

Schaff Piano Supply Company Presents:

Repinning and Restringing the Upright Piano

Part 1 - Initial Set-Up

Belly Work



By Chuck Behm

Repinning and Restringing the Upright Piano

Part 1 - Initial Set-Up



-Rationale-

When beginning an extensive repair job such as the complete repinning and restringing of an upright, it is important to have all the tools and supplies needed close at hand, so that the repair work may be done efficiently and professionally. To do so, of course, it's necessary to understand exactly what tools and supplies come into play during the course of the project. These directions are written to give you an inside look at the procedures involved, so that you will be able to tackle your first repinning / restringing job prepared for the challenges involved.

As with many complicated projects, preparation is the key to success. Knowing the techniques involved, having the needed tools and supplies on hand, and having ready access to sources of information are all vital steps to success.

Note: Photos of two separate pianos are featured in this article. One piano was simply repinned with oversized pins and new strings. The other required a new pinblock to be installed before the repinning and restringing could be done.

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Before you begin . . .

As far as the technician is concerned, repinning / restringing is a procedure that anyone "worth his salt" should be able to do. It is not a day in, day out type of job for most technicians (that I know, at least), but it is a procedure that is well worth being able to perform by any technician having a clientele of customers who own a variety of types of instruments.

In my own business, as an example, I service a sizeable number of older upright pianos. Many of these instruments have pin torque that could be improved upon, and many of them have symptoms of brittle strings. On an average I repin and restring two or three pianos a year, mostly in the winter months when the air is dry, and pinblocks are particularly loose. When I undertake such a job, it means three solid days of work, for which I charge accordingly.

That being said, a repinning / restringing job is not something someone should jump into without due consideration. It is time-consuming for the technician, and expensive for the owner of the piano. It is worth the time to sit down with your customer, and point out both the pros and the cons of having such an procedure done. At that point, if the customer wishes to proceed, the work may be done with a clear conscious.

PROS

- * If the piano is high in value either from a commercial or sentimental standpoint, repairs such as repinning, restringing, hammer replacement, etc. make sense and should be recommended when needed. Repinning in particular usually gives a high return in terms of tuning stability for the investment made. Restringing eliminates problems associated with brittle stings (knots in strings, missing strings, strings replaced with new wire), and also adds to the tonal quality of the piano, especially in the case of an older instrument with a 'tubby' bass.
- Done correctly, a repinning / restringing job should last for a long enough time that you can assure the customer that it will not have to be repeated in their lifetime. It is similar in that respect to repair jobs such as replacing a set of bridle straps, putting in a new set of hammer butt springs, etc. Those types of repairs, once done, are going to be sufficient for so long into the future that it's reasonable to say that it's a permanent fix, at least as far as the present-day owner is concerned .

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CONS

- * For an off-brand upright piano, the cost of the repairs would more than likely exceed any commercial value that the piano would have once the job is done. If the customer asks whether they would be able to get the same dollar amount out of the piano, were they to sell, as what they have invested, the answer would most likely be "no." In such a case the personal sentimental value of the instrument must play a large factor. If the piano is a "garage sale" instrument, with no history to the family, I would recommend passing on such extended repairs, unless there is something about the piano (such as the styling of the case) that the owner has absolutely fallen in love with. Even in that scenario, I would advise the customer to look around to see what other pianos would be available for the amount of investment being talked about.

- * While a repinning / restring ordinarily solves the problem of loose pins and normally makes a positive improvement in the tone of the piano, other factors may be involved which negate any such gains. Pinblock problems such as laminations which are coming apart, splits that are developing between rows of pins, previous treatment with pin-tightening formulations, etc. may reduce the effectiveness of installing new pins. Sometimes these problems are visible so that the customer may be forewarned, sometimes they are not, and may only be ascertained by the symptoms observed.
Likewise with poor tonal quality - the condition of the strings is only one factor involved. If a poor quality soundboard or worn-out hammers are also an issue, simply installing a new set of strings is not going to magically cure all that ails the piano.

