PIANO TECHNICIANS

Journal

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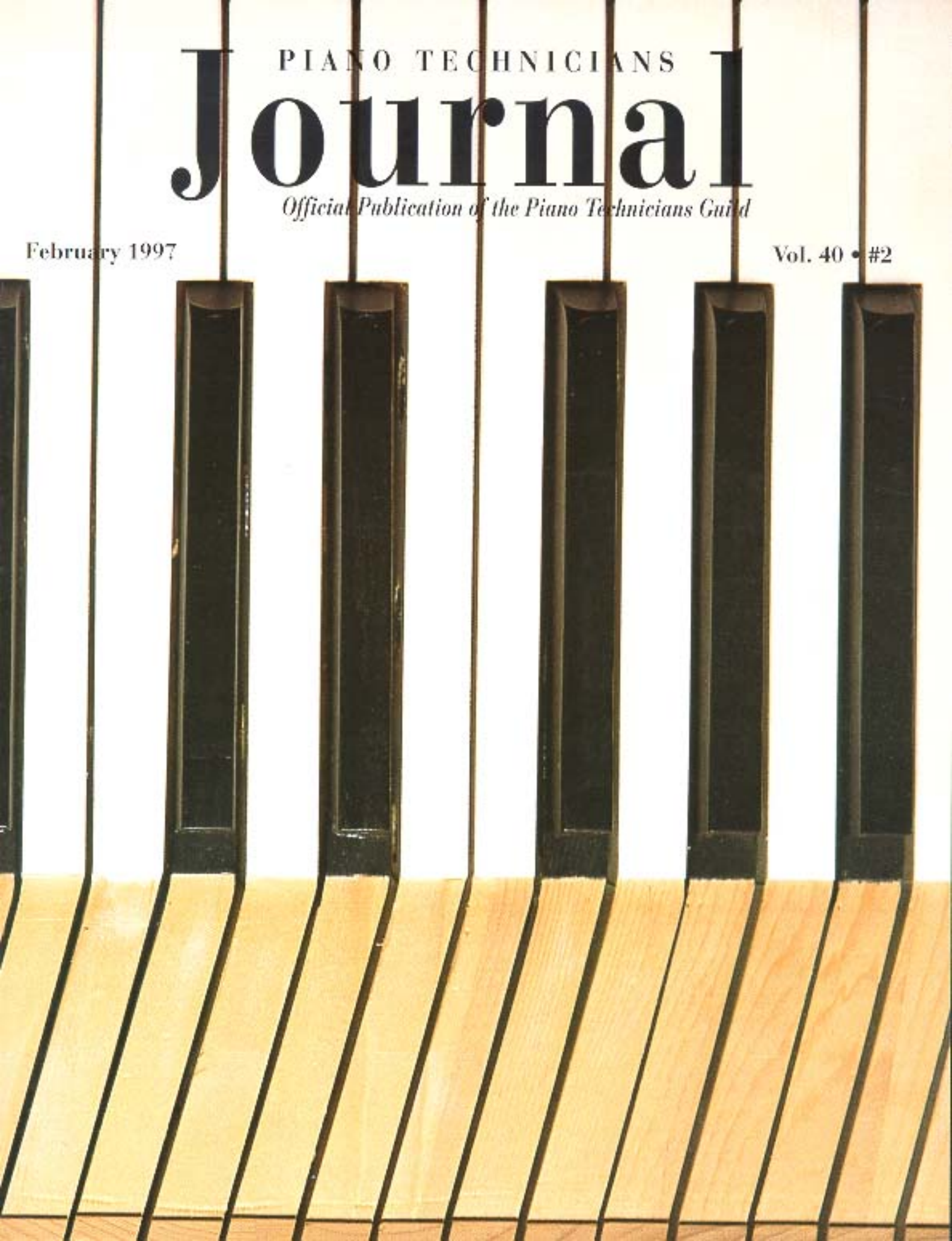

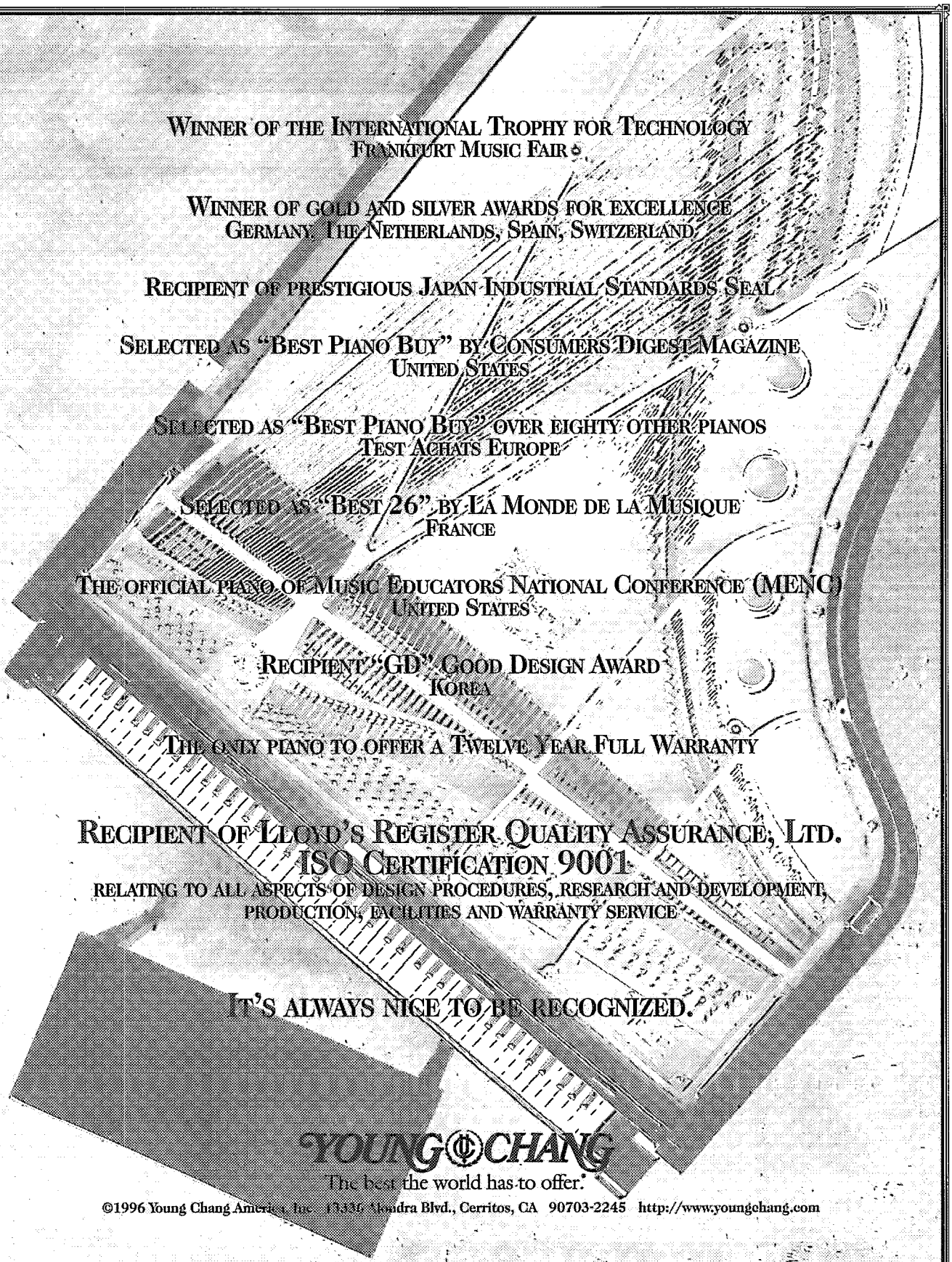

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Editorial Perspective

Passionate Virtuosity

"My feeling about technique in art is that it has about the same value as technique in lovemaking. Heartfelt ineptitude has its appeal, and so does heartless skill; but what you want is passionate virtuosity."
—John Barth

Steve Brady, RPT
***Journal* Editor**

At a recent exhibition of Andrew Wyeth's paintings, I was struck by two things about Wyeth's work. First, he can dazzle you by sheer technique; his mastery of the watercolor and tempera media is total and perhaps without equal anywhere. His compositions are always striking and well balanced. Second, his emotional involvement in his work is everywhere apparent. Here is an artist who cares and feels deeply about his subjects, about his work, and about his world. A picture by Wyeth speaks not a thousand words but a novel.

In a time where many artists forget to master technique in their work, favoring instead some obscure but rampant emotion, Wyeth is an unusual and deeply gratifying experience. Of course, the opposite malady is also common today. Having sat through dozens of piano recitals by major artists, I can attest that only a handful have been truly thrilling and satisfying. Occasionally the recital will be a letdown because, although the pianist has abundant musicality and depth of feeling, he or she has insufficient technique to match the ideas. By far the more common problem, however, is that the pianist will possess brilliant, astounding technique — and yet have nothing to say.

Can we draw any parallels to our own work from these observations about artists? We frequently hear that piano service is "both an art and a science." Ultimately, each one of us must decide to what extent our work is art, and to what extent science. To the extent that we call our work "art," we must be aware of the importance of both technique and feeling in that work. We must arm ourselves with powerful technical ability: tuning hammer technique, tuning checks, regulating skills, repair skills, techniques of filing or needling hammers. Along with these techniques, however, we then need to develop the "feel" of when and how to use each technique to produce an artistic end product.

After some experience, a piano technician will have a more or less intuitive sense of what a piano should sound like and feel like when played. Another way to understand this is that the technician should have a "perfect piano" template in the mind's eye and ear, a condition of touch and tone which gives pleasure to both player and listener. And how does one create this mental template? Try switching focus from an objective, technical mode to a subjective, experiencing mode. Play the piano yourself, or listen while others play it and listen to their reactions. With practice, the shift becomes easier, the emotional rewards greater. The reason this work becomes art is that it relies on judgment and opinion; there are no absolutes. A piano that seems "dreamy" to one technician might seem "gutless" to another, and both might feel strongly about their judgments. Knowing how to perform a technique is one thing, and having an artistic vision of when and why to do it is another. But the technician who can achieve "passionate virtuosity" is an artist indeed.

Please submit tuning and technical articles, queries, tips, etc., to me:
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FEATURES

COVER ART

Seven-eighths-scale keyboard for Bösendorfer Imperial. The keyboard was created by Bösendorfer and Kimball for Cynthia Wood, a California patron of the arts, to accommodate her small hands. The image is the October photograph in the Piano Technicians Guild Foundation 1997 Calendar.

COLUMNS & COMMENTS

DEPARTMENTS

IN ADDITION

PIANO TECHNICIANS
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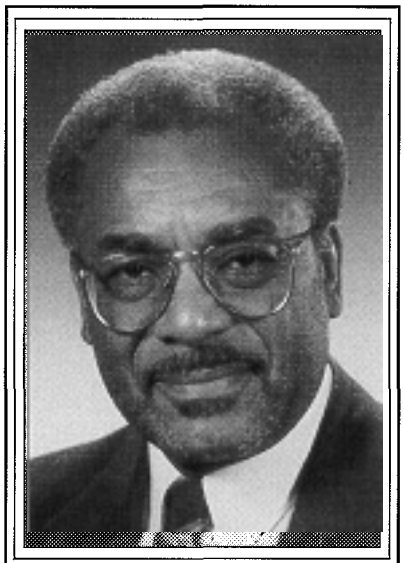
Think Like a Man, Act Like a Lady, Work Like a Dog



PTG President
Marshall B. Hawkins, RPT

There is a book I found in the library and really took a liking to some of the thoughts found therein. The author is Derek A. Newton, and it is titled *Think Like A Man, Act Like A Lady, Work Like A Dog.* It seems to me that the thoughts found in this book could be very beneficial if applied to daily situations. I am going to spell out a few of the thoughts here. See what you think.

This is what is said about the word "word" — (your word).

We use this word on a daily basis, in one way or the other, and probably seldom, if at all, stop to think about it. We use it in our businesses regularly, and we also gave our word when we signed our membership application. We might want to review our bylaws, Article IV, it speaks to our obligations, etc.

Here is a direct quote from the book which is certainly worth thinking about: "Millions of dollars are exchanged on the strength of the spoken word. A gentleman's word is his bond. So must yours be. If you have given your word on a deal, and a better deal comes along, you can't renege. If you do, your word will be worthless. You will have forfeited your integrity."

At another place in the book it has this to say: "Generalizations — avoid them, particularly in reference to men and women. Generalizations are the sloppiest short cut in thinking. They cause bum decisions. Memorize the following: All Indians walk in a single file; at least the one I saw did. Not a bad bit of advice. All too often it is easy to make broad generalizations when we should be at least attempting to think the problem through."

The next bit of advice really does apply to each of us if we call ourselves true Guildpersons.

"*Quid Pro Quo* — don't keep score on people by computing favors given/favors received ratios. You will never be hurt by helping someone or caring for someone as long as you don't expect anything in return."

Somewhere in this book Mr. Newton talks about jealousy. He says, "One should think of jealousy as a perverted form of respect. It is the emotion that the incompetent people reserve for the competent ones." The following statement was made relative to blame. "When something goes wrong most people will be looking for someone to blame it on when you should be looking for some way to fix it."

While this has been some bits and pieces of various thoughts, it is hoped that some value can be gained from them.

To close let me use what the author calls the most beautiful expression in the English language. He says use it whenever you can, so I will use it now and say, "Thank you!"

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First Prize Winner selected Kawai.

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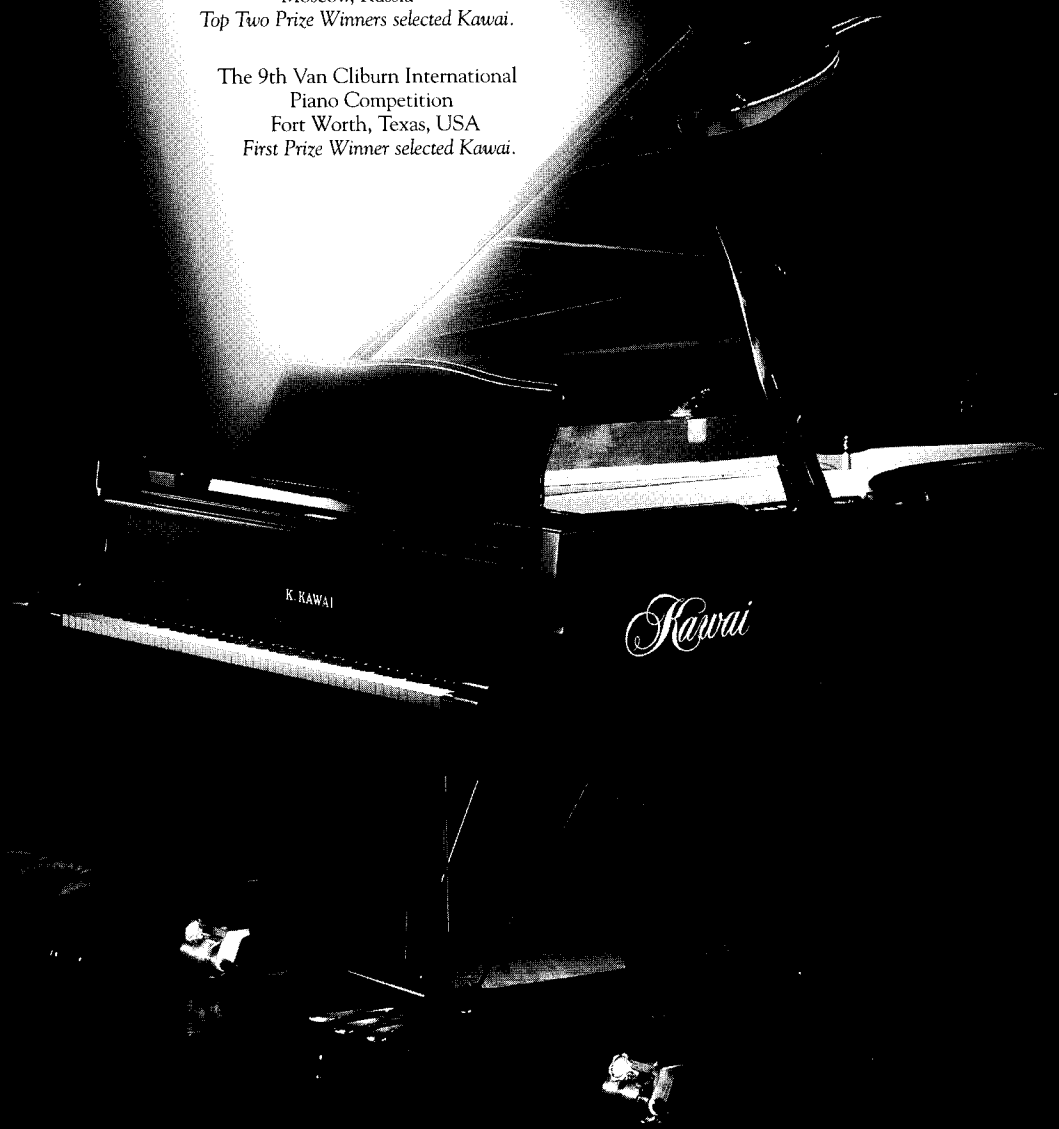
International Piano Competition
Santander, Spain
First Prize Winner selected Kawai.

The 2nd Hamamatsu
International Piano Competition
Hamamatsu, Japan
First Prize Winner selected Kawai.

The 10th International
Tchaikovsky Competition
Moscow, Russia
Top Two Prize Winners selected Kawai.

The 9th Van Cliburn International
Piano Competition
Fort Worth, Texas, USA
First Prize Winner selected Kawai.



It's becoming a familiar refrain.

TT&T Two Cool Tools

I can no longer keep these two little gems a secret:

1) For those of you who do or plan to do plastic elbow replacements in spinets, here's a tool that will save you grief, time, and money:

- Transverse End Cutter, #66-544, $16.50
- Jensen 1996-1997 Master Catalog, Page 208

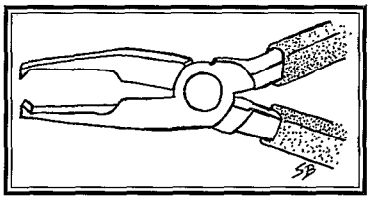


Figure 1 — Transverse End Cutter from Jensen tools.

This tool is perfectly shaped with a 1-inch jaw, 1/8 inch wide at the nose, with a 4 3/4 inch overall length. It works beautifully at nipping away stubborn plastic from wippen-lifter center pins.

2) For those of you who do chip repairs to keytops, here's a nifty sander (corded or cordless) for doing the fine, detailed sanding required after the chip has been filled:

- WAHL Filer Sander Kit, #161-780, $59.95
- Jensen 1996-1997 Master Catalog, Page 229

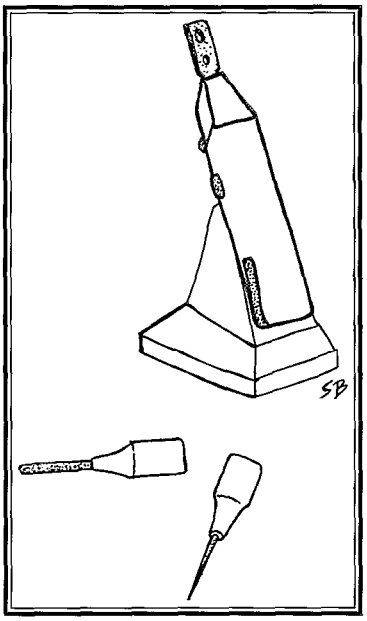


Figure 2 — WAHL Filer Sander Kit from Jensen tools.

This lightweight, precision tool provides 6,000 strokes per minute with approximately a 0.100-inch stroke length. It's about the size of a Dremel tool, and comes with assorted files and sanding paddles. The sanding paddles are about 1/2 inch by 1 inch — perfect for keys or other detailed sanding jobs. Jensen's phone number is 800-426-1194, or FAX 800-366-9662.

— John Piesik, RPT
San Diego Chapter

TT&T Replacing a Missing Bass String

If you work on many older upright pianos, you probably have or will have to send away for replacement bass strings. Sometimes the broken wire is lying in the bottom of the piano and you can send it in for duplication. But more often than not, it's been removed and whoever removed it never quite got around to replacing it.

For pianos that are still in production, you can send the make, model, and string number to the string maker and they'll have the specifications for the new one in their records. If not, you need to send the following measurements:

1) The diameter of the core steel wire
2) The diameter of the core plus the copper winding (measure both layers if there's double winding)
3) The length of the copper winding
4) The distance from the hitch pin loop to the end of the winding.

If the missing string is half of a bichord, you can take measurements 1 and 2 from the remaining string of that bichord using a micrometer. If you're replacing a single string, measure the cores and windings of the strings on either side and use the averages for your replacement string dimensions.

It can be awkward to hold a measuring tape in the missing string space and get an accurate reading for the second two measurements. Instead, I use a piece of string or carpet thread to take a pattern I can measure out of the piano. First, tie a loop in one end of the string for the hitch pin. Then thread the string down the missing string space (a soundboard steel might help), and hook the loop on the hitch pin. Pull the string taut, stagger it around the bridge pins and clip it off at the top, slightly lower (1/8" - 3/16") than where you want the winding to end, to be in line with the rest of the winding ends on the other strings. It will stretch to the right position under tension. At the bottom, clip the string again slightly lower than the point where you'll want the other end of the winding. The two pieces of string you'll have then are your winding length and the hitch-pin to winding-measurements.

— Linda Marten, RPT
(Reprinted from Milwaukee chapter newsletter)

TT&T Non-Slip Screwdrivers

Screwdrivers have a nasty habit of slipping out of the slot and marring surrounding surfaces. This tendency can be minimized by keeping your screwdriver tips clean and sharp, but it's easy to forget to do this maintenance. At the Dearborn convention last summer I spotted some screwdrivers which address this problem by utilizing tiny carbide particles embedded in the steel of the tip (See Figure 3). Available from Webb Phillips & Associates at (215) 674-2555, the special screwdrivers are available in a variety of sizes and configurations: slotted, Phillips, with handles or as bits for power screwdrivers.

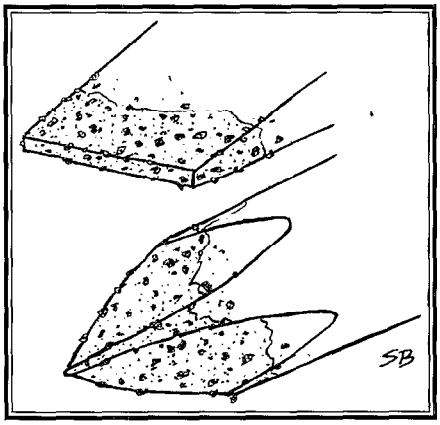


Figure 3 — Non-slip screwdrivers showing embedded carbide particles.

— Steve Brady, RPT
Journal *Editor*

Q & A/Editor's Roundtable

Q: Nylon Pedal Mounts

I've recently run into nylon (or plastic) pedal brackets (or "mounts," depending on your preferred terminology) which squeak or groan when the sustain pedal is used.

Soon I'll be tuning a new Schimmel console which has this problem. When I did a post-delivery inspection of the piano for my customer, who was complaining about the squeak, I wanted to take the brackets off, use a bit of Protek MPL-1™ on the pin and add a felt balance rail punching to take up the space which was probably responsible for allowing some side-to-side wobble which caused the noise. I found that the pedal brackets were two interlocking pieces which weren't easily "unlockable." Does anyone out there have experience with these which they might share with me? Should I use a thin knife or small screwdriver blade to pry them apart? Is the nylon somewhat brittle or very forgiving? While I know it would be easier to work on if the piano were on its back, and the bottom board removed, rather than huddling on the floor in a cramped space, I'd prefer to avoid all that hassle. I did drip a bit of Protek CLP™ on the bracket and pedal pin, which quieted the noise down for the moment, but I'd like to get some Protek MPL-1™ in there. A week ago I had the same problem with a Baldwin Hamilton studio console. In that case the sustain pedal brackets interlocked with an even larger bracket for the middle pedal. Again, no problem if the bottom board is removed as when it was originally installed, but a headache when trying to get a quick tuning done in a high school music classroom (and no one was complaining about the squeak). Thanks for any help you can provide.

