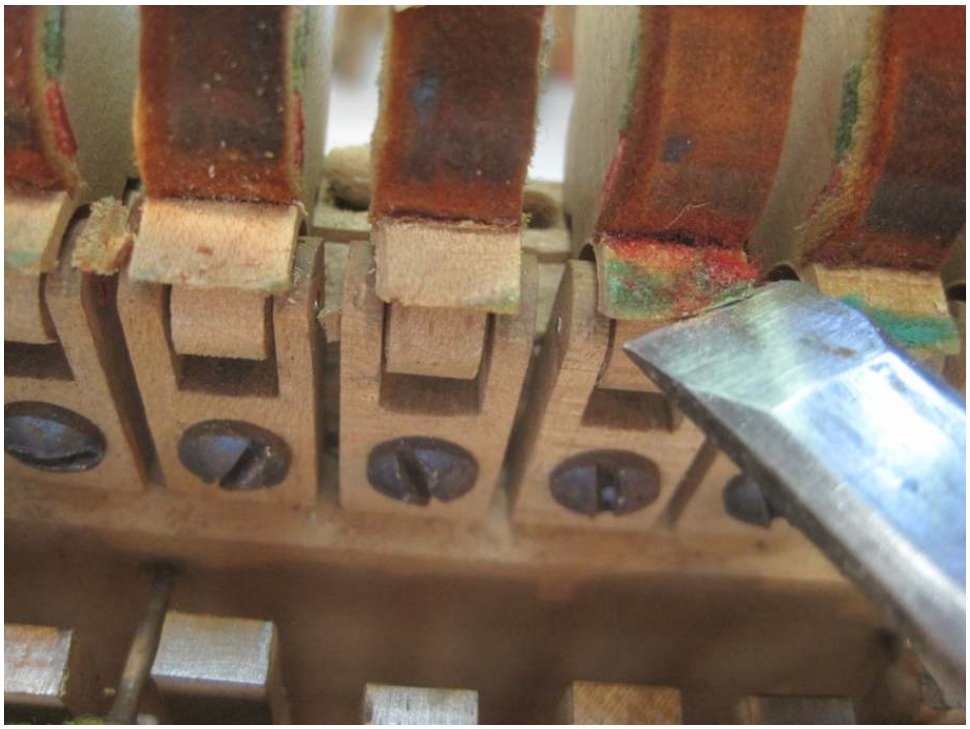

Photo 67: Ordinarily, this is a tricky repair, but with everything apart it's simple. The old felts were first chiseled off.

Photo 68: Cleaning the surface like this would be impossible when the action is all together – this is ordinarily way inside the action and may only be reached with a long set of tweezers or specialized tool.

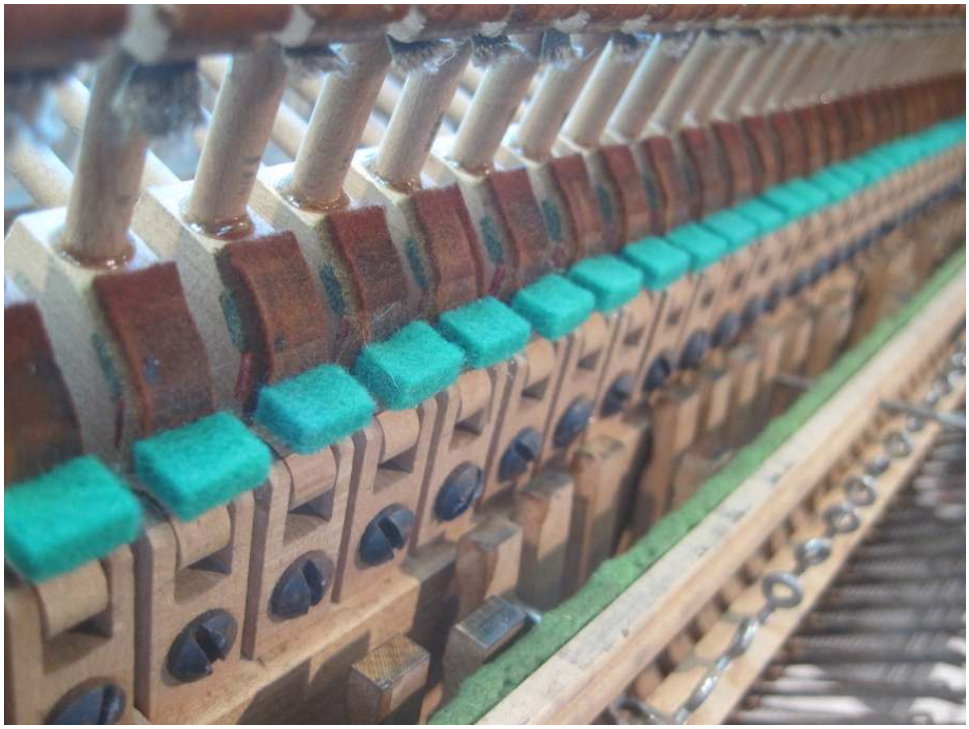

Photo 69: A new set of but felts, looking like they were put on at the factory.

