

Schaff Piano Supply Company Presents:

Duplicating and Replacing the Floating Pinblock

Part 1 - Preliminary Preparation

Belly Work



By Chuck Behm

Duplicating and Replacing the Floating Pinblock*

Part 1 - Preliminary Preparation



-Rationale-

One set of skills that separates the piano repair person from the broader-based piano restorer is the ability to successfully install a new pinblock. Some technicians shy away from this type of work in the belief that it is either too complicated, or that it is unnecessary, given the option of treating pinblocks with CA glue, or other pinblock restoratives. However, the fact is that there is really no comparison between the 'feel' of a new pinblock with an old, treated pinblock, and the reasons for not learning to master this ability just don't add up.

The simple pinblock found in many middle quality grand pianos provides the perfect starting point for learning the skills necessary to replace pinblocks. The straight-forward duplication and replacement process described in this series of articles is meant to help the technician acquire those skills.

* Note: A version of this article first appeared in the July, 2009 issue of the Piano Technicians Journal.

-Basic Procedures-

With a true "floating" pinblock attached only to the plate (and also with pinblocks additionally screwed down to a ledge on either side of the rim of the case but nothing else), duplication and replacement is usually a fairly straightforward process of measurement, cutting, fitting and drilling. Although simple by comparison to mortised pinblocks, there are still certain complexities to the duplication process to be considered



A family heirloom - typical fare for the smaller restoration shop.

In a small shop dealing with family instruments (which are quite often brands that are off the beaten path), the technician sees this type of pinblock on a regular basis. Mortised pinblocks such as one sees in Steinways and other upper-echelon pianos, are not often found in pianos of more modest manufacture. The pianos that come through the doors of the smaller restoration shop, however, are more likely to be a mother's (or grandmother's) instrument, often of a lesser known lineage and lower commercial value, but of great sentimental worth to the customer, and therefore worthy of being given 1st class service.

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To begin a pinblock replacement job the tuning pins, strings and cast iron plate must all be removed from the piano (please review appropriate articles). Before lifting out the plate, remove all the plate screws, including those attaching the plate to the pinblock. When the plate is pulled, the block generally will remain in the piano, as in Photo 2. It may or may not have screws attaching it to ledges on either side of the rim. Occasionally, however, an adhesive or sealer will have been used in between the block and the plate. In such a case, the pinblock will lift out with the plate, and will need to be pried loose before proceeding.



Photo #2: Plate is pulled, exposing the pinblock

With the plate safely stored out of the way, remove the pinblock from the piano. Usually it will be resting on shallow ledges built into the inner side of the rim. If there are wooden spacers between the ledge and the pinblock, label these and store them with the plate screws to reinstall underneath the new pinblock.

Once you have removed the pinblock, measure its thickness to determine what pinblock stock you will need to order, or use from your supply. The most common thicknesses are 1 1/4", 1 3/8" and 1 1/2". If the thickness of the board you are replacing is in between two thicknesses, select the thicker pinblock material. Once the pinblock has been rough cut to size, you may then plane it down to the exact thickness you need.

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One comment on purchasing pinblock material is in order at this point. Whichever type of pinblock you chose to use, and there are several choices available (listed below), buy the narrow width only if this is a one-time job for you. If you intend to replace pinblocks on a regular basis, consider the purchase of a wider stock of material. The hardrock maple pinblock available from Schaff in a 22" width, for example, is one such choice. From that width the technician can cut at least three, and sometimes four pinblocks (See Photo 3, below). In our own shop, we keep a supply of pinblock stock of each of the common thicknesses in a humidity controlled room. When a piano is torn down, then there is no waiting for a pinblock blank to arrive from Schaff.



Photo 3: How to make the most of 22" wide pinblock stock

Current pinblock stock available includes maple pin block material in 3 thicknesses and 2 widths (Cat. No. 563, 562, 564 [9-1/2" widths] and 563D, 562D and 564D [22" widths]). Also available is the Multi-laminated Delignit® beech pin block material in 3 thickness and 3 widths (Cat. No. 490, 493 and 496 [9-1/4" widths], 491, 494 and 497 [18-1/2" widths] and 492, 495 and 498 [47-1/4" widths]). Also available is an all-new, premium 5-ply pin block material in either rifted or quarter sawn maple (Cat. No. RM5 and QM5).