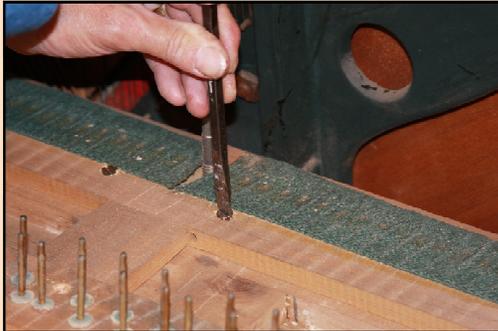
Understand please that I am not at all against the investing of time (on my part) and money (on the part of the customer) in a vintage instrument. Anyone who reads my series in the Piano Technician Journal (*Small Shop, Big Results*) should realize that I come down firmly on the side of saving old pianos whenever possible. I love vintage pianos, and I love the restoration process.

That being said, I also firmly believe in being honest with the customer. If the commercial value of an instrument is an important concern to the owner of the piano, I am not going to mislead them into thinking that a restored, no-name instrument is going to be of any great value. Once that is clearly understood, if the customer wishes to proceed, I do the best work I possibly can to make their piano a beautiful instrument which will be treasured for years to come.

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Step 1: Before a repinning / restringing job is begun in earnest, a substantial tear-down of the piano is in order. Remove enough of the case parts to allow easy access to the strings and the pins. In addition, remove the keys (and possibly the keyframe) to make the work more convenient yet. (For a description of this last procedure, refer to the Schaff article *"Removing Keys and Keyframe from the Upright Piano,"* available now for download from your Schaff eStore.)



Step 2: Putting the piano on its back by using the [shop repair truck \(Cat. No. 1901\)](#) will make the entire job much easier. Instead of standing up the entire time, you'll be able to do a good share of the work sitting down. (For a description of the safe use of this truck, refer to the article *"Use of the Modern Shop Repair Truck,"* available soon for download from your Schaff eStore.)



Step 3: At this time, removal of the old pins and strings will be necessary. A new set of tuning pins will be needed shortly. The bass strings will need to be sent off for duplication, while the treble strings will be replaced on site. (For a complete description of these procedures, refer to the article, *"Removing Bass Strings for Duplication,"* and the companion article *"Removing and Miking Treble Strings for Replacement,"* both available now for download from your Schaff eStore.)

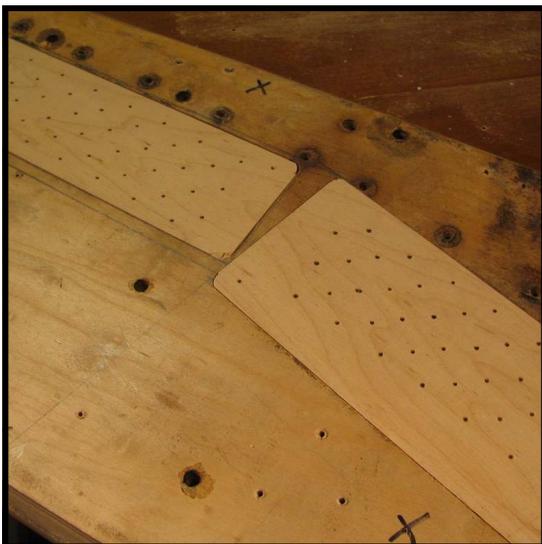
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Step 4a: If you are undertaking this job for the first time, you will need to order a [set of tuning pins](#). If replacing factory pins with oversize pins, generally you will need to order either size 3/0 (.286" diameter) or 4/0 (.291" diameter). Also, you will need to select either [blued](#), or [nickel plated with blued threads](#). For vintage pianos, my preference is blued, but that's up to your individual taste.



Step 4b: Also, for each diameter of tuning pin, 3 lengths are available (2-1/4", 2-3/8" and 2-1/2"). A more precise tool for such measurements (than what's shown here) would be a [6" tempered steel rule \(Cat. No. 3197\)](#).