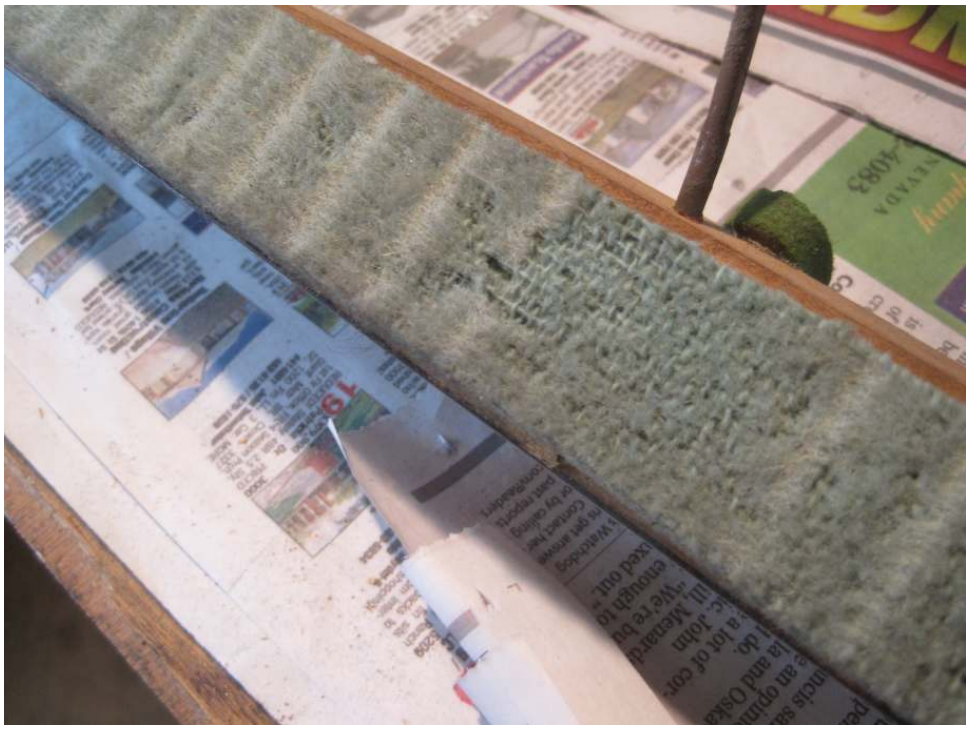

Photo 70: The hammer rest rail felt was also looking a bit threadbare.

Photo 71: New felt installed.

Photo 72: New damper felts are to be installed. The old dampers are removed, but the wooden damper heads and levers are reused.

Photo 73: Damper head with felt scraped off.

Photo 74: The damper levers are returned to the action. The new felts will be glued in place with the action in the piano so that they may be precisely fitted to the strings.