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One other note – when you cut a pinblock from a wider piece of stock, leave the edge of the remaining material as it is – don't trim it square. That way, when you cut out your next pinblock, you can take advantage of the fact that one end is always wider than the other, and alternate the end that you're cutting the wide side from.

With the correct thickness selected, the next step is to prepare a paper pattern for marking your cut line on the new pinblock material. (Note – If you draw your pencil line directly on your new pinblock, then cut it, you'll find the slant goes the wrong way!)



Photo #4: Marking the line

Using contractor's or butcher's paper, draw a pattern of the pinblock to be duplicated. Place the top of the pinblock (the wider side) down upon the paper with the straight edge flush with the edge of the paper and run a sharpened #2 pencil along the curved edge (Photo 4).

To avoid confusion, two terms need to be clarified. The 'top' of the pinblock refers to the wider face which is up when the plate is upside down on sawhorses for fitting the pinblock. The 'bottom' of the pinblock is therefore the face which is against the plate. (Obviously, when the plate is flipped back over for reinstallation into the piano, what was the top of the pinblock is now on the bottom, but at that point you are finished working on it.)

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Also, when the curved edge of the block is mentioned, the reference is to the long side of the pinblock which butts up against the flange on the underside of the cast iron plate. The straight edge of the pinblock is the long side closest to the keyboard and away from the flange.

Cut your pattern out, and turning it over, mark the side that was down on the surface of your workbench as Top (Photo 5). If you turn the pinblock back over, with the top facing up, and place the paper pattern on the pinblock so that it fits, what was underneath when the line was drawn will now be on top. This sounds trivial, but if you don't label it as such, at some point down the road you'll mark and cut a pinblock backwards, ending up with an expensive piece of scrap wood.



Photo #5: Always use labels to avoid confusion

Affix the pattern to the pinblock stock (with the top side of the pattern up), and draw a pencil line on the face of the pinblock. If you're cutting from a narrow width of stock, lay the pattern out on the pinblock stock with the straight side flush against the side of the new pinblock material. Secure the pattern to the blank pinblock with tape or tacks, and trace a heavy pencil line onto the wood, following the curved edge of the pattern. With this done, you're ready to cut the duplicate block out on the band saw.

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If you are cutting a pinblock from a new 22" wide piece of pinblock material, I would recommend doing the cutting in two stages. The first cut will get the material down to a manageable size, and the second will finish the job. Draw the line onto the wood using the paper pattern, but instead of having the straight edge flush with the edge of the pinblock material, measure over 1/2" and tape the pattern down from that point. With the line drawn, remove the pattern for the time being, then cut the pinblock using a saber saw (Photo 6).



Photo #6: Cutting out a slightly oversized pinblock

To cut pinblock material, even if it's only 1 1/4" thick, requires a good quality saber saw and a sharp blade. The heavy-duty Milwaukee [®] saw in the photo above is up to the task, but I also have several cheaper models that balk at the job. Think of upgrading tools at this point if you have an inexpensive, low-powered model of saw.

By completing this step, you will have cut the weight of the material that you're working with from approximately 50 pounds down to 15 pounds or so. This will make the cutting of the exact shape of the pinblock much more manageable on the band saw.

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Once the first cut has been done, tape or tack the pattern to the pinblock – this time with the straight edge flush to the side of the pinblock (Photo 7).



Photo #7: Tacks insure the pattern will not shift.

Now, retrace the outline of the pinblock in from the first cut 1/2" (Photo 8).



Photo #8: Marking the edge as precisely as possible

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Follow the edge of the pattern as closely as possible. Draw a heavy enough line so that it's clearly visible during the sawing operation. As you draw, it works best if you stay slightly ahead of your pencil with the thumb of your opposite hand on the paper (Photo 8, previous page), to keep the paper pattern from shifting in its position. This narrow rim of wood, by the way, will be the only scrap produced in the procedure.

Once the line has been drawn remove the pattern. At this point your pinblock is ready to cut on the band saw (Photo 9).