Step 4c: If you are installing a new pinblock or pinblock panels (as shown in photo to left), order size [2/0 X 2 3/8"](#) or [2/0 X 2 1/2"](#) pins, according to the thickness of the pinblock installed. Size 2 pins are generally the diameter pins that factories install. Thus, your newly repinned piano will be done according to factory specs. (For a complete description of this procedure, refer to the Schaff article ["Installing Pinblock Panels in an Upright."](#) available soon for download from your Schaff eStore.)

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BUSINESS BUILDING TIP

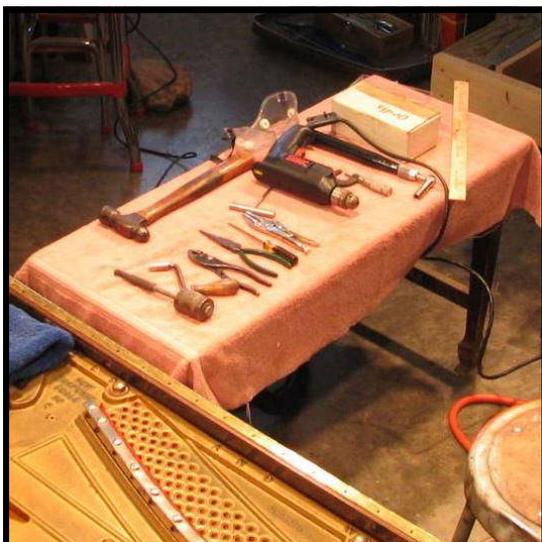
If you have an existing inventory of tuning pins in stock, select the correct size accordingly. Then, reorder the size used to keep your inventory complete. The advantage to maintaining a well-stocked shop is that you never have to wait to receive needed supplies. You're good to go, and just need to restock what's been used. *(To build inventory over time consider ordering 2 sets of pins for every set used - a painless way to grow your business over time.)*



Step 5a : Before beginning the repinning project, drape towels over the areas adjacent to the section being worked on. Spread out needed tools on the towels for easy access. Tools shown include:

- Tuning lever.....(Cat. No. 21)
- Pin punch.....(Cat. No. 174A)
- String hook.....(Cat. No. 135S)
- Needle nose pliers.....(Cat. No. 239)
- Impact Coil Tightener.....(Cat. No. 3101)
- Tuning pin crank.....(Cat. No. 109)
- Starrett wire cutters.....(Cat. No. 225A)

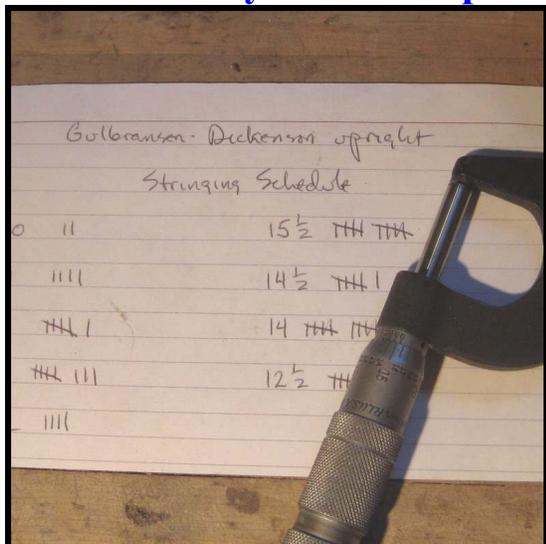
(Other tools to be mentioned as well.)



Step 5b: An alternate method of setting up for work is to pull up a spare piano bench and cover with a towel. If you will be repinning an old pinblock, you will need electrical service for your drill.

To work efficiently, always set each tool back in the same spot from which it came. After awhile, you'll be able to reach for each tool as needed without looking for it.