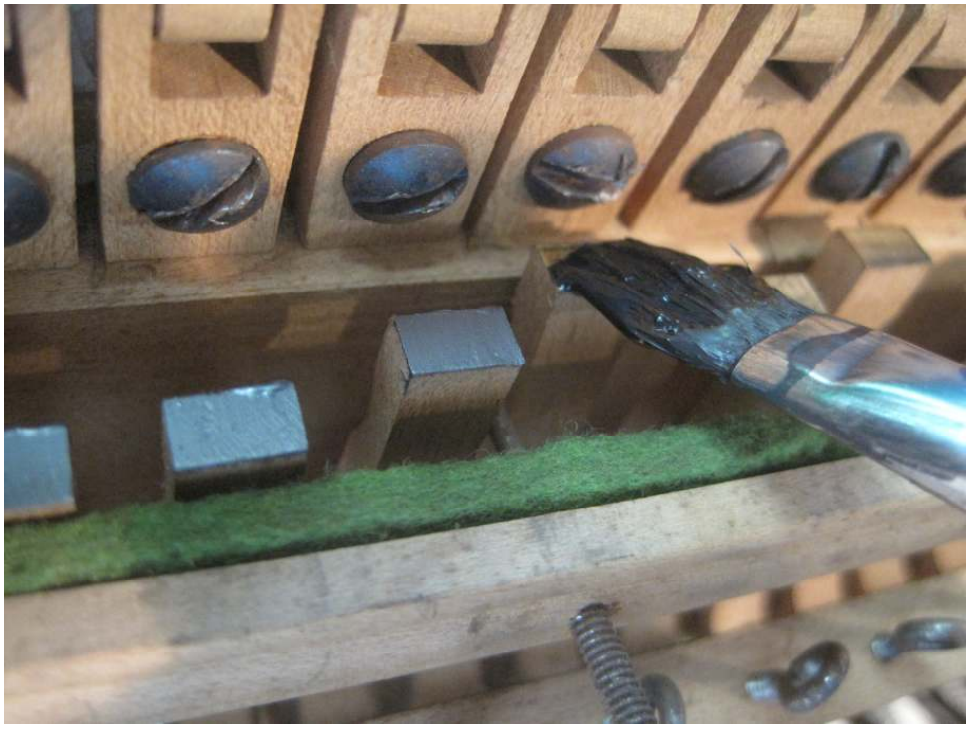

Photo 75: Another important detail is attended to – the tops and heels of the jacks are painted with DAG – a specialized lubricant to make wood to leather contact points more slippery.

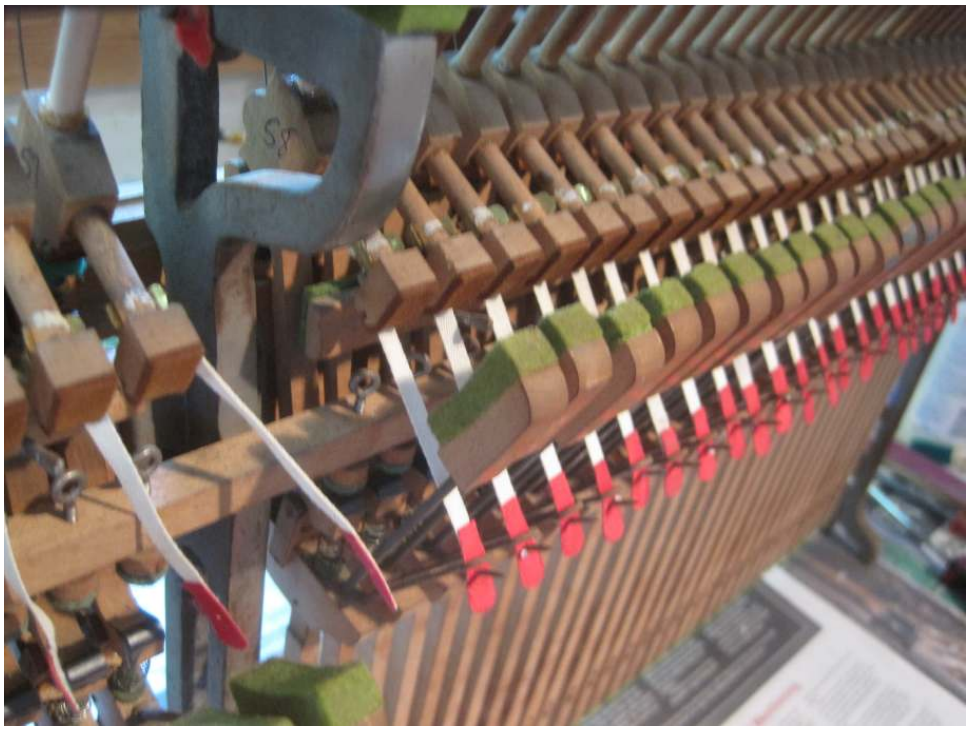

Photo 76: On the front side of the action, new bridle straps are installed.

Photo 77: Except for the dampers, the restoration of the action is complete, and it's ready for reinstallation in the piano, once the piano is ready for it.

Photo 78: Back in the main room, Dave continues work on the case. Here he buffs the 3rd coat of finish on a leg – the beauty of the new finish is starting to show!

Photo 79: While Dave is finishing up work on the case, I turn my attention to the soundboard while Dave finishes up work on the case. The soundboard has been dried, revealing 3 cracks. Here, I use a v-gouge to open up a crack running next to the treble bridge.