— Patrick Draine, RPT
Boston Chapter

A: From David Porritt, RPT

(Staff piano technician at Meadows School of the Arts, Southern Methodist University)

There is a tab on the underside of the bracket close to the screw. You have to push this to get it off. Hold a mirror under the overhang on the mount and you'll see it easily. A small screwdriver can be used to push the locking tab after you have removed the screw. The only good thing about those tabs is that when you are replacing the top it holds it together while you put the screw in.

If the pivot pin is corroded nothing will stop the squeak unless you polish it. After that I put on Protek MPL-1™ (the thick white stuff) and it lasts a long time. We have 50 Baldwin 243s that all have that kind of mount. Putting the piano on its back and removing the bottom board would be about 20 times more work that just removing the screw and releasing the little tab. Until you see it with a mirror it is kind of hard to figure out. Good luck!

Q: Installation of Humidity Control Systems

I've installed about a dozen D-C systems (full systems) mainly in grands. In a vertical, the humidistat hangs lower than the dehumidifier rod and is usually positioned about four to six inches from the end of the humidifier tank. OK, that's pretty straight forward, not much room for "interpretation." I use the 50W rod in a vertical piano along with the complete system.

For grands I typically use at least two 25W rods under the soundboard, one 50W rod where the keybed meets the open soundboard space, and one 35W rod under the keybed. I place the humidifier tank as close to the centroid of the soundboard as I can approximate it. Mostly, I hang it under the beams, unless the client objects, then between the beams. So far so good . . . now the humidistat placement.

In a grand installation, there is more "discretion" that the technician can use in the placement of the humidistat. (The instructions, unfortunately, are not complete and clear about the humidistat placement.) I shoot for five to six inches from the end of the humidifier tank. However, this sometimes requires placing the humidistat *very* near a dehumidifier rod. Since in grands the humidistat "window" is above the dehumidifier rods (as opposed to verticals where it is below), and heat rises, is there a detrimental effect when placing a humidistat close to a dehumidifier rod? How close is acceptable? Does it matter? Sometimes, the final placement of all elements of the system tends to end up with the humidistat very close to a dehumidifier rod — at least for some of my installations.

What do you look for when "designing" your installation and placement of the humidistat in a grand piano? How far from the rim, from dehumidifier rods, and from the humidifier tank provides an optimal placement of the humidistat?

And, how do you determine how much drying power (wattage) to put in the piano?

Any discussion regarding the installation of "crippled systems" (as I call them — Dampp-Chaser installations minus the humidifier) might also be interesting.

— John Piesik, RPT
San Diego Chapter

A: From Bob Mair

President, Dampp-Chaser Electronics

We recommend and urge that the humidistat be located where it will ***not*** receive feedback from the dehumidifiers. The sketch on the humidistat instruction sheet showing the underside of a grand piano with a humidity control system installed does only a fair job. It shows the humidistat six to eight inches from the humidifier tank and just slightly more than this from the primary dehumidifier. This is not exactly the positioning I would choose, and I'll be sure to correct that the next time we revise this instruction sheet. In any case, the humidistat should be located four to five inches from the humidifier and not closer than 15 to 18 inches from any dehumidifier.

Continued on Page 12

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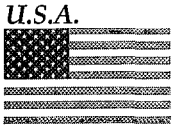

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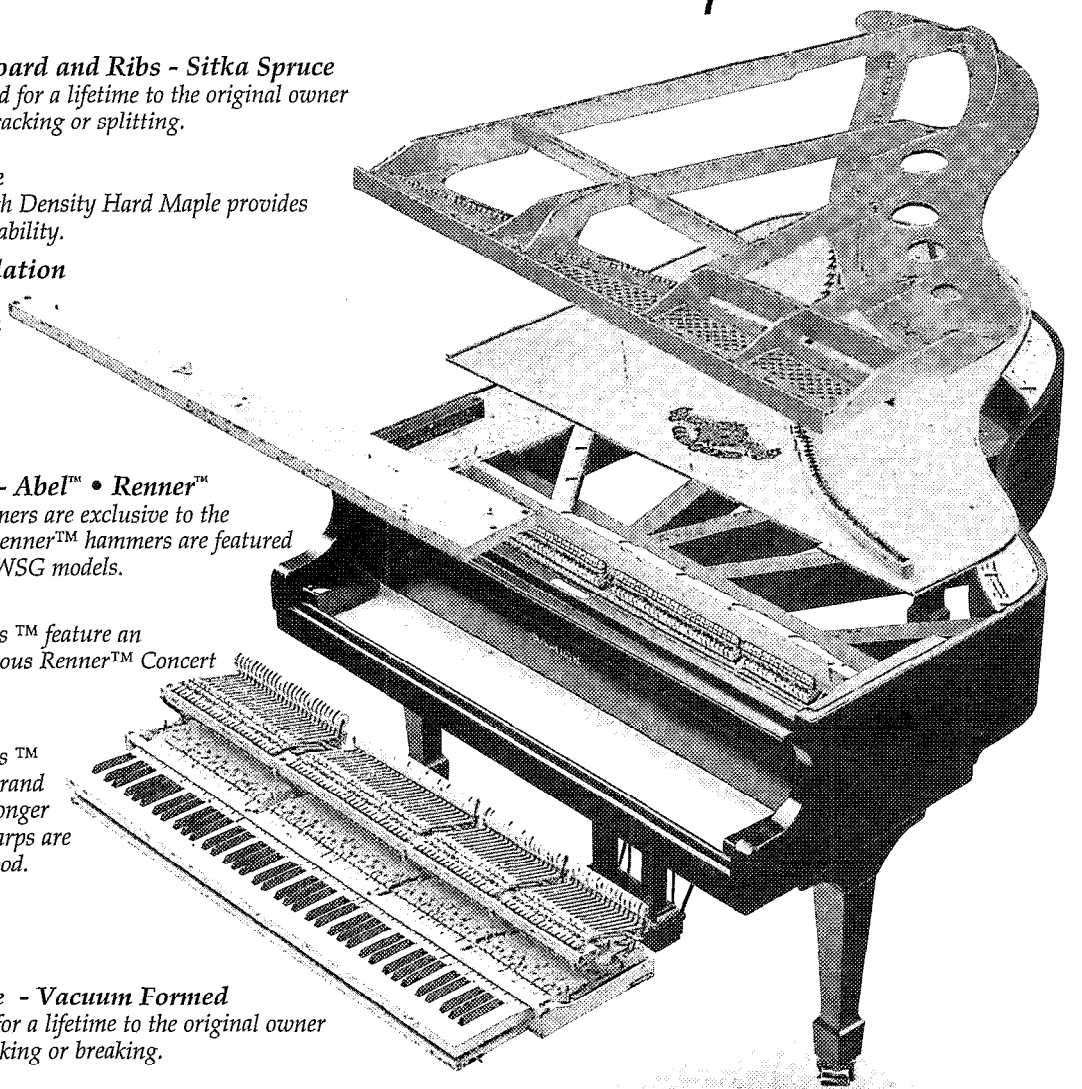

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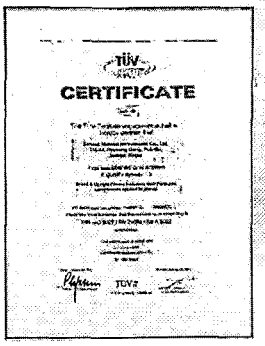

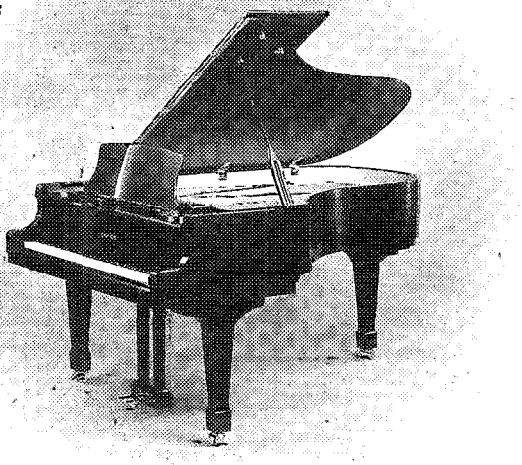

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Continued from Page 10

Now just for a bit of history: years ago Dampp-Chaser instructed technicians to place the humidistat equidistant from the humidifier and the dehumidifier; the thinking being that it would receive equal feedback from each unit and would essentially call for equal operation. This assumed that the dehumidifier and humidifier had equal capability. In fact, they don't. The humidifier has a great deal more capability than the dehumidifier and thus the dehumidifier needs to be favored. You do this by placing the humidistat to get as much feedback from the humidifier as possible. If you have ever read the article, "Fine Tuning a Piano Climate Control System" from the November 1990 *Piano Technicians Journal*, which deals with tests on an upright piano, you will note the principle is the same. If the humidistat is so close to a dehumidifier that it gets most of its feedback from the dehumidifier, then the dehumidifier will be controlled to turn off before it should (probably *way* before it should) and the general level of moisture will be higher than you want, probably higher than you think it should be, and you're scratching your head as to why.

The distances provided above are pretty good. I suggest that if push comes to shove and you can't install all the dehumidifiers that you want because of this limitation, then leave one out. Remember that shorter, higher-powered dehumidifiers are available (24-25, 36-38) now compared to five years ago. I would use these without exception.

On a grand, the dehumidifier should be placed under the beams rather than under the soundboard. A 7F (36" and 25 watt) is normally used to keep the keybed from warping which in turn puts the keys in a bind. It further contributes a little to keeping the moisture content of all action parts down.

I hope this helps. We have reprints of the "Fine Tuning" article if you are interested.

Q&A: Mini-Roundtable

Handling the Large Pitch Raise

Chris Olson (Sebastipol, California): I have been asked to do a pitch raise on a old upright (1905) that is 197 cents flat! They called me and said that another tuner had been there twice since January and told them it couldn't be tuned to A=440, and they wanted my opinion. When I got there they told me that he was slowly raising the pitch, but I don't think he knows what he's doing. It is getting in their way as far as learning to play goes, and they want it up to pitch now. I've never done a pitch raise on a piano more that 50 or 60 cents flat and I was wondering if you guys had any advice. The strings don't look corroded, just dirty around the coil, and there are very minor cracks in the bass bridge. I couldn't deal with it right then, so I told them I would consult some "experts."

So, do I do it in a couple of passes, just go for it in one pass, or run the other way as fast as I can? Thanks for any advice.

Jim Coleman, Sr., RPT: If you had a baby bulldog, would you cut his tail off one inch at a time? In an extreme case such as this, I would bring it up to A=440 roughly in 10 minutes. Then I would do a pitch-raise job with the normal overshoot, taking about 20 minutes. Then do a fine tuning.

Ron Torrella, RPT (Assistant piano technician, University of Michigan, Ann Arbor): Depends on your motivation. Are you interested in making money — albeit with a considerable amount of work (possibly an imponderable amount!) — or do you believe your time is better spent (and compensated) working on instruments that don't fall into the STIR (significant time investment required) category? In the former case, roll up your sleeves and get to work (and have fun, by golly!). In the latter case, you might want to refer this one to someone who thrives on that kind of work.

In either case, running away from this one won't necessarily help. They've already got your number!

Gary Bruce, RPT: I'd go for it. Check for any plate cracks or loose pins. But if it appears structurally okay, then I'd do it. I've raised pianos over a whole step flat in the middle section and flatter in the treble. Alert the customer to the possibilities, i.e., broken strings, and make no guarantees except to make the piano much better than it is now. Make a quick pass without stretching too far above A=440, then do the whole treble section again. Then, with the damper pedal depressed and all your mutes removed, play parallel octaves from one to 88 and back down again repeating each note two or three times. This will really shake it up and help it to settle down. Then retune, and again in four to six months.

I've been tuning for 17 years and have done this many times after a customer says the previous guy said it couldn't be tuned or was going to do it in increments.

John Piesik, RPT: What good is the piano at 197 cents flat? Go for it — bring it up! Check the plate for any cracks before you start, and check the pinblock to be sure it will hold the added tension. Once you've assured yourself that the plate and pinblock are okay, do it. You won't need more than two passes: the first pass you will bring it up to A=440 with no overshooting. At the second pass you will find the piano at about 50 cents flat. Use your normal pitch raise procedure on the second pass, overshooting about 25 percent of the flatness as you go. Finally, after your two pitch-raise passes, tune the piano to A=440. (By the way, pitch-raise from the bottom up — A0 up to C8, string by string.)

There are some things you will need to tell the customer before you begin: 1) There is a *very* small (minuscule) chance that the plate may crack during the pitch raise, 2) there may be some string breakage, (they are responsible for replacements), 3) you can't guarantee how well the tuning will hold when you're through (depends on the condition of the pinblock and structural integrity of the frame, bridges, etc.), and 4) they need to retune in four to six weeks to help stabilize and settle the piano at where it was designed to be.

As long as the piano is in overall good shape, you should come out fine — with a happy customer. I've pitch raised several older pianos, 100-200 cents flat, with the above procedure, many times with good results!

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PS — If you can convince them to purchase a ***new*** piano, of course, that would be the best solution!

Joel Rappaport, RPT: John, I was just curious what your technical or physical reasoning is for this procedure. Is this just for mega-pitch raises or do you do it this way for any pitch raise?

Piesik: I do almost all pitch raises from the bottom up, string by string. From all that I have read (everything that I can get my eyes on) regarding pitch-raising, the way I have been trained, and the results I have gotten from all my pitch-raises, indicates to me that this method is an effective, stable, quick way to pitch-raise, but not the only way to pitch-raise, of course. The results are very reliable and consistent, too.

I use the SAT for all my pitch-raise procedures, and have very good results. (I wish Dr. Al Sanderson would pipe in here to offer the results of his extensive studies/experiments as to why this is a good method for pitch-raising.) It seems that the added loads are distributed more evenly (smoothly?) providing a more stable result, and it allows one to use the overshoot method to end up with the piano ***really*** close to being in tune ***after*** the pitch-raise.

Every situation requires its own special considerations when pitch-raising, but the "from the bottom up" method works very well in most all cases.

Willem Blees, RPT: Before you do the pitch-raise in one operation (which is possible), be sure you inform the client of all the things that can go wrong. The soundboard might crack. The bass bridge might get worse. The treble bridge might crack in places. Strings might break. The piano might not stay in tune very long, and you might have to come back in two weeks to tune it again.

You notice I said "might." None of those things might happen, but then all of them could. I think that if you tell the customers of these potential problems, and that you will not be liable for them, and that they will have to pay extra for that, let them make the decision as to whether or not you do the pitch raise.

Avery Todd, RPT (Staff piano technician, Moores School of Music, University of Houston): I agree with the advice you've already been given by others. I would also "strongly" suggest that you try and get them to repair/replace the bass bridge before the cracks get any worse. If they are minor cracks now, repair might be the best option in this particular case. I personally will not do a large pitch raise on a piano with obvious bridge problems. Adding that much more tension will only make the problem worse.

Assuming the bass bridge problems are corrected, go for A=440 the first time, very quickly. One comment here, though, is to check a few strings in different areas of the piano. Try bringing them up to pitch first and see how the pin tightness and string stretch feels. There is a point where a string has reached its elastic limit and will have a very tight feel right before it breaks. Also, is there any evidence of any strings being replaced in the past? Very clearly warn the customer that there is probably a "chance" that some strings might break. If any do in the beginning stages of the tuning, back off and explain the charges and problems involved if a lot of strings break. Is it worth it to them?

Then do just as Jim Coleman suggested if the pins and strings felt okay the first time over. Someone trying to bring the piano up little by little is probably trying to avoid the string breakage (potential) problem. But if there's going to be a problem, it will happen whether you bring the piano up gradually or on the first pass.

Another thing to definitely do is check all the plate screws you can get to before you start the actual tuning. Be sure they're snug. You don't want to have a plate crack because you forgot to check the screws/bolts!

With your "dirty around the coil" comment, there is also a chance that the block has been treated for loose pins. So evaluate, use your common sense, explain as clearly as possible the costs and if everything seems good, go for it.

I've done some of these monster pitch raises before and sometimes you get lucky (no problems) and sometimes you don't. But it's good experience replacing strings (or tying knots) anyway.

Jon Page, RPT: I would add, make sure the pinblock is secure to the back, if the lid can be removed (sometimes screws are under rubber buttons). Check all plate screws, back, spacer blocks. If you're real ambitious, put it on a piano tilter and check the bottom. Many times the back has loosened from the soundboard.

If that is the case, then replace plate screws with carriage bolts. Old uprights are usually more work than people want to get into.

Besides, the dampers are probably hard as bricks. Forewarn them of what they will have after it's been tuned. "I spent all that money, and it still needs more?" They just may want to count it as a loss and move on.

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Bechstein Pinblocks — Part II

By Bob Hohf, RPT
Milwaukee Chapter

Make a square
And put it there
— Traditional Children's Rhyme

So easy for a child to say, so difficult for the craftsperson to implement. Those who are concerned with skill and craft can never take such simple abstractions at face value. "How square is square?" Years of experience are necessary to answer with authority, "Square enough!" fully realizing that there never has been, and never will be, anything square. To the craftsperson, "there" may never exist on its own without being followed by the obligatory "plus or minus."

Pianos may be distinguished by the veritable absence of anything square. In truth, the more appropriate question might be, "How far off can it be, and still *look* square?" This, however, in no way simplifies the rebuilder's task; all manner of complex and irregular shapes must be created. A cabinetmaker's fitting skills must be refined to a high degree, then often abandoned in favor of something that will *work*.

This article will describe Bechstein pinblock replacement with emphasis on the areas where Bechstein replacement differs from a more conventional job. At this point I must make a disclaimer: no attempt will be made to describe the process in enough detail to provide a *recipe* which can be followed step-by-step to assure a successful repair. This is, after all, only the *story* of a generic repair. Every job tends to have its own particular difficulties which must be attended to as they arise. There are also construction differences in Bechsteins of different vintages which will require variations in the repair procedures. Be warned that basic tool skills are not enough; it is advisable to develop a high degree of confidence with your tools before attempting to work on a Bechstein.

Who is this for, then?

There may be a few technicians who have rebuilt a Bechstein or two and produced a functional result that they were not quite satisfied with. Perhaps they tried a less complete repair than total pinblock replacement. Perhaps they did replace the block, but the completed job did not quite duplicate the original construction and the look of seamlessness. A properly rebuilt Bechstein should look as though it never came apart. This article is intended to provide these technicians with the confidence to try again, and a nudge in the direction of getting it right.

Partial pinblock replacement

There are several methods of repairing Bechsteins with pinblock failure without disassembling the sides. As discussed in the first article, the bass and treble ends of Bechstein pinblocks are encased in the sides of the piano. It is this design feature which defeats conventional procedures for removing and replacing American-style pinblocks. When working on my first Bechstein in 1978, I contacted the factory for advice on how to proceed with the repair. At that time, they recommended drilling out the old tuning pin holes, plugging the enlarged holes with new pinblock material, and redrilling for new tuning pins. In many cases this procedure will, no doubt, effectively correct the problem of loose tuning pins, but it amounts to a partial repair.[1]

I have heard several repairs discussed which amount to routing out parts of the old pinblock and replacing them with new pinblock material. Also, I have seen Bechsteins where the old block was cut off flush with the sides of the case and a new "floating" block installed. At best, these repairs compromise the original construction and stability of the instrument. At worst, string tension can introduce uncontrolled stresses to the plate with disastrous results. Neither repair is recommended.

Full pinblock replacement

Full pinblock replacement requires gaining access to the encased ends of the pinblock. We will discuss two approaches to gaining this access: cutting a notch above the pinblock ends, and removing the entire inner side boards which encase the ends of the block. In the first method, the pinblock is removed without the stretcher, and in the second, the pinblock and stretcher can be removed together.

First Method

1. Remove the veneer

Figure 1 shows the bass side of a Bechstein piano looking down on the pinblock area with the rim veneer in place and the plate removed. The shaded, grained area near the top of the drawing represents the solid-wood inner rim at the level that the base of the pinblock is attached.[2] The veneer is represented by the shaded gray area. Using a cabinet scraper, scrape off the finish from the top of the rim over the area where the

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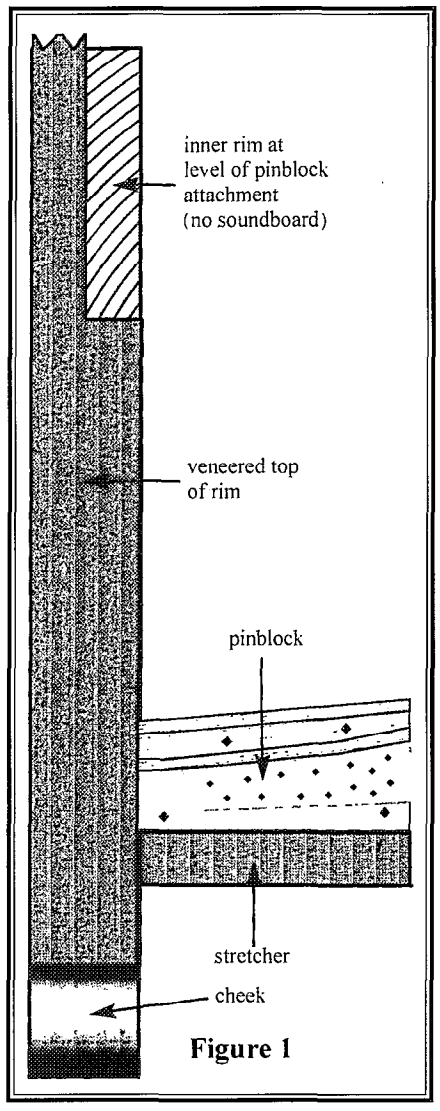

Figure 1

Bechstein Pinblocks — Part II

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veneer is to be removed. If the piano is black, plane off the veneer. Use a small smoothing plane with the blade ground slightly convex. The veneer is usually backed by a substantial layer of glue which is easy to find with the plane. When planing veneer, it is always better to stop a little shy of the final surface; planing into the glue dulls the blade in a hurry, and the glue with traces of veneer is easy to steam off later.

If the piano has an ornamental veneer, and you do not intend to reveneer the entire top surface of the rim, you may want to save and reattach the original veneer. Using veneering pins, make a couple of clear holes through the veneer and into the piano sides. These holes should be located over parts of the rim which are not being removed and will allow accurate realignment of the veneer later. Using a sharp, thin blade, cut across the veneer to define the piece to be removed. The veneer may then be carefully steamed and pried off. Press the veneer flat while it dries.

2. Cut the notches

Figure 2 shows the two boards that make up the bass side of a Bechstein in the pinblock area. Carefully mark off the section of the inner side board to be removed. Score the veneer on the inner vertical surface of the side to make a clean edge when the notch is removed. The notch should start flush with the back edge of the stretcher, extend a little beyond the front edge of the pinblock, and as deep as the thickness of the inner board. Plan first to rough out the notch to within 1/8" to 3/16" of the final size. Using a long 1/4" brad-point bit, drill holes in the board to roughly outline the notch, as shown in Figure 2. Leave ample room between the top of the holes and the finished line to allow for drill wander. The rough notch can then be chopped out in manageable chunks with a chisel and mallet. Once the notch has been chiseled clean, the entire pinblock will be exposed as in Figure 3.

