

# Small Shop - Big Results



## Installing Pinblock Panels in an Upright Piano – part 1

By Chuck Behm  
Central Iowa Chapter

Ordinarily, I am not a rash person. Installing new pinblock panels (Photo 1) in an upright piano is not a repair I would even consider advising unless a list of several vital criteria were met. That being said, in certain cases, I believe it is the repair of choice.



*Photo 1: A 123-year-Ludwig upright with new pinblock panels installed*

What criteria need to be met? First, the instrument needs to be a piano of value, either commercially (a top name brand), or sentimentally (grandma's pride and joy). If someone picks up a no name instrument at a garage sale because it was being sold for \$25, I'm not going to talk restoration unless the customer brings it up first. The issue of sentimentality, however, actually comes into play quite often with our customers. We don't see a lot of vintage Steinways or Mason and Hamlin's in our area of the Midwest, but we do see a lot of pianos that have been handed down from one generation to the next. I personally enjoy this type of job the most, because the instrument means so much to the owner.

The second criteria which I look for is that other options have been exhausted. If the piano in question has previously been treated with pin-tightener, as evidenced by a gummy black residue on the webbing of the plate around the pins, and /or if oversize pins have already been used and the pins are still loose, a new pinblock would certainly benefit the tuning stability of the piano. If the original size 2 pins are all in place, however, and no one has mucked up the works with a pin tightener, I would recommend a set of larger pins be installed or at the very least a treatment of CA glue.

The third and final criteria which I insist on, is a clear, written agreement of sharing the responsibility of risk. I explain clearly that this particular job involves a calculated risk, in that one must take the 18 tons or so of tension off of the strings, so that the cast iron plate may be removed from the piano. The problem, of course, is that when the piano is reassembled, and the tension added back on, that the century old plate could fail. If this were to happen, and it never has in my shop (I'm knocking on wood as I type this), the owner would not receive any compensation from our shop for the value of the piano. **They** would be in fact responsible for payment of materials purchased or used. **We** would take a hit on the labor costs. Shared responsibility, you see. If the customer wanted to keep the piano as a non-playing piece of furniture, I would charge them for the cosmetic work done (keytops, refinishing, etc.) but for nothing that was done inside.

All this being said, what steps does a shop owner need to follow in order to install new pinblock panels in an upright, if the job were to present itself?

First of all, I must refer readers to previous information written on the topic. Arthur A. Reblitz, in his invaluable book *PIANO SERVICING, TUNING AND REBUILDING* (second edition) has a section covering the procedure (page 273-274 of my copy). If you don't yet have this book in your library, buy it! One comment that Mr. Reblitz made in particular, I wish to repeat and stress to anyone considering this repair. "Routing out an old pinblock is one of the most dangerous procedures in piano rebuilding. Careless handling of a router can cause serious bodily damage or damage to the piano. Fingers and other body parts allowed to come into contact with a spinning router blade will sustain instant irreparable damage! If you don't have the expertise to handle a router safely, hire a professional to do this job for you." It would be a really bad idea for anyone to go out and buy their very first router and try it on this procedure without plenty of practice handling the tool beforehand.

In the September, 1982 issue of the Journal, the Technical Editor of the time, Jack Krefting, presented a thorough look at the process. This, and the entire series about vertical rebuilding that comes before and after this particular article, is still very good reading and give many tips which are useful. The one thing described in 1982 article that we haven't done in our shop is to break the sides loose from the back of the piano. I haven't worked up the courage to try this yet, but eventually, I'm sure I will eventually.

Now, to the work at hand. It is necessary to prepare the piano by disassembly of the case. Having removed the action and the keys from the piano, you next need to take the tension off the strings (see my previous article, "Removing the Cast Iron Plate") and remove the bass, followed by the treble strings. Bundle up the bass strings to send them to the string factory. Mike and I recycle the treble strings. Back the tuning pins out with an electric drill (Photo 2) and toss them in the recycling barrel.