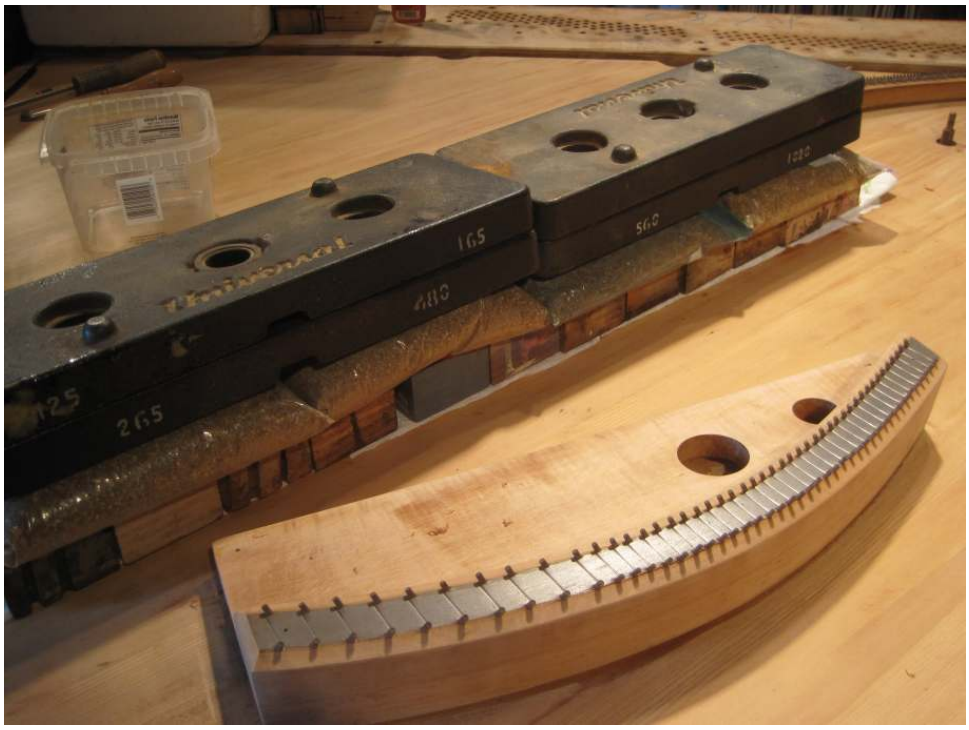

Photo 80: With the cracks opened, shims are glued in place, then clamped overnight with weights.

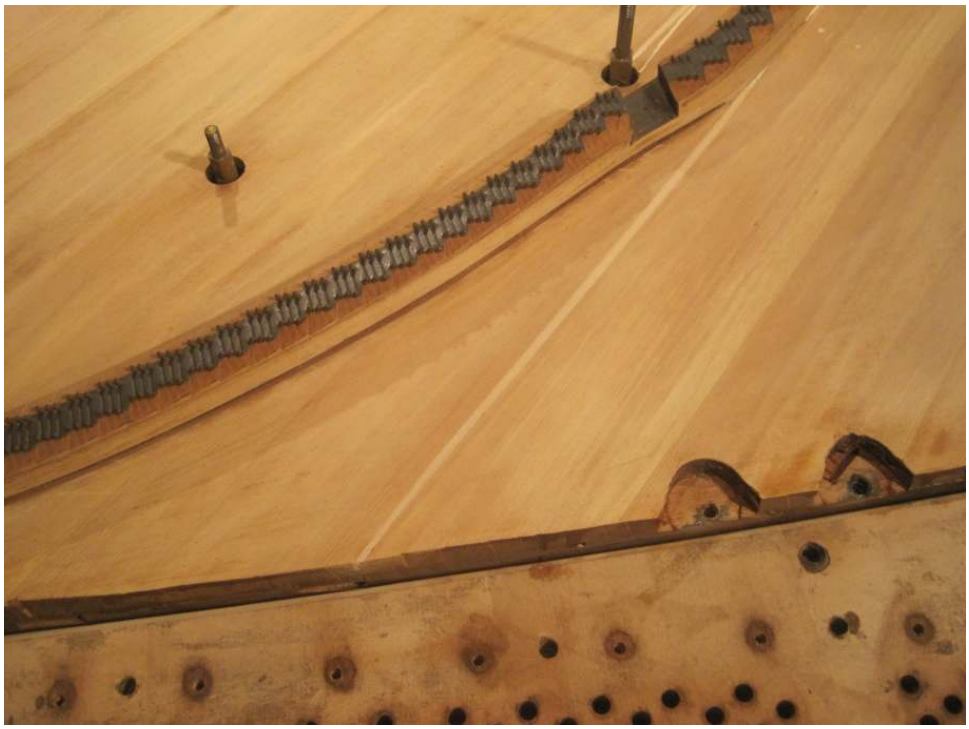

Photo 81: Once the glue has cured overnight, the shims are then sanded down smooth.