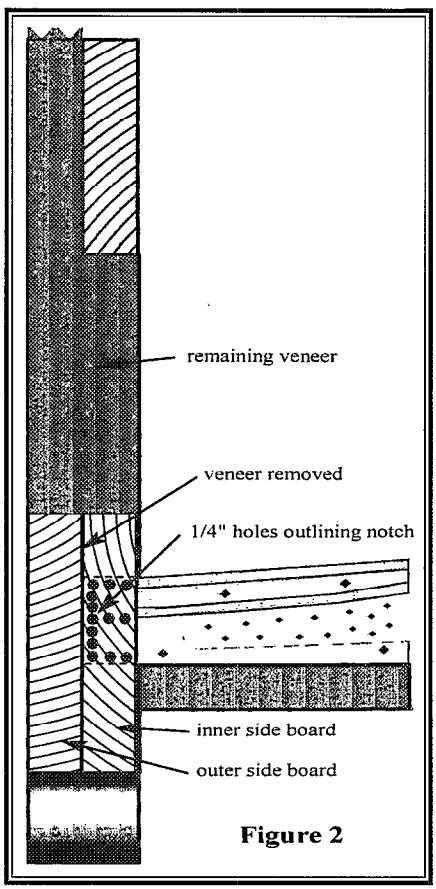

Figure 2

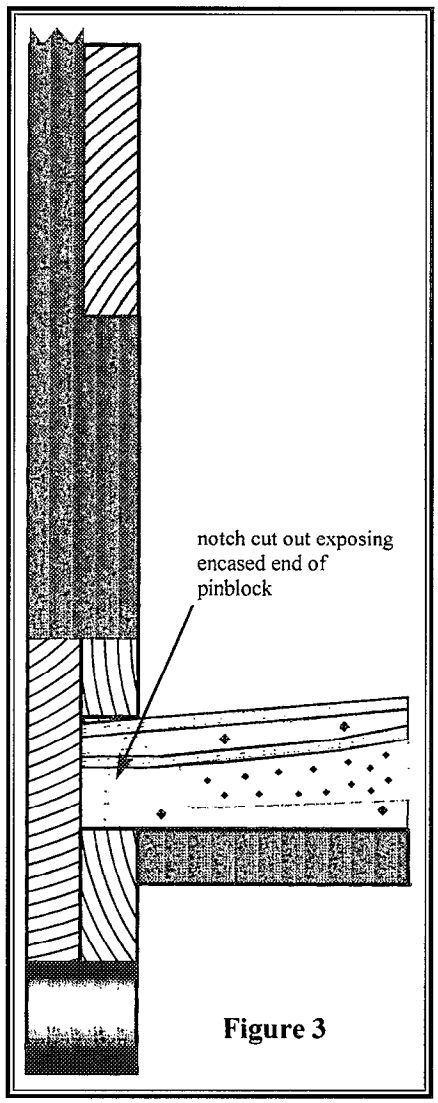

Figure 3

3. Removing the pinblock

Many technicians have their own favorite method for removing pinblocks that are integral with the case. Do whatever is most familiar. I prefer to make saber-saw cuts near the ends of the block near the treble and bass, and through to the stretcher. This allows the ends to be removed separately from the bulk of the block. Remember that the Bechstein pinblock is tongue-and-grooved to the stretcher. Frequently this joint is already weak and the pinblock can be readily split off. However, care must be taken not to damage the stretcher too badly since it will have to be repaired later. The glue joints on the ends of the block can usually be cracked by judiciously applied blows from a mallet and chisel.

4. Preparing for the new pinblock

With the old pinblock out of the way and the stretcher still in place, as in Figure 4, some time spent on the notches and stretcher will save considerable time

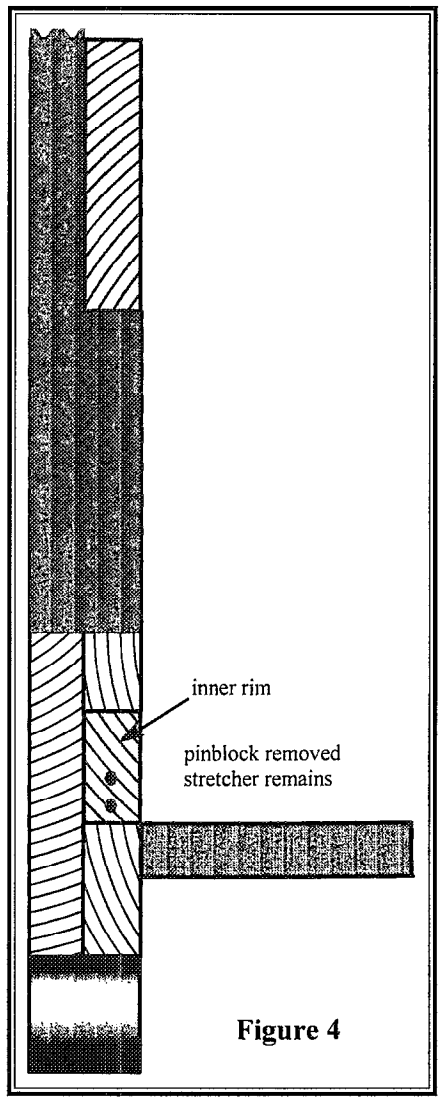

Figure 4

later. The vertical ends of the notches have exposed the end-grain of the inner boards. These surfaces should be made straight, flat, square, and parallel to each other[3] to accommodate the plug to be made during reassembly. The surface at the stretcher end of the notch must be prepared by hand, and the surface opposite can be routed with a straight-edge as a guide.

The back of the stretcher should also be prepared to provide a good gluing surface for the new pinblock. If the old groove survived the disassembly in good shape, glue in a "tongue" of new wood and trim flush with the back of the stretcher. If the back of the stretcher has splitting as a result of the pinblock removal, route out the damaged wood and glue in a strip of new wood, trimming the new piece to restore the original dimensions. Both methods will provide a solid, flat surface for gluing to the new block.

5. Reassembly

For the moment, we will skip making the new block and go directly to reassembling the piano. Fitting and attaching the new pinblock onto the inner rim and the stretcher is very much the same as in the American style of construction. Once the block is installed, the notches in the sides must be filled. Since the original sides are made of spruce with hardwood veneer on the finished surfaces, the plug should be made of similar material. Working from the thickness of inner side board, make a blank spruce piece *slightly* less than 1/8" thinner. Apply 1/16" maple veneer to both sides of the board.[4] Cut the veneered board to fit the notch. There should be good contact with the outer side board and not too snug where end-grain meets end-grain. Extra width on the top can be planed flush later. Glue in with a medium viscosity epoxy and clamp.[5] Once the clamps are removed, the inner vertical veneered surface should be *slightly* proud of the rest of the side and easily sanded flush. When the plug is installed and trimmed, the top of the rim can be reveneered.

The advantage of this approach to pinblock replacement is that the case disassembly and reassembly is relatively simple. Careful work will produce a finished rim top with no evidence of repair. However, on the inside surface, the plug will always be visible under finish. It may also be argued that notching and plugging the inner rim board, with the butting of end-grain, weakens the side of the piano.

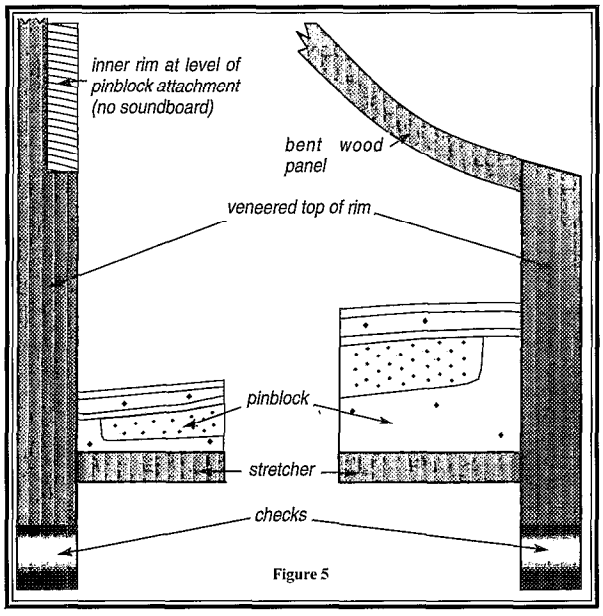

Figure 5

Second Method

The second method of full pinblock replacement involves completely removing the inner side boards at both the bass and treble. Since the stretcher is removed along with the pinblock, careful measurements must be taken to insure that the stretcher can be properly reinstalled.

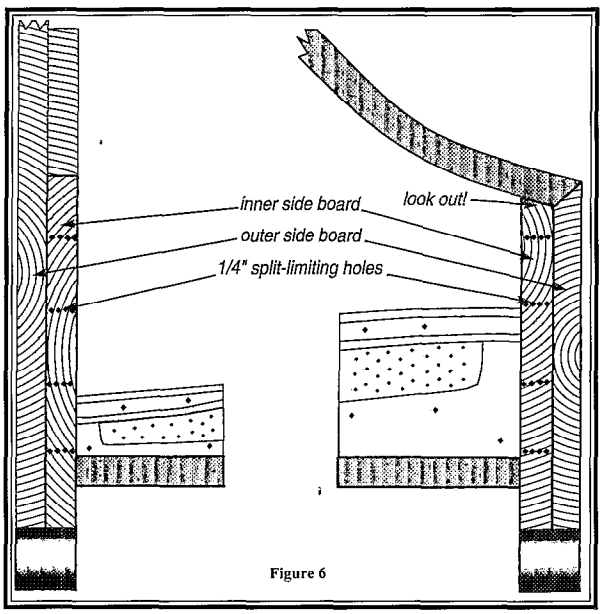

Figure 6

Since the top of the rim and the cheeks of the piano must be reveneered in this repair, it is best to include some measurements from the keybed which will remain unchanged. The spread between the sides of the piano should also be measured since, without the pinblock and stretcher in place, the sides are free to spring either inward or outward. Unless the original dimension is restored, the fit of other parts of the piano, like the lockbar, may be changed.

1. Removing the veneer

Figure 5 shows both the bass and treble sides of a Bechstein with the pinblock, stretcher, and veneer in place. The procedure for removing veneer is the same as the notching method, but more veneer must be removed to expose the entire side boards as in Figure 6.

2. Removing the side boards

It is prudent to drill lines of holes across the boards and almost as deep as the width of the board in order to control splitting while the boards are being roughed out. Remember that most Bechstein stretchers have a tenon through the full thickness of the inner board which must be preserved for reinstallation. A 1-1/2" wide framing chisel and a large mallet are very effective tools for chopping out the inner boards. There may be those who have little stomach for "having at" the side of a valuable piano in this manner; the intermediate stages of disassembly, with the splitting off of large chunks of the sides and mess of wood chips, are not a pretty sight. This is also not a good time to invite the owner in to view the progress of the repair. However, the size of such a chisel and mass of the blade make it easy to control. When cleaning up the inner surface of the outer side board, smaller chisels are not adequate for creating such a large, flat surface.

Care taken removing the ends of the boards which define the cheeks can save considerable time later when reconstructing the sides. The cheeks are veneered over the end-grain of the sides with the grain of the veneer running roughly parallel to the glue joint between the inner and outer side boards. This grain direction cooperates nicely when cutting the veneer flush with the inner surface of the outer board. Unless the cheek veneer is loose or damaged, leave it on and apply new veneer over it during reassembly. Removing the veneer introduces the risk of spoiling the smooth curvature of the cheek. Also, leaving the finish on the old veneer until just before reveneering

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Bechstein Pinblocks — Part II

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provides a hard, smooth surface that is easy to follow when reshaping the new inner side board. Of course, leaving the old veneer on will result in the cheeks of the piano "growing" by 1/16".[6]

Another potential problem spot is the corner where the treble side meets the bent-wood panel. The panel, the inner side board, and the outer side board all meet at a weak joint.[7] There may be hidden dowels inserted through the bent panel and into the inner board for reinforcement. These dowels must be carefully found and severed.

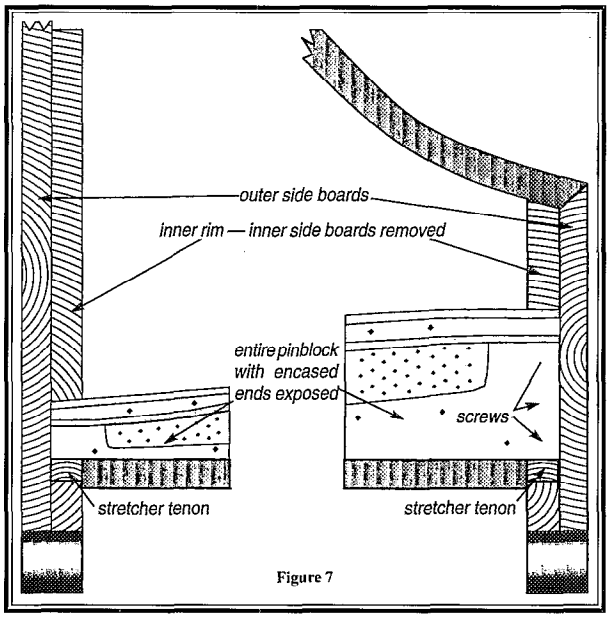


Figure 7

3. Removing the pinblock and stretcher

Figure 7 shows the side boards removed exposing the pinblock and stretcher ends. How to proceed with the removal depends on how solid the attachment is to the inner side boards and inner rim. If the glue joints are already loose, the pinblock and stretcher may be removed in one piece, taking care not to skew them and thus wedge the sides apart. If the glue joints are not easily broken, it is a good idea to remove the pinblock and stretcher separately, with the pinblock coming out in three pieces as before. With the pinblock removed, the stretcher should come out easily since the only points of attachment are the end-grain "joints" and the small areas of the stretcher bottom glued to the inner rim. However, the stretcher may be under compression along its length by the sides springing inward. In this situation, springing the sides outward *slightly* with a reversed pipe clamp should allow easy removal.[8] Removing the groove and reconstructing the back are much easier with the stretcher out of the piano.

4. Reconstruction

We will again defer the discussion of making the new pinblock to later. The reconstruction process is very complex and hard to describe because so many parts must be made to fit on so many surfaces all at the same time. Over the years I have developed a system of pinning case parts together dry, before gluing. The pins are usually 1/4" dowels and they allow parts to be precisely located — yet removable and replaceable — before gluing. The pins also facilitate installation by preventing movement of parts during gluing and clamping. For instance, the new pinblock can be pinned into its final location with two dowels each in the treble and bass, removed and replaced any number of times in precisely the same location, and then glued in. The 1/4" dowels can then be drilled out and replaced with more substantial 1/2" dowels.

5. The pinblock and stretcher

With this process in mind, fit and pin the new pinblock into the case arriving at its location in the usual manner.[9] Next, pin the stretcher to the back surface of the pinblock. Remember that the location of the stretcher affects the fit of other case parts: the lockbar must fit between the case sides, the lockbar pads must rest on the stretcher, and the fallboard must go up and down. Establishing the fit of these parts is not as easy as it may seem with the inner sides gone. Care must be taken that the back edge of the pinblock, and the front and back surfaces of the stretcher tenon are *vertical*.[10]

6. Reconstructing the sides

Figure 8 shows the outline of the new bass inner side board looking toward the bass. The board must be a good fit on the back surface where it contacts the original outer board, on the bottom where it contacts the inner rim, and on the surfaces which contact the stretcher tenon.[11] The surfaces which define the pinblock may be made loose enough to allow easy clearance, but should be close enough to look neat. Because the pinblock and stretcher are pinned in position, they may be removed, and the various surfaces of the new inner board fit in *steps*.

Start with a nice spruce board oversized in every dimension except in thickness and veneer it on both sides so that the veneered board will be flush with the vertical inner surface of the inner rim. With the pinblock and stretcher removed, fit the back side and the bottom to the existing case members. In the treble, the vertical end surface of the new board which contacts the bent panel will have to be beveled and fit at this time.[12] With these surfaces fit, pin the new board into position with one dowel each front and rear. Rough out the cutout for the pinblock and stretcher, put in the pinblock, and enlarge the cutout enough to allow easy installation and removal of the new board over the pinblock. Put the stretcher on the pinblock, clamp it in place and hand fit the tenon cutout for a snug fit. The end-grain surface of the stretcher where it steps from the tenon to full dimension should fit snugly against the new board. With the new inner board in its final position, trace the shape of the cheek from the outer board and bandsaw it out slightly proud of the finished

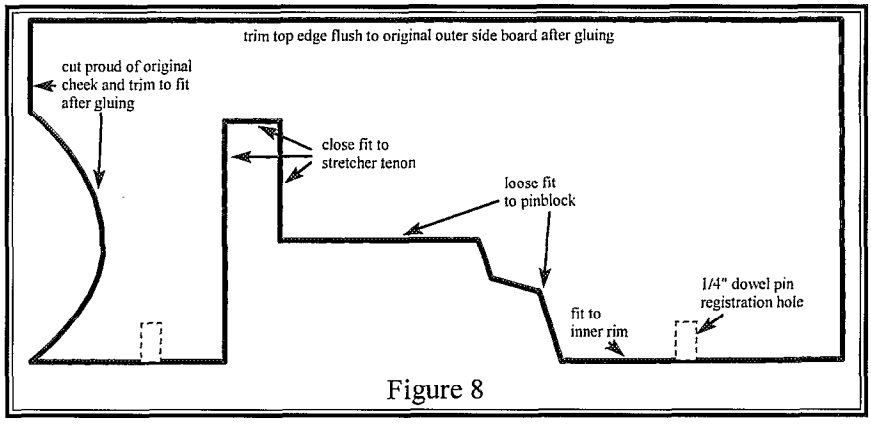


Figure 8

shape.

With the pinblock, stretcher, and new side boards dry fit and pinned into position, final assembly is straightforward. Glue in the pinblock, stretcher, and side boards in that order. Since this procedure allows proper fitting of all surfaces, and there is no necessity of leaving extra gaps for assembly, Titebond™ or other water-based wood glue is the best choice.

When the glue is dry, plane off the extra material on the top of the new inner board flush with the old outer board. Sand the cheek surface of the new board flush with the old. Applying veneer to the front and top, in that order, completes the job.

In practice, removing and replacing the inner side boards is not much more difficult than cutting notches and plugging. It is more faithful to the original construction, and, under finish, preserves the elegance and beauty inherent in Bechstein design.

Make a pinblock ...

For a while there, it seemed like we would never get to this. After making my first Bechstein pinblock, I said to myself, "If I can make this one, I can make any pinblock." Today I know this statement to be false. In spite of its complexity relative to conventional American pinblocks, the Bechstein pinblock is simple compared to those in some other German pianos. However, the Bechstein block is a very good preparation for technicians who may be interested in even greater challenges.

Figure 9 shows a Bechstein Model B (1903) pinblock viewed from above. The areas shaded with light gray represent the open tuning pin fields without pin holes. The lined areas represent the stepped faces of the pinblock which contact the plate flange.[13] The line dividing the bass from the treble represents the thicker overlaid bass section of the block. There is a line of screws in front of the tuning pin fields and a line of screws through a heavy plate bar behind the treble fields.[14]

1. Rough shaping

Figure 10 details the faceted front edge of the pinblock and the steps in creating it. Using the original pinblock as a pattern, mark out the outline on new material and bandsaw the new block in the usual way. The material removed is represented by the dark gray area in the diagram and results in a beveled front edge similar to that of a conventional pinblock. The #1 surface will be preserved and later fit to the plate flange.

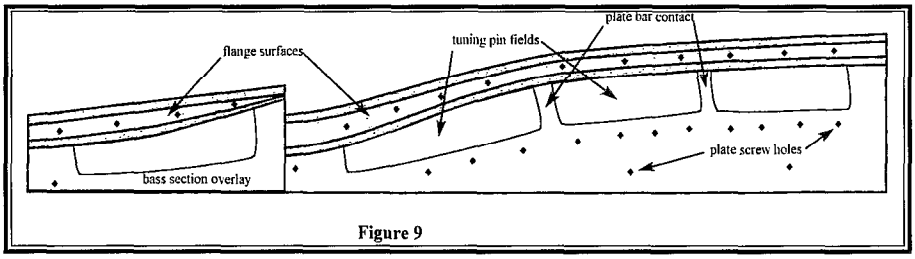
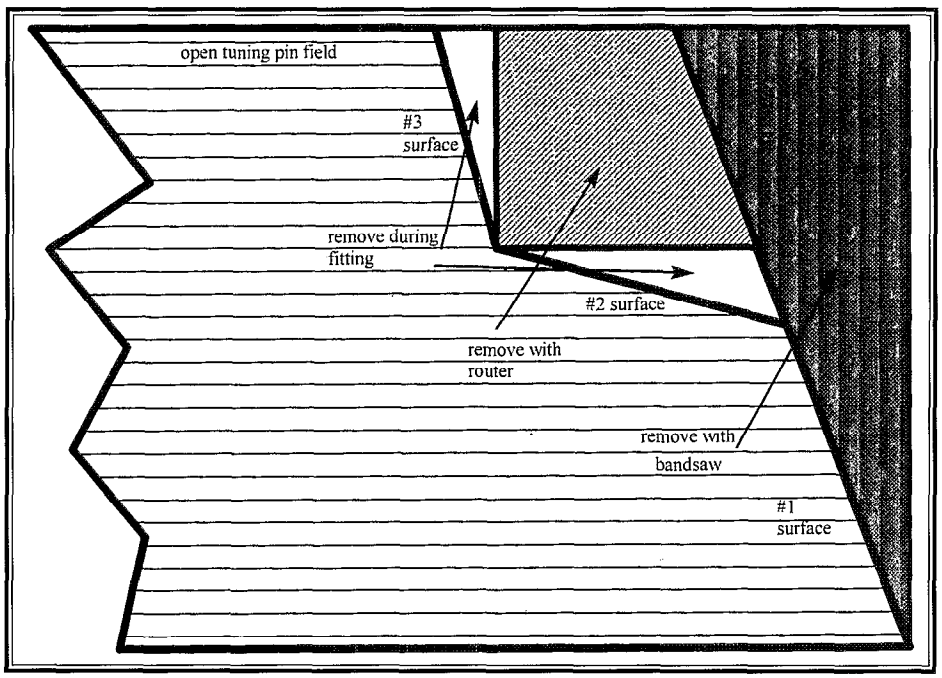


Figure 9

Creating the surface which becomes the flange edge of the open tuning pin fields (the #3 surface) is made difficult by the fact that it is not parallel to the lower #1 surface. The rough, squared-off shape may be made by removing material represented by the diagonal-lined area of Figure 10 with a round based router and a template. To make the template, pin (with 1/8" drill rod) an oversized piece of 1/4" Masonite™, or other similar material, to the top of the old pinblock. Set a pair of calipers to *somewhat less*[15] than the distance from the edge of the router base that will follow the template, to the cutting edge of the router bit. Following the #3 edge, scratch a line into the Masonite™. Remove the Masonite™ and cut the template. Transfer the 1/8" pin hole locations to the new block material and attach the template. The rough, unbeveled step may now be accurately routed out.

It is much simpler to attach and fit the bass-section overlay after the new block has been shaped and fit to the plate flange. However, when roughing out the step in the bass, keep in mind that the Masonite™ bass template will be made *on top of* the overlay of the original block and then pinned to the *un-overlaid* surface of the new block. Depending on the depth of the #3 surface relative to the thickness of the overlay, it may be expedient to dispense with the Masonite™ bass template and create the #2 surface and the lower portion of the #3 surface while bedding the rough block to the flange.



2. Bedding the flange

The process of bedding the rough new pinblock to the plate is no different from that for a conventional pinblock except for the complexity of the shapes involved. My favorite mixture for finding the high points is powdered blue carpenter's chalk mixed in water and a few drops of glue added as a binder. Start by removing the light gray areas of Figure 10 to create the bevels of surfaces #2 and #3. When surfaces #1, #2, and #3 are all getting close, direct attention to the top surface of the pinblock where the plate bars divide the tuning pin fields. All top surfaces of the pinblock should have positive contact with the bottom surfaces of the plate and the plate bars. The plate bars should be relieved into the top of the block *at least* to the extent that the front edge of the tuning pin fields are

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flush with the *top* surface of the plate.[16] After all surfaces of the pinblock fit the plate, glue on the bass overlay and bed the #3 surface and the top of the bass.

Once all of the pinblock surfaces have been bedded to the plate, clean the blue chalk off the plate with water. The holes for the plate screws may now be marked and drilled.[17]

3. "Glassing" the pinblock

Have we avoided controversial topics so far? If so, that is about to end right now. The practice of "glassing" blocks has been discussed many times in the *Journal* over the years and is generally viewed with scorn and condescension by experienced technicians. This attitude seems to be based on pride in one's ability to bed a pinblock to a plate and the remnants of old prejudice against early epoxies.[18]

The debate centers around the question, "How well does a pinblock have to fit?" Here are a couple of the answers that have been presented in public: "If the plate contacts the flange every three inches, that is enough," and, "*You* waste your time fitting the top of the block? Humph!" Settling the debate is beyond the scope of this article. The theory I suggest is, *the better it fits, the better it works.* Based on this attitude, nothing less than 100 percent contact on all surfaces between the pinblock and the plate is acceptable. There is no question that a less-than-100 percent fit is usually adequate. But, when we get to the discussion of cracked plates in the next article, it will become clear how, in some situations, a better fit can *save your neck.* Hone your skills on the simpler jobs, so that, when the tough ones come along, you will be ready.