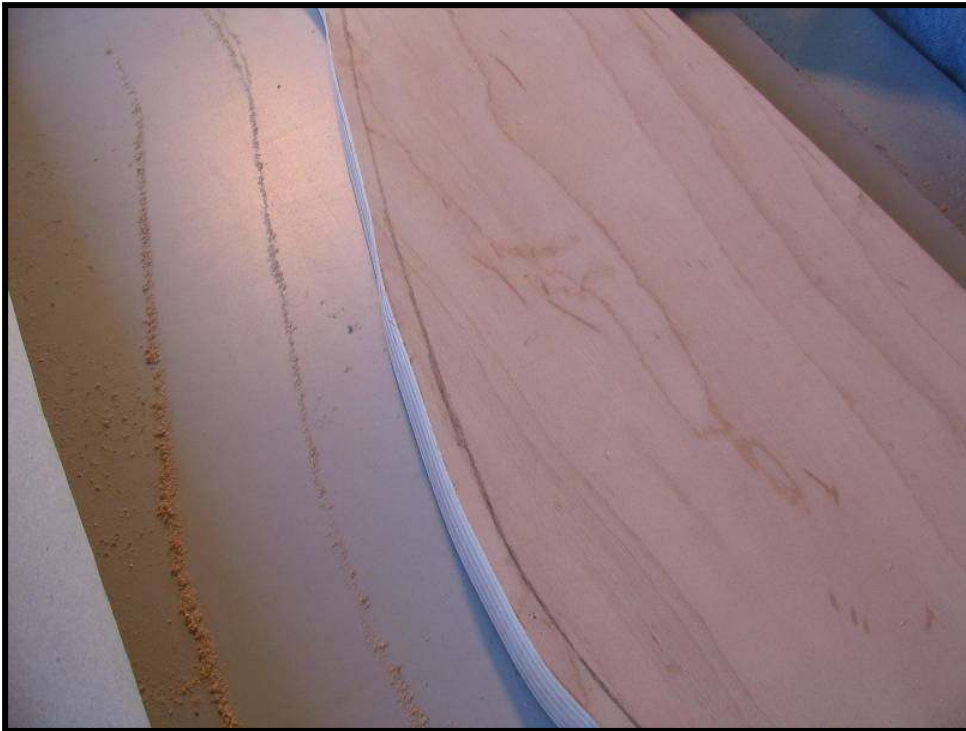
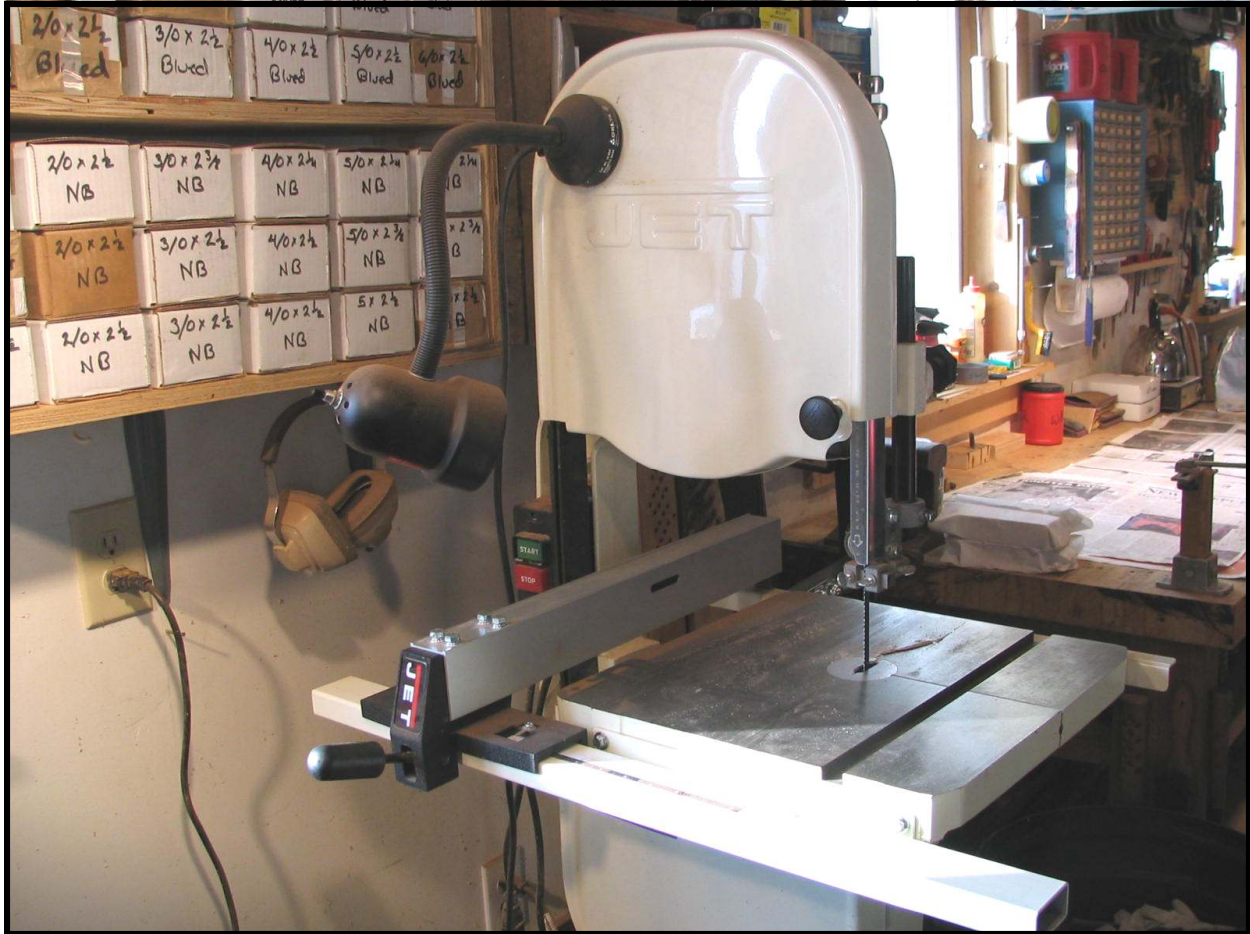