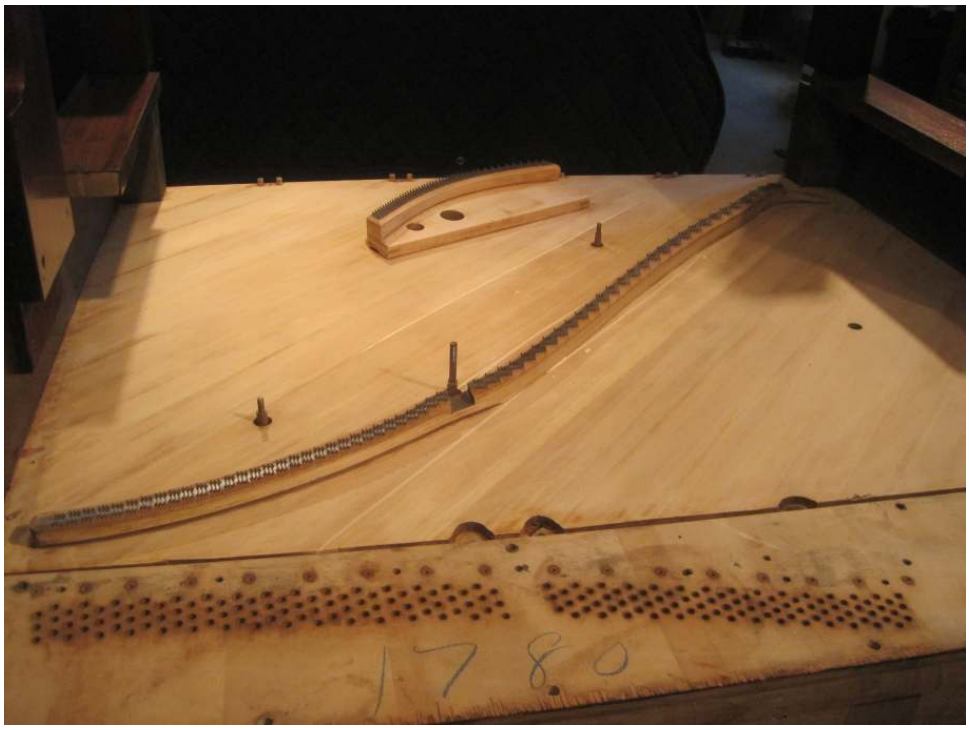

Photo 82: With the shimming done, the soundboard is ready for it's finish coats.

Photo 83: I apply the first coat of shellac.

Photo 84: The finished soundboard. It has a very nice resonance to it – thump it and it vibrates for a long time – a very good sign!