*Photo 2: Backing out pins*

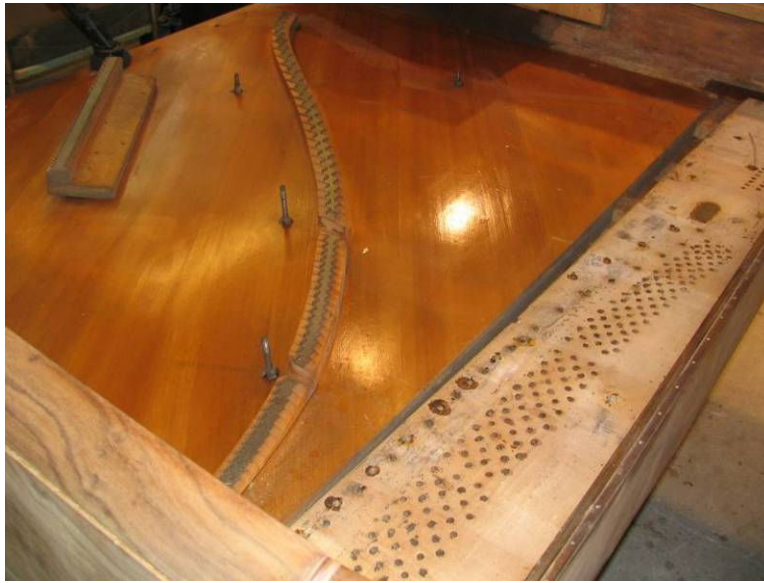
Next, tilt the piano on its back with a piano tilter. The keybed itself must be removed and put aside, along with the bottom board and pedals. I usually try to take off the arms as well to gain more clearance around the cast iron plate. Remove the 3 or 4 screws from the arms and give it several good whacks with a large rubber mallet. If the arms come off easily, it will make your job removing the plate from the piano that much easier. If the arms don't come off easily, I don't press the issue, fearing to damage the veneer of the arms and/or the sides of the piano.

Before removing the plate, time must be spent to insure that everything will go back together once the pinblock project is done. Plate screws and bolts should be removed and stored in a plywood or cardboard holder. Again, refer to "Removing the Cast Iron Plate," in which I covered this topic in detail.

Additionally, any measurements which need to be preserved on reassembly should be noted in a notebook or photographed. Time spent at this stage will save headaches later on. When possible, I like to take pictures showing important measurements, so there is no question as to what the measurement belongs to. I keep a photo file on my computer for each piano, and load the appropriate pictures from the memory card of the camera to the computer for later retrieval.

At this point, the cast iron plate is ready to be removed. Although a hoist may be used, there is will most likely be insufficient clearance to lift the plate straight up, unless the sides and arms of the piano have been removed as Jack Krefting outlined. I'm embarrassed to say that in our shop, Dave, my co-worker and I, usually lift out the plates by ourselves. This goes against my own advise in "Removing the Cast Iron Plate," in that with only two people, if one trips or his fingers slip, the plate is going down to the floor. At any rate, when we lift the plate out we lift straight up to just enough to clear the nose bolts, then walk it carefully towards the top of the piano (with each of us on either side, and the piano on its back in the tilter). Once we've cleared the top of the piano, we carefully set the bottom of the plate on the floor, and then tilt it upright. In the upright position the plate can be slid around and stored against a wall. Better yet, sandwich the plate between two uprights which are back to back. Just don't forget it's there when you are rearranging the shop and decide to move one of the two uprights. Oops.

With the cast iron plate out of the way, the pinblock, soundboard and bridges are exposed. The soundboard may be repaired and refinished (this would need to be the subject of a separate article), and bridges replaced or repaired. Before going any further with repair of the pinblock, it should be examined carefully for structural integrity. Is it glued securely to the back posts? If everything about the pinblock seems solidly in place (Photo 3), one is ready to start.



*Photo 3: No turning back now*

To replace the bad pinblock material with new, there are really three courses of action. First, one could drill out the pinholes with an oversize drill and glue in pinblock plugs. I have a tray full of plugs that my dad bought from another shop years ago and occasionally I will plug and individual pin or several pins on a piano. In the procedure I will be describing, in fact, I use plugs on several of the lowest bass pins. I'm aware that some shops do this to entire pianos as a matter of course, but it makes little sense to me. When you drill the plug for your new tuning pin, what you end up with is merely a cylinder of good wood surrounding your pin. Although it can be done without removing the plate from the piano, I wouldn't recommend it myself to a customer if they were considering a major restoration job.

The other extreme is to replace the entire pinblock. Refer to page 273 of the second edition of Reblitz's *PIANO SERVICING, TUNING AND REBUILDING* for an explanation of the process. I haven't done this procedure so I can't address its advantages with any authority other than to say that it seems like an unnecessary use of a lot of pinblock material. If there is a technician out there who thinks this is a better fix, I would invite them to write about the advantages to it in detail. I could be all wrong on the issue.

To me, replacing just the areas where the pins are actually driven into the block seems like a reasonable middle course of action. The pins have as much good wood around them as they would with an entirely new block. The old block provides a sturdy platform for the panels to be glued in place. Additionally, not a lot of expensive pinplank material is used in the process.

In next month's installment, I'll explain how to router out the area in which the new panels will go. With the right tools and methods, it's not as hard of a procedure as you might imagine. We will also go into the fitting and drilling of the new pinblock material. Until next month then, keep up the good work. Stop by to visit anytime.

**Chuck Behm**  
**River City Piano Restorations**  
**410 Monona Street**  
**Boone, Iowa 50036**  
**behmpiano@gmail.com**