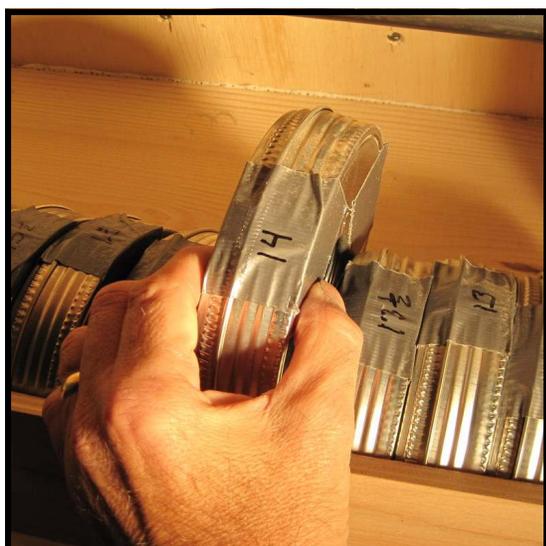
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Step 6: Upon removing the old treble string, you should have recorded the stringing schedule. At this time you will need to retrieve that information, as you will be referring to it shortly.



Step 7a: Piano wire is available from Schaff in coils of a variety of sizes. The most convenient and easy are the 1/3 lb. reels with brake, available for sizes 12 (.029") to size 22 (.049"). To avoid delays while in the middle of a restringing job, it is a good idea to stock a spare reel of each gauge, so that when one reel runs out, another is available immediately. Reorder spent reels to keep your supply updated.

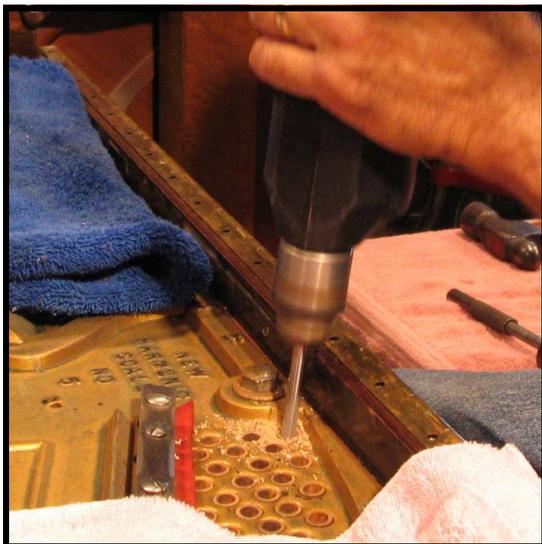


Step 7b: Wire also is available in 1/2 lb. and 1 lb. coils. Wire canisters (Cat. No. 166) make use of this larger coil size very convenient. Again, it is practical to keep a spare spool of every size in stock so that you never run out. As soon as the wire in a canister is depleted, replace with a fresh spool, then be sure to re-record to keep your supply of wire sizes complete. (For more information refer to the Schaff article *"Loading and Using the 1 lb. Wire Canister,"* available soon for download from your Schaff eStore.)

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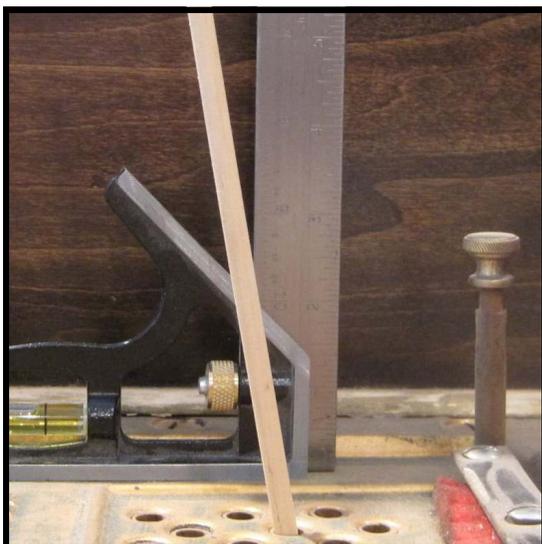


Step 8a: If new pinblock panels are being installed, the pin holes may be drilled at the drill press, as shown in the photo to the left. (Again, refer to the article "*Installing Pinblock Panels in an Upright.*," available soon for download from your Schaff eStore.) An alternative to this method is to use a portable drill press set-up which rolls over the pinblock in the after it is installed in the piano. Whenever methods vary, do the research and chose the approach that works the best in your own shop.