4. How to do it

Some epoxies are much more suitable for bedding pinblocks than others. Select a high-quality epoxy of medium viscosity when liquid, but which sets very hard. The hard set is necessary for two reasons. First, it is less compressible and will be better able to withstand the compression imposed by string tension. Second, on conventional pinblocks without open tuning pin fields, the tuning pin holes can be more easily drilled through the layer of hard epoxy. If the set is too soft, the heat of the drill bit will soften the epoxy and gum up the bit. Powdered glass flocking may be added to the liquid epoxy for thickening without affecting the hardness of the set. A thicker mix will be less likely to run out and create voids between the pinblock and the plate as the epoxy is setting.

Carefully coat all surfaces of the plate which will contact the epoxy with a releasing agent. Paste wax is effective for this and is readily removed with naphtha after the epoxy is cured. Other commercial agents are available but may be more difficult to remove later. Also coat the plate screws with the releasing agent. Coat the pinblock with epoxy and screw it to the plate.[19]

While the specification sheet on an epoxy may say, "Sets in 45 minutes," do not take this too seriously. Setting time is affected by many factors including room temperature and the thickness of the film. Epoxies start as liquid, go through a thick gum stage, become semi-hard and very brittle, and then become fully cured over a time which may extend to 24 to 48 hours. Carefully monitoring the curing process allows selecting the proper time to release the pinblock from the plate. The late semi-hard and brittle phase is the best time to turn out the plate screws and tap the pinblock loose from the plate. At this point, the epoxy will not flow and change shape, but is not too hard to crack loose easily. The best way to tell when the epoxy is in this phase is by scratching an exposed area with the corner of a scraper. It is also much easier to scrape extra epoxy off the pinblock and clean up the plate before it is fully cured.

This procedure for molding the pinblock to the plate assures a good fit when the pinblock is screwed to the plate in its final position. Other procedures which have been discussed in the *Journal* in past years do not assure this fit. One procedure involves inserting waxed paper between the pinblock and plate instead of applying releasing agent directly to the plate. This compromises the fit by introducing a gap the thickness of the waxed paper. Another procedure describes clamping the block in position while the epoxy cures and drilling for the plate screws later. This offers no protection against shifting of the block as the screws are tightened.

Molding a pinblock to its plate with epoxy is no substitute for good fitting, but it does provide a *fail-safe* backup to the bedding process. Certainly experienced technicians can fit a pinblock well enough that adding a layer of epoxy will not functionally improve the job *most of the time.* But occasionally something unexpected happens. Plates are notorious for surface irregularities, and the best dry fit can sometimes be thrown awry by simply tightening the plate screws. Verifying the fit of the pinblock in its final position is enough reason to take the additional time to mold the block to the plate: the thickness of the cured epoxy becomes a *positive* check of the fit. Installing a new pinblock which cannot move relative to the plate under string tension is critical to the tuning stability of the instrument. The molding procedure outlined here *absolutely eliminates* any chance of pinblock movement.

5. Open tuning pin fields

My preference is to apply an ornamental veneer to the exposed surfaces of the tuning pin fields.[20] After fitting the pinblock and molding it to the plate, there should be distinct outlines of the fields on the surface of the block. Using veneering pins, pin a piece of tracing paper to each field[21] and trace the outlines. Cut out the paper templates and pin them to the veneer. Cut out the veneer. Pin the paper templates to the top of your pressure caul material, cut out the cauls, and drill holes in the cauls big enough to clear the veneer pins. Apply glue, pin the veneer in place, and clamp on the cauls. This is easy and beautiful.

You did, of course, carefully observe the string spacing and alignment between the agraffes and tuning pins before unstringing, and carefully record any errors or areas that needed improvement, didn't you? Never assume that the original factory job can't be improved upon. Duplicating the original tuning pin patterns will simply repeat the slips of hands long dead. Take tracings of the original patterns and draw straight lines through the centers of the lines of holes. Most holes can be located by the intersection of three lines. Carefully correct and realign where necessary.[22] The hole locations may then be center-punched onto the tuning pin fields. Drilling the tuning pin holes with a brad-point bit will prevent chipping and splitting of the veneer.[23] A slight countersink on the top of the hole makes it easier to find during stringing and adds nice visual dimension.

Completing the job

... And that is the end of the story.

How many others feel a sense of incompleteness at the end of a story that they read with their children? For instance, after reading "Jack and the Beanstalk" for the nth time recently, we

found ourselves flooded with questions. What did Jack and his neighbors do with the huge body now lying in the yard? Was Jack able to resume anything resembling a normal life after his harrowing experiences and the restoration of his father's wealth? Did the beanstalk flower and produce beans? Were they good to eat? All these things have been lost to posterity.

Those who have followed the Bechstein story to this point, and are considering embarking on the sort of repair outlined here, will also be flooded with questions. At our home, we had lots of fun solving the riddles of Jack's life. Solving the thousand riddles of a Bechstein restoration is a great challenge and, as such, can be uniquely rewarding. Remember that you are working on one of the world's most beautiful pianos, and your assignment is to restore it to at least its original splendor.

Notes

1. Plugging and redrilling pinblocks has been discussed in other articles. While plugs provide new material for tuning pin holes, there are several other potential problems which this repair does not address. Old Bechstein pinblocks often show severe delamination and compression failure. Merely plugging the holes in one of these blocks is questionable. Plugging eliminates the option of changing the string height, and correcting fit and alignment problems pertaining to the plate, bridges, and rim. In even the finest pianos, it is risky to assume that the original fit was always done properly, or that the instrument has not changed shape under the many years of string tension. Also, in the open tuning pin fields of a Bechstein, plugs are ugly.
2. Some suspension of disbelief may be necessary to visualize the instrument from these illustrations. The grain directions depicted do not represent the true direction in a real piano, but are only intended to help distinguish between the different case members.
3. Please refer back to the beginning of the article; working in awkward quarters limits accuracy.
4. The veneer should be applied to both sides of the board to prevent cupping. An alternative would be to make and install the plug and apply veneer later, but this makes a neat job more difficult. Today, most veneer is supplied in thicknesses of 1/40" or less. Such thin veneer must be sanded very carefully and has little or no strength of its own. Veneer that is 1/16" thick is easy to work with, very difficult to sand through accidentally, and, once applied, adds considerable strength and stability to the piece. Do not veneer with contact cement: finish solvents can leech through veneer and soften the glue later, and any problems (bubbles, etc.) are difficult or impossible to repair. I recommend veneering with wet Titebond™. This requires clamping.
5. As a general rule, I do not use epoxy for making wood joints since it does not *wet* the wood like water-based glues. Also with epoxy, if enough clamping pressure is applied to create an "invisible" glue line, too much glue has been squeezed out to produce a good joint. However, in this case, if the fit of the plug is too tight at the ends, it may not go in with glue applied. Also end-grain to end-grain does not produce a joint. The purpose of the epoxy is to fill the gaps and provide a smooth surface for finishing later.
6. There is nothing sacred about many of the dimensions of a piano case. Once one becomes accustomed to doing this sort of repair and taking the related measurements, one becomes more aware of the variation of case dimensions. In most places plus or minus 1/16" is insignificant.
7. Because of this weakness, Bechsteins and other German pianos often crack at the corners and must be repaired. This repair should be done after the new pinblock is installed and the sides reconstructed. First (for the treble corner), put the piano on its side and immobilize it against a bench or other solid object. Then plane off the corner on a *tangent* to the corner. Hog the corner off with a scrub plane, rough out the surface with a convex-ground smoothing plane, and flatten with your good smoothing plane. The new surface should be 4-5 inches wide and include all of the case members. How *flat*? It should be *very* flat top to bottom and *slightly but uniformly concave* across. Now glue on a chunk of hard maple big enough to span the flat surface and thick enough to recreate a new corner. Plane and sand the maple to shape. Properly executed, this repair will be stronger than the original and will *not* crack again. Because of the oblique angle the glue joint makes with both the treble side and the bent panel, a well-made corner will be invisible under finish. I have omitted the details of this repair such as reveneering the top of the rim and removing and replacing moldings at the bottom.
8. I mentioned earlier that some may not have the stomach for this type of repair. I have long been aware that they are the smart ones. Pay heed to your fears. The sort of repair we are discussing on expensive pianos is high-stakes, and, as such, has the potential for major disaster. Spreading *too much* may crack the sides. This, of course, can be repaired, but will require reveneering the sides. Be warned.
9. Dismissing this step with a single sentence does not mean it is simple. The location of the pinblock fixes the position of the plate, and is critical to the structure of the piano as well as the string and action geometry. Different technicians will use different parameters for establishing the location of the pinblock. Discussion of these parameters is beyond the scope of this article.
10. In principle, remaking the tongue-and-groove joint between the stretcher and the pinblock could serve the same purpose as pinning the stretcher into position. The tongue-and-groove produces a stronger joint and recreates the original construction. However, the fit of the stretcher in the case is complex, and pinning allows readjustment much more easily than a tongue-and-groove. The edge joint reinforced by the dowel pins is conventional in many pianos, and, in my opinion, is *strong enough*. This is one of the many trade-offs which must be considered in the course of the repair.
11. The surfaces of the new board on the stretcher tenon are largely end-grain, and, thus, do not produce a glue joint. The fit should be tight enough to give the stretcher good, solid support even without glue.
12. Calling this surface *vertical* is wishful thinking: it probably will not be square to the bottom, but must be a good fit nevertheless. Measure the angle between the inner rim and the bent panel with a bevel gauge and transfer the angle to the new board. Then measure the angle between the old outer side board and the bent panel and transfer. Fit by hand. If the corner is cracked and either the old outer board or the bent panel has changed shape opening the crack into a *gap*, don't force them back together. Repair the corner as described above in their new *relaxed* positions.
13. The closer together the lines are, the steeper the slope. Those familiar with geological survey maps, with their isobars depicting variations in elevation, will have no trouble visualizing the "topography" of the pinblock as revealed by multilaminate pinblock material.
14. See the Bechstein article in the December, 1996 *Journal*.
15. Remember that we are making a *square* approximation of a *bevelled* surface which will be fit to the plate flange later.
16. Surface #3 is smallest surface in contact with the plate flange, and yet provides the *primary* support for the string tension. Do not slight this surface. The top edge of the plate, where it meets the tuning pin fields is not flat. This means that, in some places, the front edge of the pinblock may extend a little above the plate. This is not a problem since it will be covered by a string rest.
17. My preference has always been to drill tapered holes for the plate screws. The density of multilaminate pinblock material does not allow much "bite" of the screw threads into

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the block. A tapered hole engages the screw threads on the entire length of the screw for more secure fastening. Tapered bits (not to be confused with *taper length* bits) are available from woodworking supply houses.

18. Prejudice against using new materials in pianos may be well founded and based on several 20th century experiments which were disastrous failures. However, chemistry has progressed a lot in the last couple of decades and has produced materials which warrant close consideration. Consider the glues and lubricants which are now available.

19. Curing epoxy generates heat. Heat also speeds the curing time. This means that the pot life of mixed epoxy in a jar is quite short. A "45 minute set" epoxy will probably get very hot and set suddenly in 10 to 15 minutes. This means everything must be ready to go before mixing the epoxy. Once the epoxy is spread into a thin film on the pinblock, the tendency to cure itself with its own heat is greatly reduced, so there is plenty of time to screw it to the plate. The timing will vary with different epoxies. Use an epoxy that you are familiar with; ruining a pinblock gets expensive.

20. Many exotic and highly figured tropical veneers are readily available today. One may justify using these on the basis of the small amount of wood needed. However, I use only common domestic species for veneering unless the new veneer must match old case veneer. Walnut is well suited for ornamental veneering. It can be straight-grained or wildly figured. It can be plain or provide dramatic contrasting color. Take your pick.

21. Try to locate the pin holes where a tuning pin will be located.

22. Some deviations from the "optimum" hole location are intentional. Mis-locating a hole can mean that a tuning hammer can't be put on the pin later.

23. Standard or specially ground chisel-point drill bits are not designed for wood. They cut holes from the inside out. Brad-point bits cut holes from the outside in, and produce rounder, straighter, more uniform holes in wood.

The Financial Point of View

By Chris A. Trivelas, RPT
Contributing Editor

For self-employed service people such as ourselves, taking the financial point of view may seem foreign to our everyday lives. We can define the goal of financial independence as the ability to accumulate, invest, and manage an amount of capital large enough to provide a living from the interest and/or dividends generated — without depleting the principal. This is something most of us think of only in connection with retirement planning. Yet the principles of investing can be applied to our daily work lives with interesting and fruitful results.

While this article will, of course, focus on the financial point of view, please note that it is only one factor among many. For instance, a financial analysis of your particular situation may conclude that you could make a higher return by renting instead of owning a home, and investing the equity in something other than real estate. However, your emotional well-being may require more of a feeling of connection to a place (which owning a home may provide), and that requirement for emotional well-being may take priority over a strictly financial analysis.

When financial analysis runs amok (usually when it is given preference on a large scale) it can cause big problems. If a particular species of plant or animal is valuable to us, driving it to extinction and moving on to the next species would yield a higher return on investment than taking a smaller, sustainable harvest. The return-on-investment criteria by itself would eventually lead to ecosystem collapse and the end of civilization as we know it, the same as if Steinway were to go out of business.

On the other hand, by not using the financial point of view when it is appropriate, many sole-proprietor business people (such as most piano technicians) miss opportunities to make their present actions more likely to produce future returns. The financial, or investor's point of view is one means to an end, that end being the life that you define as meaningful and worth living.

The Basics

Starting with the simplest question: how much money do you need in the bank to be able to live off the interest? For round numbers, if we assume a 5 percent interest rate, we are talking more than 20 times your annual income. This is where most people give up. But accumulating the necessary capital may not be as daunting as it seems as first. This number can be reduced. One way is by putting the money into higher-yielding investments. For the same dollar amount of return, an investment with twice the interest rate of the savings account would require half the capital. However, the investment with the higher potential return carries more risk.

Managing Risk

There is no such thing as "no risk." Investing is gambling. The investor is always betting that a particular investment will increase in value, but in a more general sense, when we invest, we are betting on nothing less than our vision of the future. If things go on as they have for the last several years, we might make very different investments than if we believe a major depression is on the way. Or again differently than if we think another bout of inflation is on the way. The easiest investment strategy is one that assumes things will continue as they have in the recent past. This may indeed turn out to be the best strategy, but as with any strategy, it should be chosen intentionally. People should at least be aware of what it is they are betting on. Even on a savings account, while the risk may be low, it is not zero. Of course, the return is correspondingly low.

How does the investor manage risk? Suppose someone gave you 20 times your annual income. What would you do with it? Put it in the bank? All in one bank? After what's been happening with savings and loans in the past few years? At least put it in a couple of different banks. The main way to manage risk is to diversify, diversify, diversify. In a portfolio with several investments, and several different kinds of investments, one of them can plunge in value without causing a catastrophic loss. And one part of diversification is to hedge; that is, to bet a small percentage of your assets on something you expect will decrease in value, but will increase substantially in value if the main strategy turns out to be wrong.

> ***"Training in piano technology is undervalued compared to the income it can make possible."***

Off the Beaten Track

How can this apply to our everyday work lives? What if we consider the fees we charge for our service work as the interest we are earning from our capital? The capital in this case is our knowledge, experience, talent, and the goodwill we have developed in our community. This means that when we take the time to figure out a really good solution to a problem, that is, to improve our efficiency and/or quality, or when we attend conventions and seminars, we are increasing our capital — literally the same as putting money in the bank. And the best part is that this capital is at the lowest risk possible. No bank failure, government action, or economic crisis can take it away. This is a strong position, but every position has an upside and a downside.

If your only capital (and source of income) is in your talent and experience as a piano technician, the downside is that all your eggs are in one basket. This is partially offset to the extent that some of your talents (running a small business, for example) are transferable. But it is also possible to diversify within the piano world. One look at the exhibit booths at a PTG convention is all it takes to see the ingenious ways piano technicians have found to supplement, increase, or replace their income as technicians. It is all the more impressive that technicians have been able to achieve this diversification in the midst of a serious depression in the

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piano industry as a whole.

One of the ways technicians have found to diversify lends itself particularly well to the investment point of view — renting pianos. If I obtain an old upright for $1,000 and rent it out for $30 per month ($360 per year), that piano is yielding a 36 percent return on the $1,000 investment.The actual return would be lower when expenses such as billing, advertising and maintenance are taken into account; however, the return could easily be much higher if the piano were obtained for a smaller initial investment or if the market supported a higher rental fee. In the current investment climate, a return of 10 percent per year is considered quite acceptable, which makes returns in the 30 percent range look downright spectacular! To make that same $360 in a year from bank interest, I would need to put $7200 in a savings account (at 5 percent interest). From the investment point of view, that rental piano is worth $7200. Which is why, if you are renting pianos, you should never sell them, unless another factor overrides the financial one.

"There is no such thing as 'no risk.' Investing is gambling."

Why, then, don't more piano technicians rent out pianos? This is an important question because it may shed some light on why we don't more often take the investor's point of view. The first reason for me is that because I have experience evaluating, purchasing, and moving pianos, I would never rent one myself. And it seems to be human nature that despite overwhelming evidence to the contrary, it's hard for me to imagine that other people might want to do things differently than I would. In a more general sense, it is only when people value things differently that transactions are even possible.

But the second reason is probably more important. More piano technicians don't rent out pianos, or take the investment point of view, because it requires a large delay of gratification. It takes a long time to obtain and recondition 15, 20 or more pianos without getting paid for it in the short run. It is also possible to purchase rental-ready pianos either outright or with borrowed money, but the process is essentially the same, and the same with starting any investment program: it is an expense (whether of time or money) in the short run in anticipation of a benefit in the long run. Not everyone has the strength of will to resist spending the principal (not to mention the dividends, if they are to be reinvested) for the years it takes, even with investment vehicles which carry penalties for doing so (such as IRA's, etc.).

Piano Work As Investment

At this point it is possible to treat our businesses as investments and compare them to traditional investments.

The upside for the self-employed piano technician:

- A piano technician's capital can provide a good living in a much shorter time than traditional investing with little beginning capital.
- A piano technician's capital is at extremely low risk.
- Piano work may provide satisfactions not available to other investors, such as developing and using skills, and patronage of the arts in a direct, tangible way.
- If a person has the necessary talent and motivation, the starting capital (good quality training) is a bargain. In other words, it is undervalued compared to the income it can make possible.

The downside for the self-employed piano technician:

- Self employed people are taxed at higher effective rates(particularly: traditional investments are not subject to social security taxes).
- A piano technician's business does not enjoy the benefits of compounding interest. (On the other hand, the benefits of compounding interest are minimized on a traditional investment if all the proceeds are taken out as income).
- A piano technician's business is usually tied to a particular location (this consideration is irrelevant to people who are happy with where they live).

"What if we consider the fees we charge for our service work as the interest we are earning from our capital?"

Both our work lives and our retirement planning lives can be enriched if we see the similarities and realize that in principle they are not separate categories. This means not only that a sole-proprietor business is an investment vehicle as much as a stock, bond, or mutual fund; but that investing is a lot like running a business. Too many people make these incorrect assumptions about investing:

Dubious Assumption #1: Managing an investment portfolio is not work. Or: Financial independence is not work. Or: Being retired is not work.

Dubious Assumption #2: A person who is financially independent or retired is exempt from worrying about losing the ability to handle their own affairs and exempt from facing old age and death.

"When we invest, we are betting on nothing less than our vision of the future."

Let's go back to the idea that someone has just given you 20 times your annual income, and you have decided to invest it. If the value of your investment decreases by half, ten year's income could just wink out of existence. Not everyone can handle that kind of risk and worry. Investments (as well as brokers) must be evaluated carefully, financial statements and annual reports must be interpreted, risk must be assessed. There may be corporations or governments that you do not wish to support by investing in them. If so, then you must develop your criteria and research potential investments to see if those criteria

are met. If there are losses, you are responsible. In short, investing is a skill like tuning pianos. It is not learned overnight, but requires years of attention and learning, and mistakes should be expected along the way. And, like piano tuning, even with good intentions, not everyone is cut out to do it.

"Investing is a skill like tuning pianos"

This is not intended to be an argument against retirement planning. In fact, retirement planning may come more naturally if we are already used to doing such things as:

- Being aware of the return on investment (also known as payback time) when buying new tools or equipment. Some tools (especially the ones designed by piano technicians!) may pay for themselves on the first or second time they are used, even if they have a seemingly high initial cost. These are excellent investments. On the other hand, a tool that is never used is not providing any return.
- Being aware of the risk factors in our businesses. There are many layers of diversification. For example, a diverse client base makes a more resilient business. A technician who works in a close-knit musical community has a higher risk of damage from a dissatisfied client, and may want to cultivate another circle of clients as a hedge. On the other hand, when things go well, efficiency, profit, and often satisfaction and friendships are enhanced in such communities.
- Regularly asking where capital can best be invested. As mentioned above, it is difficult to destroy skill, knowledge, and goodwill capital, but it can happen, from burnout, for example. I used to joke that each technician has only a certain number of tunings in them, and they should be metered out gradually. As the years go by, I wonder if that joke should be taken more seriously. Depending on the particular circumstances, the best way to invest one's knowledge and skill capital may be to diversify, or even to specialize (if the potential return outweighs the risk). It may mean more education or starting a new business. The return-on-investment criteria should not always be the deciding factor, but neither should it be left out.

Re-assembling the above information may offer new ways of seeing ourselves. For instance, there are those among us for whom piano work is completely fascinating and satisfying. For these people, it is what they would choose to do with their time if they didn't have to do anything. Occasionally, I even have days like this. If you are one of these people, then in the most meaningful sense of the term, you are financially independent. For the rest of us, one of the most significant things we can do to learn the skills needed for our financial independence (or retirement, if you prefer) is to apply the concepts of investing to our everyday work lives.

An Essay on the History of Tuning - Part II

By Skip Becker, RPT
Northeast Florida Chapter

Other Ideas, Other Tunings

There were two other scales in common usage in Ancient Greece, both having the power of theorists and philosophers behind them: the enharmonic, and the chromatic. The enharmonic, a favorite of theorists (Aristoxenus complains earlier theorists had devoted all their writings to it), included as many as 18 steps to an octave. Today, we consider this a scale of "quarter tones." It preserved the difference between such notes as D# and Eb. Its name implies the most amount of harmony, but "in truth there is little or none belongs to it" (North). The distinctive sounds come from both very large and very small intervals. For example, in the diatonic we have the ratio 5:4 major third. The enharmonic scale has, in addition, the large (wide) 9:7 major third. The regular minor third, a ratio of 6:5, is companioned with the very small minor third, a ratio of 7:6. Not surprisingly, it was considered difficult to tune, and therefore, impractical. By the time of the Romans, it was little used. Plutarch, a first-century A.D. historian laments its passage: "the most beautiful of musical scales, the enharmonic, which on account of its grave and solemn character was formerly most in esteem, is now, however, wholly laid aside; there are few persons in the present day, who appear capable of discerning the interval, which is its characteristic."

The chromatic scale of ancient Greece has the same notes as our modern chromatic keyboard. A major proponent of the chromatic was the above mentioned Aristoxenus, a fifth-century B.C. philosopher and music theoretician. He was the first Westerner to advocate equal temperament, determined by distances on a monochord. This was an isotonic scale: the comma divided equally between each step, tempering each slightly from mathematical purity, but providing an excellent scale for performance. (It should be noted that the first documented reference to equal temperament belongs to the Third-millennium B.C. Chinese Ling-Lun.) Aristoxenus' ideas about music differed sharply from the philosophy of Pythagoras: the ear was the sole standard for musical proportions. "He esteemed that sense was sufficiently accurate for musical, though not for mathematical purposes; and it was, in his opinion, absurd to aim at an artificial accuracy in gratifying the ear, beyond its own power of distinction." (Edward Rimbault) Aristoxenus was a major player in the "*sensus versus ratio*" debate, rejecting bringing the abstract into the realm of experience, and refusing to allow music to be governed by the intellect above the senses. His philosophy has remained influential throughout history. Advocates of equal temperament were known as "Aristoxenians."