Photo #9: Ready for final cutting on the band saw

Next up – setting up your saw for operation and making the cut. Follow this series of articles* to its conclusion to learn the "tricks of the trade" involved with duplicating and replacing the "floating" and other simple-type grand pinblocks.

* Note: This series first appeared in the July - December, 2009 issues of the *Piano Technicians Journal*.

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Thoughts on Tooling Up

In order to be able to do a job in a professional manner, one must at times invest in his business. To try to accomplish advanced repairs with inadequate tools will lead to frustration, and a poorly done job.

Pinblock replacement is the type of procedure that does require tools. A good quality band saw, drill press, thickness planer and grinding equipment are necessary. Add to that a hoist to lift the cast iron plate out of the piano, vises to hold the pinblock while it is being fitted, and all the small tools needed for repinning and restringing the piano once the new pinblock has been successfully installed in the piano and it's clear that a sizeable investment is required.

The opposite side of the coin is the fact that once tooled up, income from the ability to perform this type of work correctly will hopefully be ongoing long after the tools are paid off. At some point, every shop owner must simply muster the courage to purchase what he needs to do the job right. Knowing one is well-equipped to do quality work will give one the confidence to tackle the big jobs.

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Supplies:

For your convenience, the supplies necessary to complete this procedure are listed with corresponding catalog numbers.

Maple pin block material

9-1/2" widths.....(Cat. No. 563, 562, 564)

22" widths.....(Cat. No. 563D, 562D and 564D)

Multi-laminated Delignit® beech pin block material

9-1/4" widths.....(Cat. No. 490, 493 and 496)

18-1/2" widths.....(Cat. No. 491, 494 and 497)

47-1/4" widths.....(Cat. No. 492, 495 and 498)

5-ply pin block material in either rifted or quarter sawn maple

(Cat. No. RM5 and QM5)

Important note: Ordering information is given
for the use of Schaff account holders only.

**To order, call Schaff Piano Supply at 1-800-747-4266,
or go on-line at <http://www.schaffpiano.com/>**

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Notes on Procedures