Step 8b: If the old pinblock is being utilized and oversized pins are being installed, a simple electric drill may be used to ream the old holes in preparation for new pins. Notice that the drill is not being used at a perpendicular angle to the plate, but is rather canted to follow the original slant of the pins.

Caution: To avoid overheating your drill bit, just drill two holes at a time for the two pins that will be used for the string you are about to install.



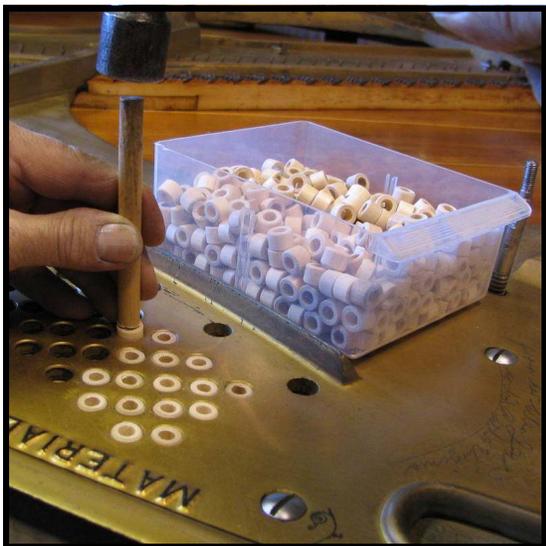
Preparation to reaming old block:
First - Determine the angle that the old pins were installed at by inserting a wooden dowel (or a pencil) into a pin hole and measuring the resulting angle. To do this, take a photo (as shown), print a copy and measure the angle with a protractor, or cut out the wedge and tape to the inner rim of the piano for a reference guide. Typically, this angle will be about seven degrees off of the perpendicular tilted away from the bottom of the piano.

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Second - If necessary, use a [micrometer](#) (Cat. No 3338, 4044, or 3299) to mike the drill bit to make sure you have selected the desired size (although the bits are numbered, sometimes the numbers wear off of the shanks).

(For a discussion the differing opinions concerning approaches to preparing an old tuning pin hole for an oversized pin, refer to the Schaff article, "[Repinning an Upright](#)," available now for download from your Schaff eStore.)



Step 9: One final decision to be made at this point is whether or not to install new [tuning pin bushings](#) (Cat. No. 346 A, B or C. Also 345A, B, or C). (For more complete information on this procedure, refer to the Schaff article, "[Installing New Tuning Pin Bushings](#)," available soon for download from your Schaff eStore.)



Step 10: Open the new box of tuning pins to be used, remove the paper covering the pins, and place them within easy reach of the work area.

You've now completed the set-up for this procedure and are ready to begin with the actual repinning and restringing of the piano. See the next page for a preview of part 2 of this series.

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The Value of the Well Equipped Shop

One's shop says a lot about oneself. If it is business like, and well-equipped with tools and supplies, it invites confidence. When potential customers drop by for a tour, they will leave with a positive feeling, and will be likely investing in your services. If, on the other hand, it is a disaster zone that looks anything but professional, it will do nothing but drive business away.

While helping a friend set up for a project he was about to undertake for the first time, I was struck by how inconvenient his work environment was. His bench was hidden under old lawn mower parts, rusting tools and assorted debris to the point where no part of the surface of the bench could actually be seen!

Whether one is operating out of a roomy, multi-room shop, or is confined to the corner of a garage or a single room in a basement, I believe that it is vital to declare the space one's own, and to set it up for business and nothing but business. Get rid of the clutter, and begin stocking your space with the tools and supplies that will say to all the world that you indeed mean to do some valuable work!

Visit your Schaff eStore to download the next installment of this series:

Schaff Piano Supply Company Presents:

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the Upright Piano**

Part 2 - Tackling the Treble Strings



By Chuck Behm

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Pally Work

Next up: Give your restringing job a factory look that the owner will be proud of. Step-by-step instructions will guide you through the entire process of repinning and restringing the treble section of your project piano.

Note: Tool and supply inventory for the entire repinning / restringing procedure will be given at the conclusion of part 3 of the series.

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Notes on Procedures