These three scales were all used extensively, and alternately, by the musicians of Greece. Lyres were not the only instruments to receive alternate tunings. Flutes were drilled, and pipes were lengthened to the specifications of a particular scale, without regard to the notes of the others. It is important to realize that there was always a difference between what theorists advocated, and the musicians performed for the public.

In the fourth century C.E., Boethius formulated the terms "*musici*" for the educated theorists, and "*cantores*" for performers. The former considered themselves musical scientists, and usually sneered at the latter. The chromatic scale was always popular with *cantores,* and their music developed independently from the vocal music of the *musici,* which clung to the diatonic. Unfortunately, the *cantores* were, in general, musically illiterate. They relied on oral transmission to learn their songs, so no examples of their work have survived. Poetry, too, went its own way. By Roman times "music and poetry, once twins, were scarse sisters" (North).

Vocal music (and the diatonic) became the music of the early Christian church, and our best examples of ancient music come from this source. Saint Augustine, also a Pythagorean, wrote six books on music, all of which praised the "majesty and nobility of Sacred Music." He coined the term "well-tuning" to mean not only proper Pythagorean tuning, but also "knowledge and talent for music as required for the musical performance on any instrument or with the voice." (Owen Jorgensen)

As time passed, the distinction between competing scale philosophies became blurred (a matter of concern only to the *musici*). No matter which musical scale was selected for performance, the underlying philosophy of Pythagoras, a universe based on mathematical/musical proportions, superseded the others. "A serene order presides over the earth ... and the heavens above revolve in sublime harmony" (James). People lived in a universe which made sense, and the greatest philosophers and scientists of their day continued to prove it so.

Developing Keyboards

The earliest keyboards were developed on organs. The earliest known organ is that remarkable tribute to ancient engineers, the hydrolicon, which used water pressure to force air through varying length pipes. The first was built by Ctesibius, in Alexandria, around 200 B.C., and continued in use until the ninth century. We don't know what the keyboard looked like, but the keys were wide levers played with a fist. The organ varied in volume depending upon how far the levers were pushed. The earliest organ with levers operated by fingers appears as early as the middle of the fourth century A.D., and its first public service in the Vatican church was in 666 A.D. (Pope Vitalian) Just when the chromatic keyboard was refined into the arrangement of the 13-note octave of today remains in obscurity. It was completed and standardized by the time the keyboard was mated to a stringed instrument, most probably the monochord, in medieval times. The earliest extant such keyboards are clavichords, which date from the early 14th century. They are described in 1319 by Jean de Muris[1] as "monochords with 19 strings" ("mono" obviously lost its literal meaning, and corrupted into a later name: "manichords"). They were equipped with a string plucking device, and were called "chekkers." They were the forerunners of virginals and spinets, and their complexity indicates that they were a refinement of much earlier instruments.

The adoption of chromatic keys on the organ was, for *cantores*, a technological breakthrough and for the *musici*, a philosophical conundrum. The *musici*, always "knowing what was best for music," would have resisted any tampering with the carefully proportioned diatonic scale. Because of the interrelatedness of the sciences, adding new notes to the scale was tantamount to adding new planets to the heavens. They didn't think we needed either. Yet the existence of the chromatic notes was well known. A singer could fall into the natural harmony of a major third above D, and the same note would serve as the fifth above B. In Medieval times, these were known as "hidden" or "indirect" keys. Their study on the simple diatonic keyboard was an "initiation into the mysteries of Music." The chromatic levers (black keys) are, of course, shorter, raised, and a different color from their Pythagorean counterparts — clear evidence of an invasion into a previously established system. They also exist without an identity of their own, retaining in part the mystery of their origin: is it F# or Gb? It certainly is not H, or "zed," a name of its own (although some German systems do denominate our Bb as "B," and our B as "H." Bach was able to spell his name musically, as he did in his "Musical Offering").

Early keyboard experimenters first installed F# (not Gb), a note which neatly divides the two tetrachords of our octave. What a marvelous addition to the keyboard F# must have been! Now, one could play a true Ionian scale in the G mode. At the same time, D mode gained a major third. There is little doubt these innovations occurred in the secular arena, and were accepted on church organs begrudgingly. Imagine the consternation of the *musici*: this new F# changed everything! It was the very devil in music.[2] Has the gender of the formerly feminine D mode changed to masculine? Is it now asexual? A neo-hermaphrodite? We don't know how such conflicts were resolved, but the predictable interdictions failed miserably, even though church doctrine was at the height of its temporal power. The *cantores* wanted more of those short raised levers, and the demand for the ability to modulate overwhelmed any imagined philosophical consequences. Reinforcements for F# arrived symmetrically, in pairs, with Bb and Eb (not A# and D#) shortly followed by C# and G#. Earliest chromatic tuning systems reflect this chronology, as the white notes, or naturals, were tuned first, and then the "sharps," usually in a cycle of perfect fifths.

The First Keyboard Temperament

As the stranglehold which vocalists held on church music loosened (early instrumentation was restricted to a repetitious refrain of vocal melody), the diatonic scale was set aside, and sacred music became chromatic. The adoption of the chromatic keyboard, combined with the refinement of musical notation (notes were given Latin letter names, repeating with each octave. This innovation was presumably to aid in tuning), also allowed the development of a new, and more complex kind of music: polyphony (many voices). The intervals of thirds and sixths had been disallowed in the ancient music. Harmony had been realized by playing the notes of an interval consecutively. Playing notes together was considered "playing in different modes simultaneously," not "concords." No doubt, Pythagorean tuning contributed much to this point of view. But by the 10th-century, church music had taken this new and enervating polyphonic character, which would dominate the music of Europe for the next several centuries.

With the advent of polyphony, a new musical need soon became apparent. The sustained tones of the organ were revealing harmonic "flaws" in the tuning system. The new keyboard presented the possibility of 24 modes (12 major, 12 minor). Although 22 of 24 modes were available for modulation, the diminished 5th ("wolf intervals" caused by the Pythagorean comma) restricted the use of the final set of two modes. A way had to be found to do something about the "discordant effects" of the intervals so important to the new music. The chromatic scale, tuned to Pythagorean proportions, needed to be tempered.

Exactly when the first temperament was used is also lost to obscurity. Marin Mersenne described it in 1636, when it had already been in use for at least three centuries. Mersenne attributed the method to the astronomer "Monsieur Boulliau," and it is known today as the Pythagorean Temperament. Its appearance around the same time as the earliest clavichords would indicate that temperament was used in tuning both organs and the "new" stringed keyboards by the 14th century. Both the enharmonic and Pythagorean dieses (harmonic "flaws") were effectively eliminated by positioning certain notes as "meantones," found for chromatic keys, by averaging the distance between diatonic neighbors on a monochord, or averaging the pipe lengths on organs. (See Jorgensen's *Tuning*, Chapter 7, for complete details). There were two harsh fifths, but modulation and transposition were available to all 24 modes.

End of an Era

And so our history of tuning has wound its way to the 14th century — the end of the "Middle Ages." It was also the end of orthodox Pythagorean music. The church had for a millennium been the protector, and sole source for "classical" music education. Most of the *musici* were clergy. The only outlets for music composition were the church chants, hymns, and "plainsong." Instrumentalists (*cantores*) still learned their craft in strict secrecy from the time-honored custom of oral transmission from master to pupil. However, big changes were coming.

As we have seen, the clavichords had a standard keyboard, chromatic scale, strings, and tuning pegs. The first tuners had a working knowledge of various scales, tuning systems and temperament. For the first time they were able to read music. We also know that they "tuned by ear," which, in those days, meant being able to properly sing the necessary intervals, and then reproduce those exact tones by adjusting string tension (see *Tuning*, Chapter 3, on nomenclature). For the next several hundred years tuning was a vocal art, a reflection of music in general. Specific tuning techniques would have varied with the experience and aptitude of each tuner.

An indication of how well the first tuners were doing comes from William Cornish, a courtier of Henry VIII. He gives us an admonition, and the grandmother of all poems about piano tuners. From his "Treatise between Truth and Information:" —

The clavicorde hath a tunely kynde,
As the wyre is wrested hye and lowe,
So it tunyth to the players mynde,
For as it is wrested so must it needs showe,
As by this reson ye may well know,
Any instrument mystunyd shall hurt a trew song,
Yet blame not the clavicorde the wrester doth wrong.

Continued on Page 31

Prepping Verticals For Fun & Profit — Part I

By Ernie Juhn, RPT
Long Island-Nassau Chapter

We all know that when new pianos arrive at the dealer they need some attention. A lot can be said about the fact that as a rule, the better the "prepping," the less trouble can be expected after the sale. I purposely said "as a rule," because some dealers claim there are pros — as well as cons — regarding "prepping." Some dealers claim that, considering today's competitive market, the question "how much prepping?" is in order. In this article we will explore all aspects of the subject. Wherever possible, I will base the information on research with dealers, technicians and customers.

From our point of view as piano technicians, a well prepped piano is a necessity. It will make it easier to service the instrument after delivery, it will be easier to keep it up to standard pitch and most likely, the customer's attitude will be such that we can expect repeat business. On the other hand, if the piano arrives at the customer's home with all kinds of problems, the above-mentioned attitude of the customer may change. Add to it the possibility of a long wait for service, and we may be off to an unpleasant start. The fact that the world has "shrunk" to the point where shopping by mail, computer or by traveling quickly a few miles to the next geographical location is a reality, may, however, justify some "alternative" thinking. Let us assume that a dealer is "surrounded" by competitors who sell the same product. It is only logical that customers will shop for price. If service is used as part of the advertising campaign, no doubt all dealers have to follow and offer the same kind of deal — or better. And now comes the dilemma. Some dealers who not only promise the lower price and better service, etc., but actually *keep* their promise, discover that they just can't keep up with these standards and may have trouble remaining in business. Consequently, those who are still around have to make the choice of whether to keep the promise of low price and good service and risk the future of their existence, or just promise and, well, not keep the promise. They have to make up for it by providing cheaper service (inexperienced technicians), "selling" the new customers to newly established technicians by getting the prepping and/or first service call done practically at no cost. Some dealers even resort to their own "Service Warranty," which is worded cleverly and implies that the instrument must be serviced by their own technician in order to keep the "warranty" in effect. And, the ultimate saving, just don't prep the piano at all, hoping that the percentage of problems will be small. Incidentally, left-pedal-blocking styrofoam, bottom-board wedges and action-retaining hooks are dead giveaways that no prepping has been done.

Some pianos need more prepping than others. There is the famous name Asian vertical piano which has the reputation of being uncrated at A=440. Indeed, with a few exceptions, that is true. That upright also has aluminum action rails and the entire condition is generally stable — until it is kept in the warehouse or showroom for any length of time. That is when the "yo-yo" effect of humid-to-dry and vice versa begins. Action screws will become loose, and due to the humidity changes, tuning will be affected. Naturally, prepping in this case should include tightening all screws, spacing hammers, tuning and pedal adjustments. Of course, regulation and especially capstan adjustment changes (due to keybed swelling and contracting) should be checked.

Some of the other Asian uprights show many of the above features except for the "440 out of the crate" distinction. As a rule, we have to recognize that the phrase "workmanship and material" is the best answer to questions as to why some need more work than others. That, of course, makes one brand more expensive than the other and, as a result, in the less expensive kinds, something has been saved somewhere. In most cases, the "something" is time. After all, labor (in countries like Japan) is expensive. I have experienced over and over again that taking one of the "cheaper" Asian uprights, tightening all screws, regulating it properly and tuning it well before delivery, produced a more stable instrument and a more satisfied customer.

Speaking in "general terms" we can safely say that the order of events was (and still is) obvious. Japan's economy followed that of the U.S.; wages and manufacturing cost became higher and approached those of the U.S. Along came Korea experiencing a similar cycle of events and, finally, the attention of piano manufacture shifted to China. With piano manufacturing skills somewhat less developed than those of their competitors, the quality of the instruments delivered during the early years of China's piano venture left a lot to be desired. Consequently, the instruments not only required a lot more prepping, but often prepping was not the only solution. In the case of these early Chinese pianos I will say that there just is no way a dealer could get away without quality prepping — and I mean thorough and high-quality prepping. This included tightening of ***all*** screws (including case screws), complete regulation (including traveling) and, in many cases, repinning of some action centers. Surprising as it may seem, tuning pins were usually tight and instability could usually be cured by tightening pinblock screws, and in some cases there was a need for bonding of plate against back structure by drilling through and using long bolts and nuts (if done expertly, this is very effective and can be done inconspicuously). At this point I would like to

say that the piano production in China has improved greatly. Add to it the fact that several Western companies purchased Chinese piano companies and are already producing instruments of quality comparable to the original "home factory" production.

Without speaking about specific brands, I think it's generally true that as price drops, prepping becomes more important. As a guideline, let me mention that especially some of the "new" name brands, using actions of their own manufacture, have been known to be in desperate need of extensive dealer prepping. I suggest checking very closely for jack alignment. Jacks actually activating adjacent hammer butts have been the rule with some of these lower-priced "new name" instruments. Another common problem seems to be squeaks in key centers and general alignment. Pianos produced in areas with predominantly low temperatures seem to arrive in the U.S. at a rather low pitch; I don't believe that there is a connection. I do, however, believe that raising pitch to standard should be done during prepping before delivery.

Let us continue our journey into the area of the former Soviet Union and other Communist countries. During "Iron Curtain" times and even after that, the so-called Communist countries tried desperately to compete in the world market. Pianos from these countries started to show up on the U.S. market. Belarus (meaning White Russia) produced pianos. Their uprights are lower in price than most Asian instruments. The Czech Republic, with quite a tradition of piano building, began making a mark for itself again after a few decades of absence. Some of the finest names in piano history, like Bluethner (Leipzig), Petrof (Czech Republic) and many more, are again on the list of top names available.

A word about the rather well known and fine central European uprights. For obvious reasons I am going to "lump" them together and let you sort out the various makes.

Prepping should include: hammer blow distance (don't forget to adjust hammer rest rail first and capstans last), as well as damper timing. (Dampers should begin to lift when hammer traveled between 1/2 to 1/3 of its way). Make sure dampers "follow the string" when string is pushed. Also, check for tight key centers (key should drop into position by its own weight when lifted straight up on the balance pin).

At this point I should mention that some European imports have been known on the American market for a good many years. Their quality has been established and they are well represented. There is hardly ever a problem that cannot be solved in consultation with the U.S. representative. Most of them are eager to work with dealers and technicians.

For a moment, let us examine the less favorable, but unfortunately also common situation of a totally "non-prepped" piano. As mentioned above, some dealers *do* opt to go that route. For argument's sake we could pretend that the instrument has been delivered "from crate to customer" without a stop at the shop or store. What now? With the acceptance of the job, the dealer technician is obligated to do everything in his/her power to make that instrument perform as well as possible.

Remember, the customer expects a piano that: a) performs as well as the sales person promised, b) was prepared (as the sales person promised), and c) is of the finest quality available (as the sales person said). Where do we begin? What do we do? And how can we still make a living? I will address these questions in next month's "Prepping Verticals for Fun & Profit—Part II". PTJ

An Essay on the History of Tuning - Part II

Continued from Page 29

A description of how pianos were actually tuned in 1819 was probably as true in the 14th century as it is today. "Almost every man who tunes his own instrument has a system of his own: we shall only observe, that the greatest musicians in the course of their lives have often changed their method." (Graupner)

NOTES

1. Jean de Muris is best known as a French astronomer and mathematician. His work in music, the third leg of the Trivium, was an important contribution. He codified and integrated conflicting methods of musical notation into the system that we recognize today.
2. The C-F#, or tritone interval, was known as the *diabolus in musica* from Medieval times until the end of the Renaissance, when it became the *discordancia perfecta* (*New Grove Encyclopedia of Music and Musicians*). It differed from the diatonic diminished fifth interval of B-F, in that it was conceived of as an augmented fourth. Both were universally disallowed as a consonance. PTJ

A Simple Shop Hoist

By Rob Kiddell, RPT
Calgary Chapter

Here's a fairly simple hoist that my brother and I constructed over the summer. Total cost involved was around $250 (Canadian), less than half of what commercial hoist and crane assemblies sell for. I use it for many things, including pulling plates on grands, and keybed removal and replacement on verticals.

Design & Construction

Materials:

- Four 8-foot lengths of 2 3/8" drill stem pipe or box pipe.
- 3-foot length of 2 7/8" drill stem or box pipe for corner brackets.
- One set heavy-duty plate-type casters (brakes optional, but a good idea).
- Four feet of 3" X 1/4" steel plate, cut or welded into two "T" shapes. Also, enough left over to make 4 plates to mount the casters to.
- Five bolts, at least 5" long and 1/2" diameter, plus 14 nuts and assorted large washers.

Also, a 1-inch length of metal tubing so that the hook on the hoist doesn't score the threads of the bolt it is hanging from.

- Two heavy-duty roller bearings, inside diameter slightly larger than the bolts used for the roller truck.
- 1/2 ton (or better) chain hoist. Shorten the drive chain so that it doesn't hang into the piano you're working on.
- Three nylon adjustable straps to secure the item you are hoisting.
- Access to a welder and metal cutter, or be on friendly terms with a machinist.

I have purposely left out measurements so that you can customize the hoist to your shop space. One nice feature of this design is that you can break it down for storage or portability.

Photo 1 — The author positioning the hoist over a 4'11" Reed & Sons grand.

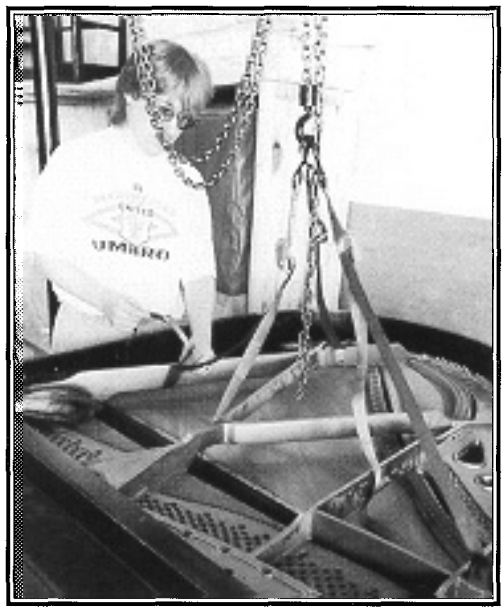

Photo 2 — Attaching the nylon cinch straps to the plate struts.

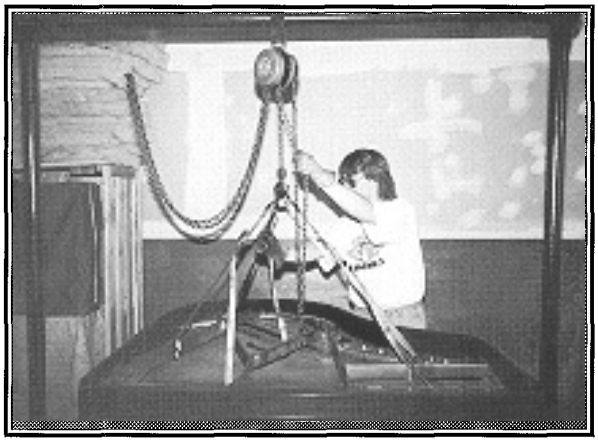

Photo 3 — Tensioning the straps to lift the plate evenly.

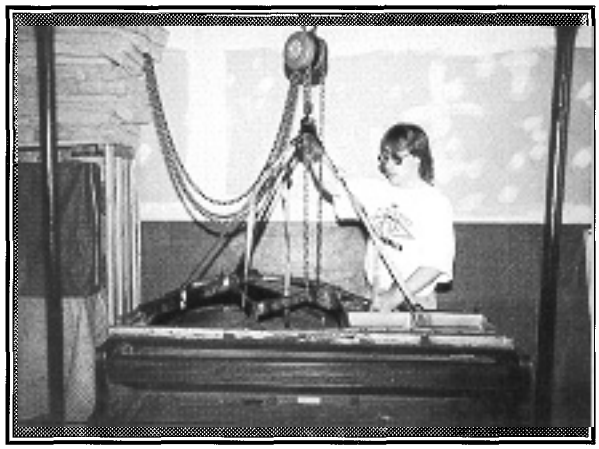

Photo 4 — Hoisting out the plate. Plate flange has cleared the stretcher.

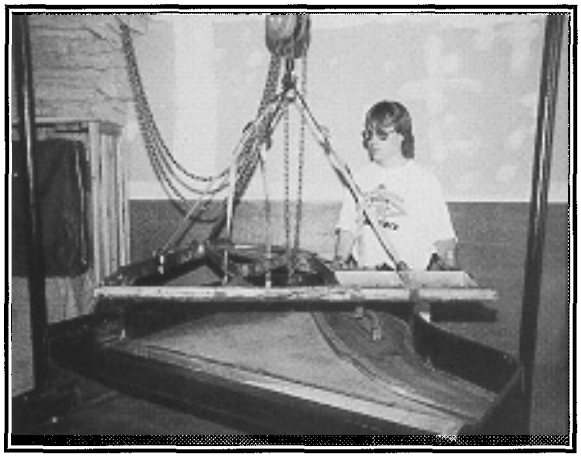

Photo 5 — Rolling the piano away. Careful!!

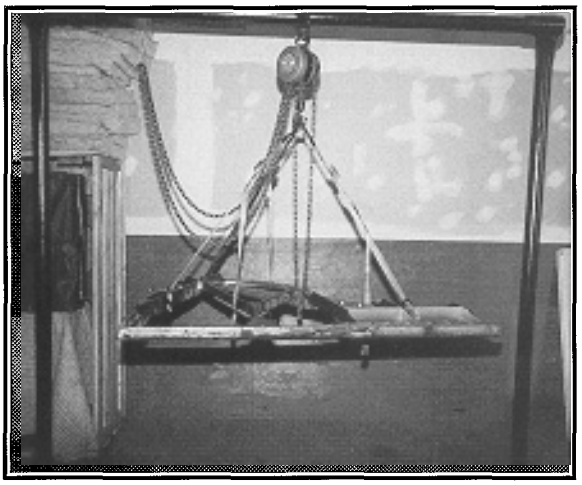

Photo 6 — Plate suspended in mid-air, later lowered onto a piano tilter for portability.

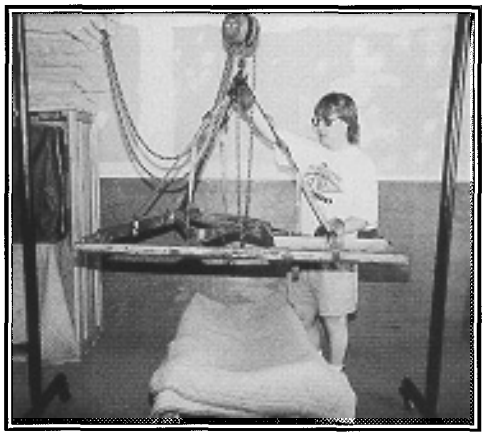

Photo 7 — Lowering plate onto padded piano tilter.

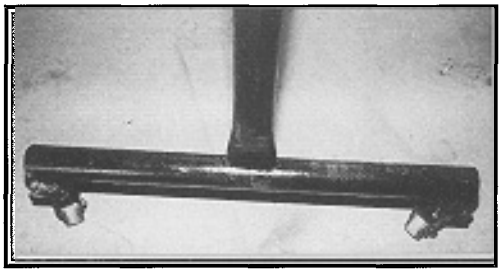

Photo 8, top — Detail showing corner assembly of crane. Photo 9, center — Bottom of crane, showing casters. Photo 10, above — Detail of roller truck assembly mounted on crane.