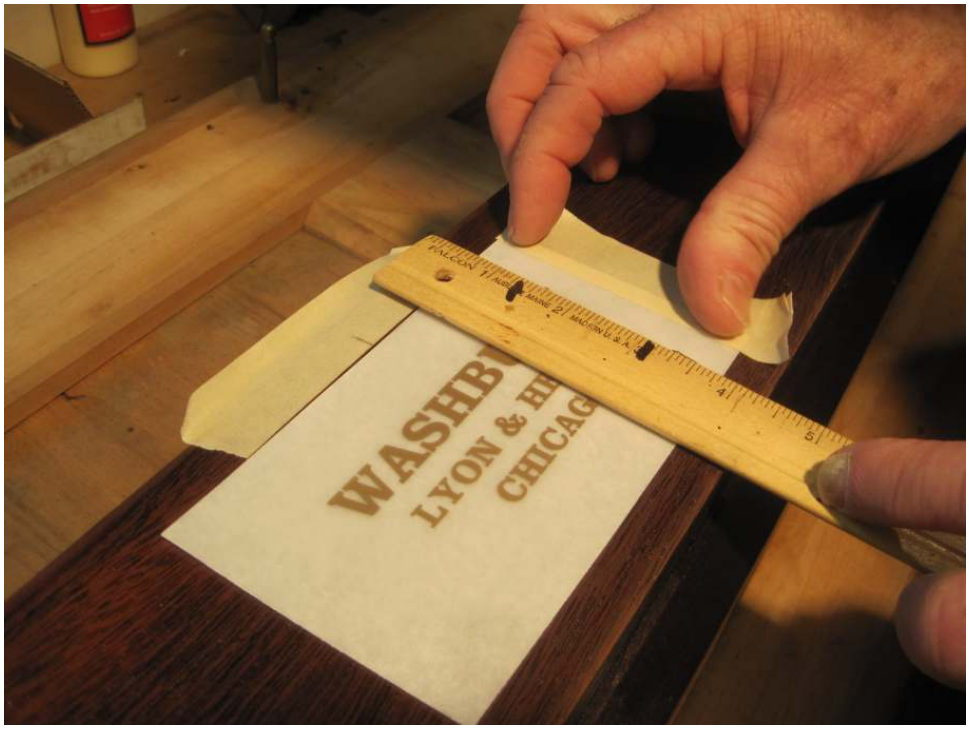

Photo 85: Over on the finishing bench, Dave prepares the new fallboard decal. It's centered on the face of the fallboard from side-to-side, and also up and down. Once he has it centered, the transfer sheet is taped down on the right side.

Photo 86: Dave uses a burnishing tool to transfer the lettering to the surface of the fallboard. This is done in between varnish coats so that the lettering is sandwiched in between layers of finish.

Photo 87: Once all the letters have been burnished onto the wood, Dave carefully peels off the plastic sheet.

Photo 88: The first of several more coats of polyurethane is applied.

Photo 89: A proud name from a great piano-making city.

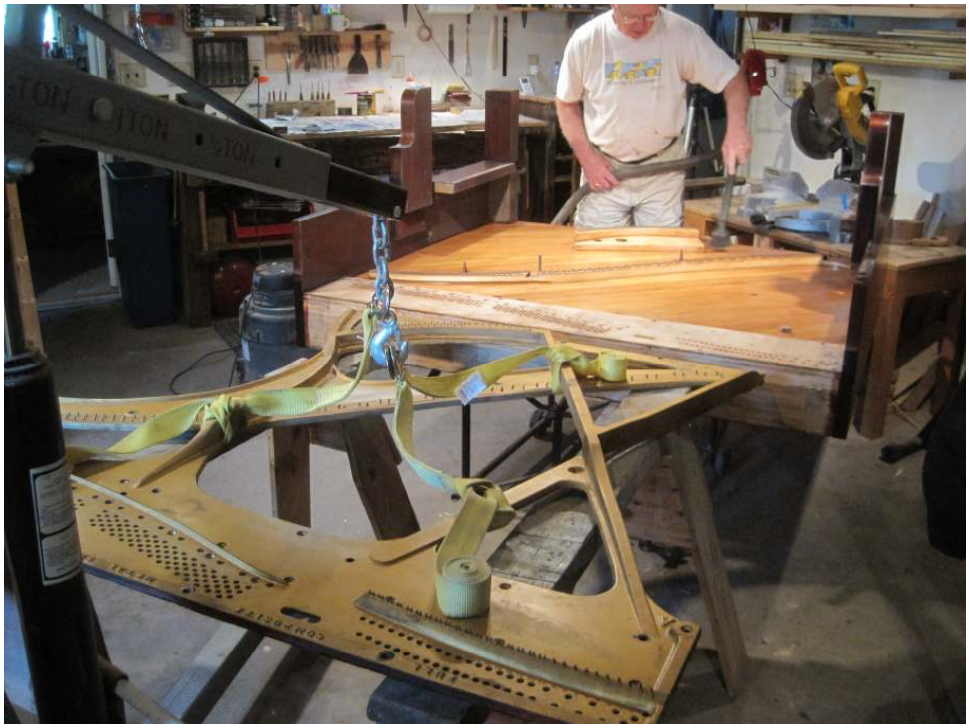

Photo 90: The time has finally arrived to reinstall the cast iron plate. Dave does some final vacuuming while I ready the plate on the hoist. It must be lifted high enough to clear the protruding, but kept low enough to stay under the case parts which jut in on the sides.

Photo 91: The plate is lifted off the sawhorses with bags of sand on one end to balance it and keep it level. The sawhorses will be pulled free, and the piano rolled under the plate. Three bolts must be aligned before it is lowered into place.

Photo 92: A job well done and finishes up the work for the week. It's all downhill from here!

Next up: Dave will finish up the final buffing of the 3rd coat of finish next week, then begin the restringing and repinning of the piano. Once that is done, the case will be reassembled, and the piano will be rolled into my room, where I'll install the action and be doing the regulating and tuning. When that's done, it's a wrap and the piano will be homeward bound!