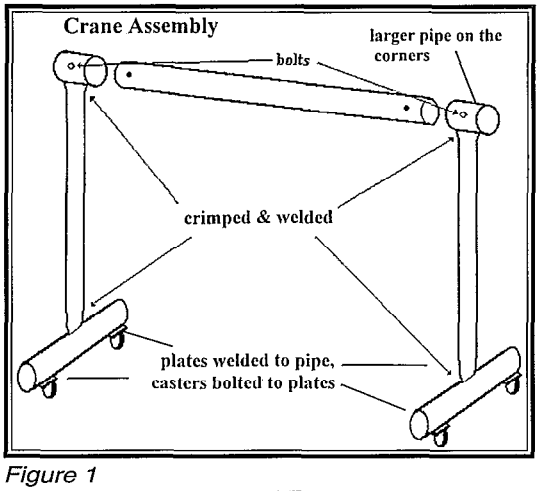

Figure 1

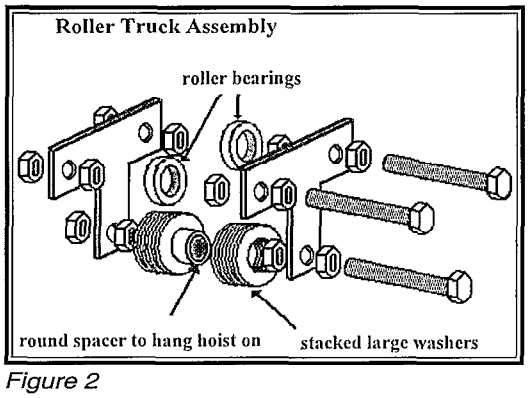

Figure 2

Finessing Pianists & Their Instruments

By Nancy Burkhalter
Laramie, Wyoming

Tuning a piano looks easy. It ain't. Most people think we listen for what "sounds good" and then just turn the pin. But, in fact, just one tuning entails thousands of judgments about where and how to set the 230-odd pins. Acquiring such high levels of both physical and aural acuity requires years of practice. But goodness knows, all that skill can be seriously compromised if tuners don't know how to finesse the pianists themselves.

Take concert pianists, for instance. They have a special job to do: perform difficult music on a strange piano with an orchestra and conductor they've never seen before. Pretty risky. Enter the tuner — yet another wild card who can make or break their performance.

"I would say," said Cincinnati-based tuner/technician Ben McKlveen, "that 50 percent of all we do is psychological support for these people. We have to find a niche where we can get to them and say, I'm in your corner, and I'm going to do whatever I can to make you comfortable."

Whether these artists complain about a mushy action or a tubby bass, the tuner must translate all that into technical jargon. Whatever it takes, tuners stand ready to spring into action, often under immense time pressure.

Of course, there can be only one prima donna in any relationship. As for tuner and artist, there is no question who has dibs on that role. Tuners must cater to every pianist's wish, no matter how difficult or unreasonable.

"We are the Sancho Panzas to the pianistic Don Quixotes of the world," McKlveen said.

Here's his recipe for survival: relate to their problems, build trust, and above all, "be a silver-tongued devil," he added, with his well-honed wile and guile.

One artist McKlveen worked his magic on was Austrian-born Walter Klien, who wanted the piano brightened for his performance of Beethoven's Fourth Piano Concerto. "Great," grumbled McKlveen to himself. "I just took that piano down last week for Andre Watts." Klien, perhaps attempting to goad McKlveen into an argument, awaited his protest.

But Klien had met his match. "I looked at him," McKlveen said, "and said, 'Mr. Klien, you and Beethoven are the artists here. The piano is just a piano. I'll put it wherever you want it.' And at the risk of losing this year's modesty award, the piano never sounded better under the hands of Walter Klien."

On rare occasion, some requests have gone against the best judgment of the tuner. Benjamin Wiant, protege of McKlveen and my mentor, tells of a pianist who blustered into Columbus demanding that Wiant "spritz" the hammers, that is, lacquer them to brighten the sound. "This was a brand new set of very expensive German hammers," Wiant said, "which, if I had lacquered them, would have turned into unmalleable, terrible sounding, brilliant, tinny stuff.

The pianist then played his trump card. "Well, if I were in New York, they would do it for me in 5 minutes," at which point Wiant assured him he was not in New York, the piano did not belong to him, and in short, to buzz off.

That doesn't mean Wiant won't also go the extra mile if circumstances dictate. Eduardus Halim was playing a Steinway that Wiant had just rebuilt. But, as Wiant points out, "Actions are made of soft and changing parts. Leather compacts, felt compacts, very small changes of dimension take place as the instrument is being used."

After the first part of the program, the action started to change, alarmingly so. Halim was terrified. "So at intermission," reports Wiant, "we dragged out the action in front of the audience and made necessary adjustments. The audience thinks, 'Oh I didn't do my job.' But Halim thinks, 'Oh wow, I can go on with my performance.' He almost tearfully thanked me after the concert."

The Tuner's Life

Both Wiant and McKlveen have been tuning for a combined total of 80 years. Each has had extensive musical training and each stumbled into tuning as a hedge against an iffy career as a musician. As McKlveen puts it, "I thought tuning was the most ridiculous occupation I'd ever heard of. Only drunks, blind people, and old men became piano tuners."

McKlveen emerged from World War II in 1946, having served in a division of the Army Band as an oboist. In 1948, with a degree in education under his belt, he enrolled in a piano tuning course at the College Conservatory of Music of the University of Cincinnati. After a few years as a tuner and a sometimes musician, he went back to teach piano tuning at the Conservatory." That's when I began to learn my craft," he said.

A gregarious and very likable fellow, he teaches classes in every aspect of the field at Piano Technicians Guild conventions, including stringing, voicing hammers and tuning. His tall, trim physique and booming voice give him a commanding presence, not compromised in the least by the ever-present jump suit he wears that has become his signature. Any other 74-year-old man would simply look foolish in such garb.

There are several piano tuning schools across the country. But one can still apprentice a master craftsman and enjoy the same nurturing guidance found in medieval guilds. Tuners are, in general, very generous with their time and, despite stiff competition in many cities, are cordial and willing to share supplies and ideas. Wiant helped me drill a new pin block one day, asked for no payment, and we had a great time doing it.

Except for the jump suit part, Ben Wiant is every bit as generous, knowledgeable, and robust as McKlveen, He's a perfectionist, really. One colleague, frustrated at Wiant's penchant for precision, wisecracked that "even Ben's work isn't good enough for Ben."

Wiant's first love is historical instruments. For one Guild convention he laid an equal temperament on a modern piano and a historical one on a pianoforte so the

audience could appreciate how Beethoven, Chopin, and Bach intended their music to sound.

Wiant even carries a special, smaller tuning hammer that is more sensitive to the movement of the pins in European-made instruments. "America technicians have a fetish for tight pins," he says, laughing. "This [hammer] is very useful in telling me exactly how the tuning pin is moving if they are not so tight." He's been sent on buying sprees to many legendary German piano factories, such as Steinway's in Hamburg, Bechstein's in Berlin, and Seiler's in Kitzingen. His own house is littered with gems from yesteryear: an 1860 Broadwood from London, an 1810 Lemuel Gilbert from Boston, and an 1865 Wirth (a relative of the Bösendorfer) piano with a Stein-Streicher action, the kind Mozart and Beethoven used. His newest treasure is a 1969 Grotrian-Steinweg, Model 200. Music is indeed his passion.

A refined, energetic man with an easy laugh, he has dedicated 35 of his 61 years to the music community in Ohio, and indeed, as far as Wyoming. Recently, Eduardus Halim asked that Wiant be flown out to do his wizardry on the 9-foot Bechstein at Jackson's Grand Teton Music Festival. In fact, he is so much in demand by Festival artists that he has been tuning there for 15 years.

Halim says he feels comfortable working with Wiant because, "Ben knows my playing well, and knows what I like and what suits my playing."

"Eduardus has an absolutely hair-trigger technique," Wiant said. "He likes a very fast piano."

This ability to relate to the pianist's repertoire and technique is exactly why these men are a cut above.

"I consider myself primarily to be a musician," explains Wiant, "and secondarily a piano technician."

Wiant uses this knowledge to build rapport by showing artists he is sympathetic with their needs. "I try to make positive comments about the repertoire," he continues. "I have played a lot of it, and I know the problems involved in executing it."

McKlveen agrees. "If you can talk to them about what they are playing, [show] you are not just a technician but also musical, this bonds you even more closely."

Although not usually adversarial, the relationship between tuner and pianist can still be a test of mettle. Artists who are tuners themselves, as is Anton Kuerti, may not be so much picky as they are very aware of what they want and what is possible for the tuner to do.

"[Kuerti] is very detailed in what he expects from the instrument," Wiant said. "So he is trying to get me to perceive the instrument exactly as he perceives it, so if there are problems, I can fix them. But when it comes down to the performance, all that technical perception is wiped away and he concentrates on playing the piano. And it is absolutely fabulous."

One can't help getting the impression that some artists do set out to bedevil the tuner. McKlveen said he "spent a month with Ivan Moravec one week," who had come to the hall early before his all-Schumann concert. McKlveen tells of an effusively cordial man looking about for a tuner to fix the middle key that traveled too far to the right when he used the una corda pedal.

"So I pulled [the action] out, shimmed the flange (put a piece of paper under it), and put it back in," McKlveen said. "Moravec checked it and said, 'Oh, that's wonderful. I have five more up here.'"

McKlveen wasn't about to shove the action in and out 88 times to shim each key.

"Mr. Moravec, what is it that you are trying to achieve?' He said, 'I want the una corda to move the action to the right, but a minimum amount of motion. Do you understand?'"

Yes, replied McKlveen, with a strained smile, and took the shortcut, which was to shim the case so the action didn't travel so far to the right. It is the most efficient method to correct the problem, and what he would have done in the first place if Moravec had been straight with him about what he wanted, instead of trying to play Stump the Technician. In the end, he said, Moravec had learned two things: "He knew that I knew what I was doing, and he also learned that I would carry him as far as he wanted to go."

If you can talk to them about what they are playing, [show] you are not just a technician but also musical, this bonds you even more closely.

But little did McKlveen know how far that was. He then proceeded to do the same thing with the tone: The D up here is too dull. Can you brighten it? Can you do the whole section now? Yes, McKlveen did that, too. The customer's always right, he kept muttering to himself.

The *piéce de résistance* occurred when Moravec announced," You've improved the piano by about 10 percent. However, with this concerto and this piano in this hall, I need about 20 percent more."

"This is when your stomach hits your ankles," McKlveen said, because he now faced the decidedly untantalizing prospect of spending the entire afternoon with this Germanic taskmaster lacquering and voicing hammers.

And that's exactly what happened. Moravec sat by his side the entire time until the sound was evened to the artist's liking.

After a thorough concert tuning, McKlveen thought he was rid of him. Not so. He appeared behind him like the Phantom of the Opera at exactly 7 p.m. He then proceeded to pick each unison from note 21 to the very top. "He hates a dangling unison," McKlveen adds admiringly, because "he has a right hand that can spin a melodic line out that is as smooth as a silk thread being pulled off a spool."

After the concert, Moravec bestowed upon McKlveen his highest honor: offering his right hand to shake, not his usual left hand extended to commoners.

Moravec said, laughing, "You know, my colleagues are going to be very happy for all the work you've done on the piano." Then he demurred. "That's not true. Nobody's going to know the difference except me."

"Mr. Moravec that's true. But if you know the difference, and it makes you comfortable, and you play better, then you've been successful and I've been successful, and you and I have had this wonderful collaboration."

A silver-tongued devil, indeed.

In Pursuit Of Perfection:
A Chronicle of the Piano's Most Illustrious Builder

By Charles Ball, RPT
Austin, TX Chapter

For aficionados of the Steinway piano, 1995 brought an embarrassment of riches in the form of two written chronicles of that illustrious firm and its prestigious instruments. First appeared the book, *The Steinway Saga*, by D.W. Fostle, followed in short order by *Steinway & Sons*, by Richard K. Lieberman. The production of these works was greatly facilitated by the availability of the Steinway archives, which reside at LaGuardia Community College/CUNY, and by the personal archives and accounts of Henry Z. Steinway, the last family member to serve at the helm of the firm. Many others related to or associated with the Steinway family and the company were interviewed as well. At the 1996 Piano Technicians Guild Convention in Dearborn, Henry Z. Steinway, in addressing a group of technicians about the history of his family firm, characterized this book as a "light history," and, as such, it is most readable and enjoyable.

A review of *Steinway & Sons* by Richard K. Lieberman, Yale University Press, 1995. 374 pages. Illustrated with numerous black & white photos.

At first blush, two books on the same subject may seem redundant; however, each makes its own contribution to the history (and legend) of the subject, and each has its own emphasis and interpretation of the available data. Without engaging in an excess of gratuitous, direct comparison of the two tomes, there are some notable differences worth reporting.

Firstly, D.W. Fostle is clearly very much taken with the pivotal figure, William Steinway (1835-1896), the fifth child of founder, Heinrich Engelhard Steinway (Steinweg) and the first president of Steinway & Sons; and most likely the one member of the family who did the most to establish the company's place in the pantheon of illustrious instrument builders. William's many gifts to posterity include his personal diary, which provides a wealth of details, not only about his own personal life, but about the lives of those about him, the activities of the firm, and his multitudinous other business activities.

After the untimely separate deaths of his brothers Charles G. (1829-1865) and Henry Jr. (1830-1865), William was left alone at the helm of the rapidly expanding family business; and through shrewd promotional activities, such as entries into the popular trade fairs of the day, most significantly the Paris Exposition of 1867, the endorsement of popular artists of the day, such as Anton Rubinstein and Ignace Paderewski, and the building of Steinway Hall in New York, a shrine from which he would dominate the musical life of the city for decades, William succeeded in establishing his instrument as the ideal which all other manufacturers would ultimately attempt to copy.

It was William who, in a vain attempt to find refuge from the periodic labor unrest of New York City, which has beset the company from its earliest days, began purchasing land in rural Astoria, across the bay from their Manhattan manufacturing center and began transferring most aspects of the building of the Steinway piano there. In the course of his narrative many fascinating facts emerge. For instance, at one point he became so frustrated with labor costs and unrest in the city, that he almost purchased a factory site north of Boston.

William also had vast business interests beyond the building and marketing of pianos. He was very active in New York politics, and served as chairman of the New York Transit Authority. Many of his extensive investments in Astoria, above all the village he created primarily for his workers, proved ill advised or untimely, so that after his death in 1896, with mounting debts and the country in the midst of a ruinous depression, his cousins attempted to sell Steinway & Sons to an English syndicate for $6 million!

The Steinway Saga examines many of the legends that have surrounded the origins of the house of Steinway and its name for generations, and dismisses many of them as unsubstantiated, in conflict with the historical record, or as the creation of the heated imaginations of the company's marketers; while *Steinway & Sons* uncritically recounts some of these legends, such as those about the humble and almost miraculous origins of the founder.

Furthermore, Fostle engages in some fascinating speculation about the early piano building that the family engaged in after its arrival in New York city in 1850, suggesting that their first New York creations may have been produced for the stencil trade, thus accounting for their first recorded piano numbering in this country beginning at 483 — far more than they could have produced during their cottage industry days before emigrating from Germany or during their early years of apprenticeship in New York City.

Even more fascinating is his speculation about the origins of the so-called Steinway sound. Recounting extracts from family letters and diaries, the author stresses the repeated efforts of Henry Jr., one of the chief architects of the Steinway piano, to produce an instrument that could generate sufficient volume to satisfy ears dulled by years of heavy drinking, the unprotected assaults of such production noises as pin driving, and the ringing of tinnitus. Referring to the rich record of correspondence between Henry Jr. and his brothers Charles and Theodore, where the auditory agonies of the Steinways, and Henry Jr., the architect of the modern Steinway, in particular, are detailed at first hand, Fostle advances his theory that the famous Steinway sound may have found its origins, not only in the need for a more full-throated and projecting instrument to suit the musical tastes, concert venues and repertory of the day, but also in the somewhat pathetic desire of one of the most influential piano designers of his day to experience fully the fruits of his work.

On the other hand, Lieberman is at great pains to show that Henry, Jr., not C.F. Theodore (1825-1889) the eldest Steinway son, was the architect of the modern grand piano. Theodore bore no love for the new world and was the only son to remain behind in Germany until, upon the death of

his brothers in 1865, he was persuaded to move to New York, where he took out many patents, including most of those for the Steinway vertical piano, which he developed, until he returned to Germany to start the Hamburg operation. Theodore never endorsed William's courting of the concert grand market, preferring to concentrate upon the growing mass market for the vertical piano.

Perhaps, Lieberman suggests, it was William who promoted the notion that Theodore was the creator of the Steinway grand piano, preferring a living and active legend to a dead one. Yet, it is to Henry Jr. that the credit should go: "The so-called Steinway system included all Henry's achievements: a cast-iron plate with a downward projecting flange, longer and heavier over-strung bass strings fanning out over the center of the soundboard, a vibrant soundboard with the bridges closer to the center, and a responsive action that gave performers more control over the new power at their fingertips. Some of these things were his own invention, some the result of heavy borrowing from others. Whenever another manufacturer had come up with a new piano, Henry had hardly been able to wait to open the lid, examine the mechanism, and draw the parts that interested him. But nobody had ever put it all together like this before. This was the modern piano, and it has not changed much since 1859. By the end of the century most of the major piano manufacturers in the United States and Europe were imitating Henry's construction, and all pianos today use the Steinway system, although the term is no longer used, because there is no alternative around."

Clearly, Fostle is most captivated by the 19th century developments and activities. He delves in some depth into the technology of the Steinway piano and illuminates the innovations that made the instrument unique. However, this reader felt with this book that once William Steinway died in 1896, the best years were past. The subsequent family members who served at the helm of the firm and on the periphery, are not nearly as sharply or sympathetically drawn, and the company is described in terms of a great spiraling descent into ultimate oblivion. The instrument is rightfully venerated, but in a somehow detached manner from the company that continues to produce it.

It is in sketching the 20th century history of the firm and its characters that Lieberman really comes into his own. The personalities and achievements of the four presidents to serve in this century become most vivid in his portrayal, especially those of Theodore E. (1883-1957) and Henry Z. (1915-), the last family member to serve as president, and the figure who restored Steinway & Sons to a sound fiscal footing before selling out to CBS in 1972.

Theodore's tenure is marked by enormous losses and setbacks, including the collapse of the piano market from all time highs in the mid 1920's, with the advent of radio, the phonograph, and the automobile; the Great Depression, when the employment dropped from more than two thousand people to six hundred, many of whom worked part-time; the Second World War, when with shortages of materials and no demand, piano manufacturing at Astoria ceased altogether; and the lean years of austerity that followed. A tragic figure who never sought the presidency of Steinway & Sons, Theodore was a sensitive, artistic individual who lacked the business acumen of his predecessor, Frederick (1860-1927) and his successor and son, Henry Z.

Lieberman asserts that important factors that guided and supported prior Steinway leaders, perhaps most notably William Steinway, included having close associates from the family or its inner circle to rely on, and possessing an appreciation and understanding for both business affairs and the music and artistic life of the community. Yet, Theodore was essentially alone at the top, a frustrated artist with little love or inclination for the heavy responsibilities fate had placed upon him. Retreating further into drink as the prosperity and glory of Steinway & Sons receded further into the past, he turned most of the day-to-day operations over to Henry after his return from World War II, and barely saw the company through the centenary celebrations of 1953 before resigning in favor of his son and heir in 1955.

"The Steinway Saga examines many of the legends that have surrounded the origins of the house of Steinway..."

In considerable detail, Lieberman sketches the many production and manufacturing changes that occurred during the current century, as Steinway struggled with a dramatically changing market and with new technological innovations. Models were added, such as the depression era baby grand, model S, and the 45" vertical "pianino;" and models were deleted, such as the models O and A, thereby dispelling the popular notion that little has changed at Steinway & Sons since the turn of the century.

It is often forgotten today that at the time Steinway & Sons was founded in 1853, most of the pianos being produced in this country were square grands. It was not for another decade that Steinway began producing modern grand pianos in any quantity, while they made their first upright in 1862. At that time uprights were not as popular in this country as they were in Europe, where homes and apartments were smaller. Also, in mid-century, grands were generally eight feet long or more. The model A, a 6-foot grand, was introduced in 1878 to capitalize on a new market for smaller pianos, while the popular "bread and butter" model M, a 5-foot, 6-inch grand, was introduced only around 1912.

After the turn of the century the pace of technological change, as chronicled in the book, was slower but not inconsiderable. Much change took place in the 1920s, a relatively short period when demand reached an all time high just before "nationwide piano shipments dropped by 90 percent." Early in the decade the pressure was on to increase production without reducing quality, and a combination of talented designers and technological breakthroughs facilitated a strategy to do so. In addition to the introduction of new models and factory expansion, Steinway's creative geniuses introduced some changes that are of potential interest to technicians.

The first major change in the construction of grand pianos was to abandon the use of varnish for finished

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50 YEARS AGO ...

Man with 100 Pianos

W. R. Pierce

*If it can ever be said of a man that he lives, eats and sleeps his vocation, then it can truly be said of W.R. (Bob) Pierce, head of the piano department at Barker Bros., Los Angeles. Mr. Pierce not only sells pianos at a record-breaking pace: he works at a desk shaped like a grand piano; he smokes a piano shaped pipe and he owns what is probably the world's finest collection of miniature pianos; a collection which has been exhibited and exclaimed over from coast to coast, and which has been publicized in leading periodicals both in and out of the piano trade. In short, Bob Pierce is "Mr. Piano" himself. (**This is the first in a continuing series of articles and photos that will be republished from the 1947* Piano Technician *and* Tuner's Journal**)*

A few of the more than 100 miniature pianos in Mr. Pierce's collection.

In Pursuit Of Perfection: A Chronicle of the Piano's Most Illustrious Builder

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surfaces in favor of nitrocellulose lacquer." Murphy Varnish Company in Newark, N.J., was commissioned under DuPont to develop a lacquer for pianos. Together with Cassebeer [the cousin who engineered most of the manufacturing changes], they developed a special formula for Steinway, Murphy Varnish no. 11, labeled "TC Lacquer" (for Teddy Cassebeer). The new, fast-drying formula transformed piano making at Steinway & Sons. What once took months now took days." Another change facilitated by the use of lacquer, was the abandonment of mahogany wood finishes on the model M in favor of a black ebony finish, as most of the other models had abandoned rosewood, starting around 1888.

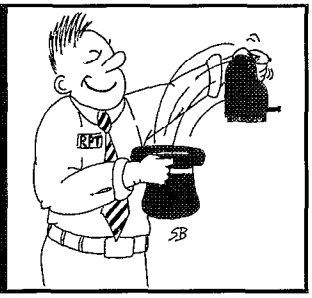
Structurally, the most significant change in this period was the use of maple alone for grand piano rims, rather than the maple and poplar mix, previously used, and now both inner and outer rims were bent together in one process. Thus Steinway was able to keep up with the production demands of the 1920s.

A final note of interest pertains to the Hamburg operation. C.F. Theodore had long dreamt of opening a branch of Steinway & Sons in Germany, with himself solely in charge. Perhaps it was as repayment for his service to the family business when he reluctantly moved to New York after the death of his brothers in 1865 that he was finally permitted to do so in the 1880s. Labor was cheaper in the Old World, and not as susceptible to subversion by labor unionists and socialists. Yet well into the next century the Hamburg operation was mostly an assembly plant for plates, rims, and actions shipped from New York.

In conclusion, this chronicle of the Steinway family and the company and instrument that it produced, is rich with details that are fascinating and appealing to all who love the Steinway piano. In fact, even for those with a more general interest in the piano, Steinway & Sons provides a clear and lucid picture of the world of piano manufacturing and marketing in this country from the mid-19th century to the present. For the technician, as we have seen, there is a wealth of technical detail to attract his attention; in addition, many familiar names, such as Bisceglie, Drasche, and Lloyd Meyer, emerge. Thus, this is an important addition to our professional library.

Grand Illusions ...

The Page for Serious Cases



The Piano's Contribution to Civilization

– Part I of Part II

By Bob Bullok
Waukegan, IL Chapter

One morning in 1517 Copper Nikus found a piano someone had abandoned on his combination patio-drawbridge. Obsessed, as he was at the time, with measuring the speed of rumor, he missed the significance of this fortuitous event. Mistaking the small, neat package to be a bundle of firewood, he promptly chopped it up and fed it to his hearth. Only when he smelled the small, plastic elbows burning did his folly become apparent, and he is said to have wailed diconsonately, "Forsooth, I have incinerated a spinet!" because Copper Nikus spoke Lithuanian, we cannot guarantee the translation but, to this day, the words "spinet" and "firewood" are frequently used interchangeably. Joan of Arc, the first female piano technician of record, was a saint of a woman. She became embroiled in a dispute with one of her customers, a mean-tempered abbot named "Bud" and was braziered over a spinet. Her last words are reported to have been, "Well, at least that's one less spinet the Guild will have to put up with!" The famed Nostradamus, after whom we have named a university, predicted St. Joan's immolation. It was subsequently noted she had died 62 years before Nostradamus was born, thereby rendering his prediction somewhat redundant. His reputation tarnished, he spent the remainder of his days as a historian. When he began predicting things that had already happened, his batting average improved to nearly 50:50.

In the middle 1700s the "upper crust" of the European city-states, fancying themselves *Patrones d'Art*, began subsidizing almost any ragtag musician who could prove he had tuberculosis. Pampered as they were, these malingerers cranked out a lot of music because they had nothing else to do. They didn't know the meaning of the word "work." *Really.* If you ask a composer what he did, he'd say, "I *opus* in the music business." Because they had to carry their instruments with them from hand-out to hand-out, the lighter harpsichord became popular. Its shrill, "tinny" sound caused Beethoven to become deaf. This turned out to be a mixed blessing. With no aural distraction, he did some of his best *opus*. He liked to feel the vibrations of the bass strings, the only music he could "hear," so he went into business with the younger of the Chang brothers, building larger, stronger instruments. His popularity soared because he remained uninfluenced by the music of the day, and many harpsichords were converted to firewood or dog coffins. Some still exist, but they are usually hidden away in some dusty attic and are no real threat to the highest form of the piano art, "Eight-Beat" Rock 'n' Roll.

The evolution of the piano followed the course of human progress in the middle and late-middle ages. Sometime during the Crusades, billed as *"Christian Rock World Tour 1,"* the electronic keyboard first appeared. It never caught on, though, because batteries hadn't been invented and nobody wanted to lug the new instrument, which resembled part of a piano, around. Cruel infidels would taunt, "Hey, stranger, where's the rest of your piano?" Columbus was a piano prodigy who, finding himself bored to death by the humdrum life of a court performer, imposed on Queen Isabella to stake him to a trip to the New World. Ostensibly, he was to open a string of piano-bars in the Caribbean and send the "royalties" to his queen. As fate would have it, he had trouble getting through customs in Santiago where the cargo was confiscated and sold for you guessed it, firewood! Isabella, bless her generous heart, never got a dime. The mail was slower then than now, if you can believe it, and Isabella never heard from Chris again. Dead broke and broken-hearted, she died believing Chris had fallen off the Earth near Bermuda. A broken man, Chris found his way to Havana and took up with The Demon Rum. He is thought to have expired in 1530 in Cancun.

Pianos did not appear again in the New World until the Pilgrims arrived in 1620. They were fleeing the *Spinach Inquisition*, a brief but violent period of time in Europe when the Church asked more questions than a four-year-old watching *The Playboy Channel.* The wrong answers elicited unhappy responses from "Torky" Mada, the Chief Inquisitor. Being quick to size up the situation, the Pilgrims grabbed every piano they could find, rented a ship from Mayflower Movers and sailed for The New World. Having left in such a hurry they didn't have a chance to grab the music, the forlorn Pilgrims traded their cargo of pianos to the Aliquot Indians for tobacco. The Aliquots were glad to get rid of the smelly weed, having determined it to be harmful to their health. Of course, the Native Americans, as they called themselves, didn't like playing the piano, but they used them to build hogs by wrapping drop-cloths around them. Journeying on the Jamestown, the first Pilgrims developed emphysema in the winter of 1621 and all died. Thereafter, Pilgrims arriving in the America avoided both tobacco *and* pianos. To this day, you will not find a Pilgrim who smokes or plays the piano, and many of their "No Smoking" and "No Piano Playing" signs can be seen throughout New England.

(EDITOR'S NOTE: Part II of Part II of The Piano's Contribution to Civilization *will be published in an upcoming issue.)*

PTG Review
PIANO TECHNICIANS GUILD
Dedicated To PTG News • Interests & Organizational Activities

1997 Institute Shaping Up

It is early December as I write this, and Institute plans for our 40th Convention in Orlando, Fla., are progressing smoothly. The Institute team of Wally Brooks, Evelyn Smith, John Ragusa, Bob Anderson and Paul Olsen are excited about presenting an educational, creative, innovative and rewarding Institute for everyone.

At this year's Convention, you will have the choice of more than 120 subjects relating to piano technology, business, and health. There will be many new-to-the-international Institute instructors with new ideas to share along with our veteran instructors with new classes and old standbys.

We will have some outstanding classes and instructors. One of these will be ***Bruce Hoadley,*** author of *Understanding Wood* and *Identifying Wood.* He will give a class on "Understanding Wood" and will also give a special 6-hour class on "Wood Technology," covering the subjects of properties of wood, wood and moisture, and wood gluing.

Friday evening and again Sunday morning, there will be an ***"Applied Skill"*** room where you can learn hands-on how to notch bridges, hang hammers, repair ivories, file hammers, and ten or more other skills — one-on-one with some of the finest technicians in the world.

The Challenge! Watch two of the finest piano tuners in the country square off, one tuning aurally, one tuning with the aid of electronics. You vote which is better — Virgil Smith and Jim Coleman, Sr. in a rematch of their Chicago Tune-Off.

If your interests are in rebuilding, there will be a nine-period ***"Rebuilding Seminar"*** with subjects including: soundboard repairs, pinblock replacement, new soundboards and bridges, efficient stringing, jigs and fixtures.

If you are interested in ways to make more money and keep it, and run a more efficient business, you will not want to miss the ***"Business Seminar"*** being arranged by Evelyn Smith.

Plans are being formulated to have a professional tax reduction seminar given by W. Murray Bradford, CPA. Mr. Bradford is the founder of the ***Tax Reduction Institute*** and publisher and editor of the *Tax Reduction Letter,* a monthly newsletter for the self-employed, author of *Business Tax Reduction Master Guide* and has appeared on hundreds of radio and television shows and quoted in the *Wall Street Journal, Changing Times, Money, Fortune, USA Today,* etc.

Our ears being our primary tool of trade, will make the class of Robert Fifer, PhD. and audiologist, very important. His class *"**All About Hearing;*** Life Cycles, Exposure to Noise and How the Brain Interprets Sound," will be of interest and value to all.

Hearing Evaluations offered by the Central Florida Speech and Hearing Center will be available at a nominal charge to convention participants.

Yes, we will have tutoring, mini-classes, hands-on regulating classes along with many classes on tuning, voicing, field service, dampers, actions, hammers, player pianos, etc. Watch your future *Journals* for more information.

Now is the time to make plans to be in *Orlando in July!* You will not want to miss this very special ***40th Anniversary Institute.***

— Wally Brooks, RPT
1997 Institute Director

Schedule to Build Your Business

By Gary Neie, RPT
Economic Affairs Comm. Chairman

For technicians who are independent contractors, there is a need to constantly build our businesses. One of the methods that is most effective is scheduling the next service call at the time you finish a service call.

My dentist uses a system that I like. He gets me to sign a card at each visit and then sends out this card a week before my next visit and also makes a follow up call two days before the visit. Each time you receive a card with your own handwriting on it is a surprise. You are also more likely to keep the appointment. I have seen some of the more successful technicians use a similar system.

Another method that is helpful, especially with churches and schools, is to use a contract. I use a contract that is renewable each year. My customers make the agreement the first year and sign the contract. Each of the following years I just send a renewal of the contract and adjust price increases as they come due. You have to be able to look into the future somewhat, as you are locked into this price for a full year. I use my regular tuning price and allow from 10 percent to 35 percent discount depending on how many pianos are under contract. All of my contracts are renewed January 1 of each year, and I mail out renewable notices in October each year to give the churches and schools time to get the prices into their new budgets.

ECONOMIC NEWS & VIEWS

I just assume that they are going to renew and am seldom disappointed. There is a clause at the end of the contract that the cancellation of the contract must be in writing with a two weeks notice of cancellation. This is necessary as personnel change from time to time and you will find it helpful for continuation of your services. We had a "tooner" in our area some years ago who just went

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Second Annual Piano Event a Success

The Redwood Chapter of the Piano Technicians Guild held its second annual "Piano Event" at a major shopping mall in Eureka, Calif., from October 18 to 20. Inspired by the SPELLS program, the weekend-long event brought together local piano technicians, music teachers and a piano retailer to encourage the public to follow their dream of learning to play the piano. The retailer provided a grand piano which occupied center stage in the mall on which each piano teacher gave free introductory lessons. The technicians provided a console upright which was stripped of some of the case parts to reveal its inner workings and also displayed two action models. We distributed brochures from the National Piano Foundation and lists of all local piano teachers including MTA members as well as the independent teachers.

We kicked the event off on a Friday night with a free recital featuring local student talent ranging in age from five to over 60. The students and their teachers were delighted to have an opportunity to perform in the informal setting that the mall provided. The public obviously appreciated the Friday recital and many shoppers lined up for the free piano lessons given throughout the weekend. Occasionally a talented mall patron would ask permission to sit and play the grand and it gave us a great pleasure to say "yes, you *may* play on it."

Our objective was to make the public aware of the resources available to enable them to find a piano teacher and to have their piano serviced. We are grateful for the volunteer efforts of all the participants who made this year's Piano Event a success.

— Carman Gentile
Redwood Chapter

Baldwin Announces Personnel Changes

LOVELAND, OH. — Baldwin Piano & Organ Company recently named Ted Stalets manager of Wurlitzer Acoustic Pianos and Daniel Baker vice president of sales. Stalets has been with Baldwin since 1977 and most recently served as a team member in the Company's acoustic piano division. Prior to that, he worked in Baldwin market development and also served as Division Manager of Baldwin's New York retail operation.

INDUSTRY NEWS

Ted Stalets

Stalet's new responsibilities include growing the Wurlitzer brand in terms of product development, related marketing efforts and sales.

Daniel Baker will be in charge of sales through Baldwin's network of more than 400 dealers as well as related strategic planning and marketing efforts.

Daniel Baker

Baker previously served as vice president of sales and marketing with Professional Healthcare, a retailer and wholesaler of medical supplies and equipment. Prior to that, he worked for Proctor & Gamble in a variety of assignments over a 15-year period, most recently as division sales manager. In this position he was responsible for medical product sales through a large dealer organization. Baker has extensive experience directing dealer sales networks.

Baker received his undergraduate degree from the U.S. Military Academy at West Point.

Schedule to Build Your Business

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from door-to-door and church-to-church and built a pretty successful business. I also enjoyed some of the fruits of his labor as I got the call to repair some of the pianos that he had worked on, but that is another story and "the city is full of these stories."

Word of mouth is probably the most effective method of advertisement, the second best that I have is my van. My company name, address and phone number is on each side and rear of the van. Many times while tuning pianos in a church I hear footsteps coming up the stairs, most of the time it is someone wanting a piano tuned while I am in the area. People have stopped me on the street to get their pianos tuned because they have seen the van. One time a policeman followed me into a customer's driveway. Thank goodness he didn't have that little red light on top of his police car turned on. He came out of his car apologizing that he wasn't stopping me for any wrongdoing, but just wanted his church piano tuned.

One of the most effective tools that has come along is the computer. All of my customer files are on the computer and indexed so that I can pull them up whenever they are due service. I pull them one month at a time and send out post card notices a week in advance of my service dates. This allows me to schedule service in one area at a time to save travel time. I am able to schedule a whole month at a time, always leaving blank days in the schedule for call-in customers. This method is very effective for me, however, other technicians seem to have trouble getting it to work.

You need to always have work scheduled. There is a quote I have seen recently that read, "If you don't have work lined up for tomorrow, *you are out of work.*"

There is more than sufficient work out there for all of us, we just need to be prepared when it comes along. Make it a policy to attend every training session that comes along to help you be prepared. Recently I attended the Texas State Association annual seminar. Just one session that I went to paid for the whole meeting. Charles Fry, RPT, taught a procedure for replacing butt and catcher skins in about two hours that use to take me all day long, and he used a much neater method.

Then, two weeks later, I went to a day-and-a-half chapter session in New Orleans led by Brian DeTar. Among other things, I learned to voice hammers "before" resurfacing hammers. Am I going to use these new methods in my work? You bet I am. I will also be at every chapter session and learning opportunity that comes along. I will be in Orlando in July 1997 to learn some more interesting ways to conduct my business. Are you going to be there? Are you interested in becoming a better technician in 1997?

Make Your Plans Now to Attend the 40th Anniversary Piano Technicians Guild Convention & Technical Institute in Orlando, Fla.

ETS Prepared to Serve

By Richard Bittner, RPT
Chairman, Examinations & Test Standards Committee

It's time to start thinking about this year's annual convention. The Examinations and Test Standards Committee will be prepared to serve the needs of its members in many activities. First, three rooms will be set aside for tuning exams. Two of those rooms will be used for the Associate who wishes to upgrade to Registered Piano Technician status. These exam rooms will be managed by some of the leading examiners in the Piano Technicians Guild. The third exam room function will be for Certified Tuning Examiners. Any RPT who wishes to become an examiner and help lead our Associates to the next level will have the opportunity to do so at this convention.

The fourth exam room will be for the technical exams. This room will be equipped with the newest action models provided by Renner and Young Chang, as well as the repair jigs. This will offer a great opportunity for the Associate to be examined by the Guild's leading examiners with the best equipment available.

The Examination and Test Standards Committee will also provide classes. "Preparing for the Tuning Exam" will be given by Keith Kopp, our Tuning Exam Chairman. He will give detailed information on how to prepare yourself for the tuning exam. Also, "Preparing for the Technical Exam" will be given by Tom Seay, our Technical Exam Chairman. If you have questions about these exams and want to know how to prepare yourself, these classes are there to help you. Remember no questions go unanswered.

Examinations & Test Standards Committee

Two classes by the ETS Committee will be "Administering the Tuning Exam," and "Administering the Technical Exam." These classes will be reserved for RPTs only. Detailed information on how to give the exams and what to look for in the future. Richard Bittner, ETSC Chairman, will give information on exam procedures and policy changes concerning the Tuning and Technical Exams.

Chuck Erbsmehl will give a class on "Preparing For The Written Exam." The written exam will also be offered during the convention.

Finally, on Tuesday night, July 22, a Master Tuning session will be given by the ETS Committee. If you are interested in seeing this session, please complete the bottom portion of the Exam Application and mail it to Richard Bittner. Note that there is a limited number of spaces, so mail your application soon.

Application for Convention Tuning & Tech Exam

Name _____

Member # _____ Phone _____

Address _____

City/State/Zip _____

Application For:

☐ **Complete Tuning Exam—$60** $ _____
☐ **Complete Technical Exam—$60** $ _____
☐ **Partial Exam(s)**
Available only if repeating a section for the first time within one year of previous attempt:
☐ **Part 2 Tuning Exam—$30** $ _____
☐ **Number of Technical Exam Sections—$20 each** $ _____
Total Fee Enclosed $ _____
No fee required for tuning exam for RPTs enclosing a Consent-To-Serve Form

_____ **I have passed the Written Exam taken 7/90 or later**
Required for Tuning and Technical Exams

_____ **I will bring Reclassification Form**
Required for Tuning and Technical Exams

Signature *Date*

Yes, I would like to observe a Master Tuning on Tuesday, July 22 ☐ (please check)

If you are an Associate member who needs to take the PTG tuning or technical exams to become a Registered Piano Technician, an excellent opportunity will be available during the Convention and Technical Institute in Orlando.

The PTG Examinations and Test Standards Committee will conduct tuning and technical exams July 24-27. Before taking the exams you must have passed the PTG written exam. A reclassification form, verifying that the written exam has been passed, must be brought to the examiner at the time of the test. Written test scores are not required.

Only a limited number of exam slots are available, so be sure to apply early by completing the form to the left and sending it to: Richard Bittner, 519 Melody Court, Royal Oak, MI 48073. 810-398-3876.

A $60 fee payable to Piano Technicians Guild is required from applicants for RPT status. There is no fee required for tuning exams for RPTs who are attempting to achieve CTE status, and are enclosing a CTE Consent-to-Serve form.

WonderWand to be Sold by Co-Inventor

"WonderWand," the unconventional tuning lever designed to reduce stress and increase efficiency, manufactured and sold for many years by Charles Huether, RPT, will be handled by co-inventor *Wayne L. Saucier, RPT*, 26 New York Ave., Wayne, NJ, 07470-5819, Phone (201)628-8863. For those who are not as yet familiar with the convenience and benefits the WonderWand provides, call Wayne or Charlie, or better yet, ask the technician who owns one.

Industry News

— Charles P. Huether, RPT

1996 Piano Technicians Journal Index

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Associates Pass The Test

REGION 2

327 CENTRAL FLORIDA

DANIEL J. BERG
506 LAKE BRIDGE LN. #1028
APOPKA, FL 32703

REGION 5

553 TWIN CITIES, MN

BILL V. GAGNON
7236 GRAND AVENUE S.
RICHFIELD, MN 55423

REGION 5

553 TWIN CITIES, MN

MARK P. EASTER
3262 LIBRARY LANE
ST. LOUIS PARK, MN 55423

New Members in December

REGION 1

012 VANCOUVER ISLAND, BC

TIM THOMPSON
7 SILVER STREET
NANTUCKET, MA 02554

041 MAINE

CHARLES B. GREY
P. O. BOX 71
ROCKLAND, ME 04841

062 TORONTO, ON

FRANCIS D. DUBE
1446 BANCROFT DRIVE
SUDBURY, ON P3B 1R5 CANADA

ROGER BROADBENT
168 BRIAR HILL AVENUE
TORONTO , ON M4R 1H9 CANADA

TIMOTHY B. GREEN
BOX 375, 350 IRISH LINE, RR #2
ENNISMORE, ON K0L 1T0 CANADA

WALTER SCHIENKE
181 KING ROAD
RICHMOND HILLON L4E 2W1 CANADA

WAYNE H. HOHLE
22 KING STREET
ELMIRA, ON N3B 2R2 CANADA

139 SOUTHERN TIER, NY

DALE RUTAN
433 SHELDON ROAD
FREEVILLE, NY 13068

REGION 2

212 BALTIMORE, MD

PETER D. COHN
17 WEST END COURT
BALTIMORE, MD 21227

REGION 3

761 FORT WORTH, TX

PATRICIA L. WILBUR
6052 WORMAR AVENUE
FORT WORTH, TX 76133

771 HOUSTON, TX

MARION H. MCCAULEY, JR.
3102 SLEEPY HOLLOW
SUGAR LAND, TX 77479

REGION 4

481 DETROIT-WINDSOR, MI

DONELL L. MOORE
2886 W. RICK DRIVE
PORT HURON, MI 48060

601 CHICAGO, IL

JAMES C. PICCIRILLI
160 W. ADAMS
ELMHURST, IL 60126

REGION 5

585 NORTH DAKOTA

MICHAEL F. BRYANT
10900 OLIVE LANE
BISMARCK, ND 58501

683 NEBRASKA

JULIE A. BOND
212 W. 1ST STREET
VILLISCA, IA 50864

801 DENVER, CO

WILLIAM J. POWELL
11271 W. 47TH AVENUE
WHEAT RIDGE, CO 80033

REGION 6

891 LAS VEGAS, NV

JOSE M.S. ALEXANDRE
1655 E. SAHARA AVE., #2130
LAS VEGAS, NV 89104

945 GOLDEN GATE, CA

JON DELONG
P. O. BOX 806
MOSS BEACH, CA 94038

950 MONTEREY BAY, CA

JAMES A. WOFFINDEN
P.O. BOX 66256
SCOTTS VALLEY, CA 95067

REGION 7

972 PORTLAND, OR

DAN D. MCCLUNG
205 SE WILSON AVENUE
BEND, OR 97702

EDWARD CARWITHEN
HCR 01, BOX 557
MT. VERNON, OR 97865

RICHARD M. ENGLE
52 SW ROOSEVELT AVENUE
BEND, OR 97702

In Memory . . .

HARRY BERG, RPT
Phoenix, AZ

JAMES COLLINS, RPT
South Bay, CA

RUDOLF VOTH, RPT
Puget Sound, WA

CALENDAR OF EVENTS

All seminars, conferences, conventions and events listed here are approved PTG activities.

Chapters and regions wishing to have their function listed must complete a seminar request form. To obtain one of these forms, contact the PTG Home Office or your Regional Vice President.

Once approval is given and your request form reaches Home Office, your event will be listed through the month in which it is to take place.

Deadline to be included in the Events Calendar is at least 45 days before the publication date; however, once the request is approved, it will automatically be included in the next available issue.

February 21-23, 1997

CALIFORNIA STATE CONVENTION
Radisson Hotel, Sacramento, CA
Contact: Yvonne Ashmore, (916)273-8800
12700 La Barr Meadows Rd, Grass Valley, CA 95949
Website address:
www.dcalcoda.com/ptg/

March 14-16, 1997

PACIFIC NORTHWEST
West Coast Tyee Hotel, Olympia, WA
Contact: Mitch Kiel (360)264-5112
11326 Patsy Drive, SE, Olympia, WA 98501

April 3-6, 1997

PENNSYLVANIA STATE CONVENTION
Days Inn, State College, PA
Contact: Fred Fornwalt, (814)942-1489
1333 Logan Blvd., Altoona, PA 16602

May 1-4, 1997

NEW ENGLAND / EASTERN CANADA REGIONAL
Ramada Inn, Portland, ME
Contact: Joseph Bacica (207)846-0966
P.O. Box 1575, Portland, ME 04104

May 9 & 10, 1997

UTAH INTERMOUNTAIN SEMINAR
Snowbird Resort, Salt Lake City, UT
Contact: Judy Rapp, (801)298-7875
1151 West 400 North, W. Bountiful, UT 84087

July 17-23, 1997

PTG ANNUAL CONVENTION & TECHNICAL INSTITUTE
Twin Towers Hotel & Convention Center, Orlando, FL
Contact: PTG Home Office
(816)753-7747
3930 Washington, Kansas City, MO 64111

AUXILIARY EXCHANGE

Dedicated To Auxiliary News and Interests

It's Your Auxiliary, Too

Phyllis Tremper
PTGA President

Hello, everyone, again. These months just seem to come around too fast. Here it is the dead of winter and you are probably sitting by the fire with three layers of clothes on except, for our snow birds in the South. However, you would never know it because as I write this to you at the first part of December, we are experiencing a heat wave! It's over 60 degrees outside today, and we still haven't had snow. What is Christmas without snow? I can't imagine what it's like. Anyway, back to February. Since you don't have to mow the lawn now or weed the garden, why don't you take a few minutes and get a pen and paper and jot down some remarks on what the auxiliary means to you. Why have you joined personally? I would especially like to hear from those members who have never been to a national convention. I must say in my 13 years with this organization, that I know most of the people who come to the conventions on a regular basis, but I don't know all of you. I have heard from only two people who want to take the background tour of Disney World's Magic Kingdom. This organization is for you. I need to know what you want from it if I am to lead you into the next year and next summer's convention.

I want to say right now that you have elected a wonderfully industrious support team for my executive board. The corresponding secretary and treasurer do many hours of behind the scenes work, and I am so very happy with their continued reports and updates to me. Thank you, Beva Jean and Marilyn. Carolyn keeps in touch with the membership lists and knows them well, which takes time, and Carol will do the writing of the happenings at convention time and after to let you know what took place at our meetings. Paul has done his work and so is sitting in his rocking chair just enjoying the view. Well deserved! Thanks to all.

You are in for a surprise next July as you hear the scholarship winners. Florida holds a concerto competition, that is a piano solo with an orchestra. The competition takes place on June 14, 1997 so the winner will not have time to prepare another work for us; the winner's teacher will probably play the piano reduction of the orchestral parts. I just hope that Baldwin can secure not one, but two big pianos for us! Be sure to thank Baldwin for their help in our scholarship. Speaking of help, I need it! Is there someone out there in the Florida area who could help me with presenting the scholarship award to our two winners on that day, June 14, 1997? What a great way to celebrate Flag Day by raising the flag for us and hearing some great music. It would also be a great way to "Put A Little Music In Your Life." It takes place in Lakeland, Fla., at Florida Southern College. Awards will be around 4 or 4:30 p.m. if you cannot make it for the whole day. Please, someone, volunteer to do this for me. Write to me by snail mail or e-mail or telephone, but let me know you will do this for our auxiliary. My addresses are on this page. Thank you for your help and you will be greatly rewarded for "Putting A Little Music In Your Life."

— Phyllis K. Tremper
PTG Auxiliary President
December 11, 1996

Walt Disney U

By Joal Hetherington

December 1996 — Get Up and Go! A Personal Magazine for Women Living Anew

A little learning is a Mickey Mouse thing — at least at the Disney Institute, a unique new vacation spot adjacent to Walt Disney World in Florida. The courses here are short and sweet (mostly two to four hours), and the emphasis is on fun. (Paul Cook, are you listening?) How about making a tabletop topiary, or learning the basics of golf, or picking up cooking techniques of top chefs, or creating an illustrated storybook on computer? These are just a few of the 80-plus sessions available. In between, you can exercise at the work-class fitness center, sun by an outdoor pool, or relax with a massage at the spa. Better yet, bring the grandkids. They'll have a terrific time in Disney Day Camp (ages 7 to 10) or youth programs (ages 10 to 17) from drawing comic strips to rock climbing while you're "in class." Then all of you can headover to the Magic Kingdom or Epcot for some family fun. Now, that's a Mickey Mouse vacation. Prices begin at $429 per person for a three-night stay; call 800/282-9282.

(I found this article in one of the many newsletters I receive. — PT)

FOR SALE

SANDERSON ACCU-TUNERS from Authorized distributor. Consignment sale of used Accu-Tuners and Sight-O-Tuners or new Accu-Tuner customers. Call for details. Rick Baldassin, 801-292-4441.

ACTION PARTS AND HAMMERS for the rebuilder. Highest quality Encore, (by Abel) and Nu-Tone (Knight) piano hammers. Try the new refined Tokiwa Action Parts (now some of the finest action parts made today). For the classic American piano sound, we recommend Encore hammers on walnut moldings. Encore hammers are made to the strictest specifications of Wally Brooks by the Abel Piano Hammer Company of Germany. Quality boring and shaping. We also specialize in pre-hanging grand hammers on new shanks for a $109.00 pre-hanging fee. Write or call: Brooks, Ltd., 376 Shore Road, Old Lyme, CT 06371, Phone: 800-326-2440, FAX 860-434-8089.

A NEW BOOK FROM DOCTOR PIANO! "TUNER TALES—Funny and Amazing Stories From Piano Technicians" $11.95 plus $3.50 shipping. Also available: "DIFFERENT STROKES—Hammer Techniques For Piano Technicians" $13.95 plus $3.50 and "DEAR DOCTOR PIANO—A Guide To Piano Care For Owners" (Illustrated) $14.95 plus $3.50. Quantity discounts available. Write Ken Burton, 1 Willow Cr SW, Calgary, AB, T3C 3B8. Phone 403-242-0799. Email Kwburton@freenet.calgary.ab.ca

SANDERSON ACCU-TUNERS NEW & USED. BOB CONRAD 800-776-4342.

KORG AT120 CHROMATIC TUNER. $249 postpaid. Large needle meter. Shows pitch, octave, note. Plays C2-B6. Hears C0-B8. Adjustable volume, pitch. Calibrates A=380-480 Hz. Batteries, adaptor. SONG OF THE SEA. 47 West Street; Bar Harbor, ME 04609; (207) 288-5653. Brochure.

HAMMER BORING GUIDES. All metal, weigh 15 lbs. Accurate and easy to use. $200.00. Instructions and photo available on request. Kent Gallaway, 709 Thorne, Ripon, WI 54971; 414-748-3265.

CLASSIFIEDS

Classified Advertising rates are 35 cents per word with a $7.50 minimum. Full payment must accompany each insertion request.

Closing date for placing ads is six weeks prior to the month of publication.

Ads appearing in this publication are not necessarily an endorsement of the services or products listed.

Send check or money order (U.S. funds, please) made payable to Piano Technicians Journal, 3930 Washington, Kansas City, MO 64111-2963.

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MAKE INSTANT LIVING IN NEW YORK CITY! Selling my database of 250+ active & 450+ inactive customers, all in Manhattan. 33% grands, 15% Steinway. Only EXPERIENCED RPTs please. Buyers must sign limited resale agreement. Only $5,000.00. Make it in the Big Apple! Don Farrar, RPT, 817-545-0066.

TUNING HAMMER BALL—ergonomically designed to lessen repetitive motion injuries and wrist stress. Made to order, it slips on and off most tuning levers. $14.95 includes shipping. Mayer Gluzman, 6062 Anne Dr., West Bloomfield, MI 48322. (810) 661-4869.

SOUNDBOARDS BY NICK GRAVAGNE. Ready-to-install crowned boards or semi-complete. Over 130 new boards out there! New expanded and updated installation manual $20. 20 Pine Ridge; Sandia Park, NM 87047; 505-281-1504.

ENCORE GERMAN SHANKS & FLANGES—now available for replacement on New York STEINWAY grands. The Finest Quality Workmanship Available. The value of a Steinway is determined by its final tone and action. "When you're striving for excellence—begin with quality." Encore Hammers and Actions Parts available only through Wally Brooks, Brooks, LTD., 376 Shore Rd., Old Lyme, CT 06371; 1-800-326-2440, FAX 860-434-8089.

PianoDB & PianoDB 95 - DATABASE FOR WINDOWS. MS Access 2.0 & 7.0. Easy to use graphical interface-Manage Clients, Pianos, Service Notes, Suppliers, Supplies-More. See it on the Internet: http://www.dcalcoda.com/ $250 kenhale@dcalcoda.com D C AL CODA (916) 272-8133, Send for Infopacket, 126 Doris Dr., Grass Valley, CA 95945 (Ken Hale, RPT).

Our Hammers and Bass Strings Speak For You. A. Isaac Pianos, 308 Betty Ann Dr., Willowdale, ON M2R 1B1 CANADA. (416) 229-2096

"SALE OF PIANOS" — All models and styles. Specializing in players, art case and conventional pianos. Floor ready and as is pianos available. We also specialize in one of a kind and hard to locate pianos. Call collect Irv Jacoby 1-800-411-2363, 216-382-7600/FAX 216-382-3249. Jay-Mart Wholesalers—Pianos since 1913.

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FOR SALE—Antique Hallet, Davis & Co. Full 6'6" Grand Piano, Serial No. 24200. Built about 1880. Rosewood case, fancy cambriole legs. Needs restoration. Asking $1500. Call 603-539-6327.

HANDCRAFTED TOOLS—For Bearing, Notching, Hammershaping, Ribshaping, and More! Call or write for free brochures. MAZZAGLIA Tools, PO Box 18, Groveland, MA 01834 (508) 372-1319

BUCKSKIN for recovering grand knuckles and backchecks, upright butts and catchers. The "original equipment" supplying the industry for 140 years. Richard E. Meyer & Sons, Inc., 11 Factory Street, P.O. Box 307, Montgomery, NY 12549; 914-457-3834

KEY LEVELING SYSTEM — As seen at National. Unique straight edge and calibrated gauge plus all parts to improve and simplify your leveling jobs. Includes video tape. $100 plus $15 S&H. Carl Meyer, 2107 El Capitan Ave., Santa Clara, CA 95050, 408-984-0482.

BOSENDORFER 5'10" GRAND—#6440 c. 1870. Viennese action, original condition, excellent ivories. Original case parts, previously refinished in black lacquer. Needs new pinblock, stringing. $2,500.00 Mollberg & Associates. Piano Restoration, Austin, TX (512) 444-2210.

PIANOS FOR SALE—Spinets, consoles, studios, grands. One or a carload. Excellent brand names. As is or rebuilt. Lowest possible prices. Owen Piano Wholesalers; 2152 W. Washington Boulevard, Los Angeles, CA 90018. Telephones 213-732-0103, 818-883-9643.

PIANO SCALING SOFTWARE for WIN & DOS. Plot inharmonicity, Tension, Break %, and more. Automatic Bass Rescaling, String Winding Sheets, Detailed Manual, and much more. Decimal & Metric. $80.00. Tremaine Parsons, Box 241, Georgetown, CA 95634, 916-333-9299

Members of the Piano Technicians Guild can have the opportunity to purchase direct Bosendorfer concert service pianos in select markets. These pianos are generally 3 to 5 years old in very good technical condition. The finish condition will vary from piano to piano and is sold as is. For more information call: Roger H. Weisensteiner at 800-422-1611.

PTOOLS - COMPUTER TOOLBOX FOR TECHNICIANS. WIN & DOS Client Management, Mailmerge, Correspondence, Import/Export, Labels, Envelopes, Autodial and more. Measurement Conversions. Trade Specifications, Zipcode, Supplies, and Resource Databases. Conversions, Specifications, Calculations, Repair Formulas, and more. $30.00. http://ourworld.compuserve.com/homepages/ptools. Tremaine Parsons, RPT; 916-333-9299.

PIANO COVER CUSTOM MADE to your specifications. Rehearsal covers now available. Specializing in custom colors and fabrics. Call or write for brochure. JM FABRICations; 10516 Ohop Valley Extension Road, Eatonville, WA 98328, 360-832-6009.

RELIABLE ACCU-TUNER NOTESWITCH! One year guarantee! Includes coiled cable, thumb switch and attaching hardware. Fits all tuning hammers. $49.00 includes s/h. Dean Reyburn, RPT, Reyburn Piano Service; 2695 Indian Lakes Road, Cedar Springs, MI 49319, 616-696-0500

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*Bluthner 6'2" 1962 Ebony Satin, $18,000; *Steinway A, 6' 1-1/2"; *Knabe 6'4" 1925, High Polished Ebony Lacquer, $6,725; *Schimmel 6'9" 1976, Ebony Satin, $14,900; *Yamaha C-7, High Polished Ebony, $16,000; *Steinway 5'10" 0, Dark Mahogany, $13,500; *Steinway 5'10" 0, 1920, Light Mahogany, $16,000; *Baldwin 7', Ebony gloss w/Pianocorder, $14,000; *Fisher Bby Grand, 5'4" 1915 Circasian Walnut, $4,895; *Kawai Walnut 5',1972 $6,800. Call SCHROEDER'S PIANOS for a complete list of used pianos, 800-923-2311.

PIANOS - Yamaha and Kawai grands $1850 and up. 23 Steinway grands and verticals. Large quantity of used American grands from $700 up. We buy pianos. Ed's 504-542-7090.

PINBLOCK MATERIAL NOW AVAILABLE FROM GENEVA INTERNATIONAL! Geneva International Corporation, exclusive U.S. distributors of Petrof and Weinbach pianos, is pleased to announce the availability of Marion plywood pinblock material. Constructed of select hard maple, the Marion pinblock is well suited for the rebuilding technician. Call Alan Vincent at 1-800-533-2388 for pricing and more information.

New from PROTEK: Pro*lube* Spray Lubricant. Protek Pro*lube* is an advanced state polymer lubricant. Designed around the successful CLP formula, Pro*lube* is for higher friction areas like the keybed and frame, shift and sostenuto mechanisms. Great for front and balance rail keypins and anywhere you would use a spray lubricant. Provides long lasting durable lubrication with virtually NO ODOR! With the addition of Pro*lube* along with CLP and MPL-1, Protek offers safe, high tech task specific tools for every lubricating need. Ask for Pro*lube* at the supply house you do business with.

REPAIR CHIPPED IVORY IN 20 MINUTES. "AcryliKey" ivory restoration system produces a strong, color-matched, nearly invisible repair. Kit contains material enough for 50+ repairs plus pigments, mixing utensils, sanding pads, and complete instructions. $39.95 ppd. Richard Wagner, RPT; P.O. Box 1952 Lake Oswego, OR 97035 (503) 697-9254.

CALL VICTOR'S for largest selection of Fine Grands in USA. Over 400, all makes. Need Technician, 300 NW 54 St, Miami, FLA 33127, 305-751-7502.

SERVICES

STRAIGHT SIDES, SQUARE FRONTS and crisp notches are the benchmarks of our quality key recovering. Tops with fronts $115 plus return shipping and insurance. Call or write for free price list of our key restoration services. Yvonne Ashmore, RPT and Associates, 12700 La Barr Meadows Road, Grass Valley, CA 95949, 916-273-8800

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We're on the NET.it's plain to see/there's lots to find.and always free//look us up.to see what's new @HPR//we're there for you! Heartland Piano Restorations

KEY BUSHING: We use over 20 different sizes of Spurlock Precision Cauls. Send the micrometer measurement of the key pins and we will give you a perfect fit. Both rails high quality felt $85.00 or leather $95.00 plus return shipping and insurance. Write or call for free price list of our key restoration services. Yvonne Ashmore, RPT and Associates, 12700 La Barr Meadows Road, Grass Valley, CA 95949, 916-273-8800

PIANO PLATE REPAIR—The alternative to total loss or costly rebellying!! Welding of cracked or broken plates a specialty. Complete repair service offered. Call Bob Beck (RPT-New Jersey Chapter) (201)884-0404.

STEINWAY Action Frame Rails Resoldered, Replaced, and/or Repositioned. For price list write or call John Dewey Enterprises, Inc; 861 E. 2900 North Road, Penfield, IL 61862-9603, phone (217)595-5535.

SOUNDBOARDS INSTALLED, topsides rebuilt. Bridge-conformed, scale-diaphragmized boards with truly quartersawn ribs (sitka, eastern, or sugar pine). You send us the case, we'll return you a piano. Quality's the bottom line. David G. Hughes, RPT. 410-429-5060. Baltimore.

KEYBUSHING: Precision keybushing with high quality felt using Spurlock system. Both rails $85.00, return shipping included with prepaid order. Include key pin measurements for precise fit. Debra Legg Piano Service, 327 Rowena Lane, Dunedin, FL 34698, (813)734-3353.

REFINISH PIANO HARDWARE in nickel, brass, or chrome. Metal finishing specialists for over thirty years. Parts shipped back to you in 2-3 weeks. Rush jobs can be accommodated. Whitman Company, Inc. 356 South Ave., Whitman, MA 02382. Ph. 1-800-783-2433.

RESTORATION OF CARVED WORK, turnings, inlays, and marquetry, including repair of existing work and reproduction of missing pieces. Edwin Teale; 18920 Bridgeport Road; Dallas, OR 97338; 503-787-1004.

REPLACEMENT SOUNDBOARD PANELS — North Hudson Woodcraft has been producing QUALITY soundboard blanks for over 100 years. We will custom build a spruce soundboard to your specs. Rib stock, shim stock, and quartersawn Hard Maple also available. For information and prices call: NORTH HUDSON WOODCRAFT CORP. (315)429-3105 - FAX (315)429-3479.

Antique Pump (Reed) Organ Restorations and Tuning. Piano & Reed Organ Shop, 125 W.S. "B" Str., Gas City, IN 46933. 317-674-4942 call evenings.

PIANO KEY SERVICE—
.075 Tops with fronts - $105.00
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554 State Route 1907, Fulton, KY 42041, 1-800-745-6819.

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TRAINING

WELL-TEMPERED TUTOR. Learn to tune by ear with your Macintosh computer. Use pre-programmed temperaments or create your own. If you have trouble hearing beats, this program can isolate the beats for you. Score yourself with the PTG exam. Twenty-one historical temperaments also available. Demo disk available. Mark Anderson, RPT: 510-524-0390 (California). Great teaching tool!

NILES BRYANT OFFERS TWO HOME STUDY COURSES: Electronic Organ Servicing: Newly revised. Covers all makes and models — digital, analogue, LCT's, synthesizers, etc. Piano Technology: Tuning, regulating, repairing. Our 87th year! Free booklet; Write or call NILES BRYANT SCHOOL, Dept. G, Box 19700; Sacramento, CA 95819—(916)454-4748 (24 hrs.)

BILL GARLICK SEMINARS-Upgrade your skills at intensive six day resident seminars at Bill's home. Applications are invited for upcoming seminars in tuning, grand action regulation, historic tunings, harpsichord maintenance. Tuition includes instruction and use of facilities, private bedroom (share baths), breakfast and lunch. Write or call for information. Bill Garlick, RPT, 53 Weeks St., Blue Point, NY 11715; 516-363-7364.

THE RANDY POTTER SCHOOL OF PIANO TECHNOLOGY — Home Study programs for beginning students, associate members studying to upgrade to Registered Piano Technician, and RPT's wanting to continue their education. Tuning, repairing, regulating, voicing, apprentice training, business practices. Top instructors and materials. Call or write for information: RANDY POTTER, RPT; 61592 ORION DRIVE; BEND, OR 97702; 541-382-5411. See our ad on page 3.

TRAINING

INSTRUCTIONAL VIDEO TAPES. Victor A. Benvenuto. Piano tuning, $50.00*; Grand Regulating, $50.00*; Grand Rebuilding, $100.00 (2)*; Key Making, $50.00*; Soundboard Replacement, $29.95*. (*Plus S/H). The Piano Shoppe, Inc., 6825 Germantown Avenue, Philadelphia, PA 19119-2113; Ph. 215-438-7038, Fax, 215-848-7426

SUPERIOR INSTRUCTIONAL TAPES ** All videos at one price, $50 @ ** Beginning Tuning, Upright Regulation, Aural and Visual Tuning, Grand Action Rebuilding, Exploring the Accu-Tuner, Grand Action Regulation, Voicing, Pinblock Installation, A to A Temperament, Baldassin-Sanderson Temperament, Bass Tuning - 3-Ways. Superior Instructional Tapes; 4 W. Del Rio Drive; Tempe, AZ 85282; Ph. 602-966-9159.

PIANO TECHNOLOGY EDUCATIONAL MATERIALS. $49.95 each reel— Vertical Piano Regulation, presented by Doug Neal. Presented by Cliff Geers: Plate & Pinblock Installation Part I, Plate & Pinblock Installation Part II, Wood Repairs, Soundboard Repair, and Grand Hammer Replacement. Add $5 per order for shipping and handling. Questions? Call 712-277-2187. Mail orders to PTEM, 3133 Summit, Sioux City, IA 51104 .

WANTED

WANTED!! DEAD OR ALIVE: "Steinway uprights and grands." Call collect, Ben Knauer, 818-343-7744.

PIANOS! PIANOS! PIANOS! !!!Free phone appraisal!!! Buying all types of usable pianos. Cash or bank check on pick up. Won't hesitate on price. Call us first for fast professional service. "Steinway, Mason-Hamlin command specialty prices." Jay-Mart Wholesale, P.O. Box 21148, Cleveland, OH 44121. Call Irv Jacoby 1-800-411-2363, or collect 216-382-7600/FAX 216-382-3249.

CAN YOU HELP? Would like to contact the Tuner-Technician who worked on the Piano for the Bill Grahams Fillmore East Theatre, Greenwich Village, NY in the 60's and 70's. Please write to: J. Kirsch, 4485 Baintree, University Heights, OH 44118.

WANTED—Yamaha PT 100 Tuner. New or used, in good working condition. Toll-free 1-888-464-6213.

WANTED: TINY PIANOS such as the Wurlitzer Student Butterfly or other small types. Call collect: Doug Taylor, 607-895-6278. I'll pay shipping!

DISPLAY AD INDEX

PianoDiscussions™

February 1997

News From The World of MSR/PianoDisc, Knabe, Mason & Hamlin

SilentDrive is here!

Music Systems Research recently introduced its most exciting innovation in player technology at Winter NAMM '97. Called the **SilentDrive System,** it consists of four circuit boards which allow for precise control of the key and pedal solenoids by PianoDisc's PDS-128 Plus control unit. **The result is a player piano performance capable of tremendous dynamic range, with better volume control and faster key and pedal response** than has ever before been possible. It also allows for **whisper quiet movement of the key and pedal solenoids.**

The **SilentDrive** is being hailed as the **most significant improvement in player piano technology in years.** PianoDisc Certified Technician Franco Skilan (Precision Pianos of North Hollywood, CA) summed up the common response to SilentDrive: **"Absolutely incredible, a quiet system with absolutely awesome dynamic expression."**

Knabe's 100th Anniversary brochure is newest company point-of-purchase

The latest Knabe point-of-purchase brochure does more than display products and offer a little company history — it's actually a bit of history itself! The four page publication is a reproduction of a Knabe brochure made in 1936 to celebrate the venerable piano company's 100th Anniversary.

The brochure includes pictures of the factory in Rochester, NY, focusing on some of Knabe's master craftsmen at work. Also included are letters written in tribute to the Knabe piano from such luminaries as Hans von Bulow and Peter Ilyich Tchaikovsky. There's also a photograph of Albert Einstein intently playing his Knabe. Knabe's long affiliation with the Metropolitan Opera is also covered and Met greats such as Rosa Ponselle, Lauritz Melchior and Kirsten Flagstad are shown with their Knabe pianos. The brochure text also refers to the widely held view, among the great singers, of the Knabe piano's tone as "akin to the beauty of the finest human voice."

"We found the old brochure absolutely fascinating. When it came time to put together a new brochure covering Knabe history, we found that nothing captured the feeling of Knabe's heyday quite the way this vintage one did," commented MSR's Tom Lagomarsino. "So we reproduced it from our one very fragile, well-worn copy. The result is a fascinating glimpse of Knabe's incredible history."


Small Grand of Epoch Making Quality and Price Announced on Eve of KNABE'S Hundredth Anniversary

PDS-128 Plus reads Standard MIDI files

PianoDisc's PDS-128 Plus player piano system can now read Standard MIDI files, thanks to new enhancements to the system which were announced at Winter NAMM '97. The new enhancements allow "off the shelf" playback of DSDD 3.5" consumer SMF disks which are General MIDI. If a piano part exists on any channel, it will be played by the PDS-128 Plus system. If the system is also equipped with PianoDisc's Symphony option, all other parts will be played by its sound card, through external speakers. That will allow it to play *Yamaha PianoSoft, Yamaha PianoSoft Plus* and other software lines made by Yamaha. Educational Software, specifically *Alfred's* instructional software materials, which were originally made for use exclusively with the Yamaha Disklavier, are now compatible with the PianoDisc system. Educational software made by other manufacturers may also work well on the PianoDisc system.

"As a result of PianoDisc's ability to read Standard MIDI files, and the proprietary nature of our own software, PianoDisc is the player that can play the largest variety of marketed software in the industry today," commented MSR Executive Vice President Tom Lagomarsino. "We think this enhancement, particularly because it makes educational software available to PianoDisc owners, is one of our most valuable to date."

1997 Installation Training Schedule

Tech Training
Mar 17-22 Apr 14-19
May 19-24

Continuing Education
Mar 24-26 Apr 21-23
Aug 18-20

Tuition for the Installation and Continuing Education seminars is free, but a $50 refundable deposit is required for confirmation. The PianoDisc Continuing Education seminars are restricted to PianoDisc certified technicians in good standing. For more information, call PianoDisc at (916) 567-9999.

Tech Gazette

Yamaha Service February 1997

Last month, we drew a thumbnail sketch of the history of one of the most modern piano manufacturing facilities, Yamaha Music Manufacturing in Thomaston, GA.

In this article, we would like to continue our discussions of other specific operations which take place at YMM.

Climate Control of Raw Materials

All wood is ordered to be delivered to the facility at a specified Equalized Moisture Content (EMC), but as technicians know, wood changes size and character with any change in moisture content.

At YMM, there are three levels of humidity control. First, the entire facility is air conditioned to maintain constant temperature and relative humidity allowing the wood components to be dimensionally stable during the building process. This is crucial in the soundboard crown process and the pinblock drilling operation. This allows for precise dimensions at all times - rather than a trial and error process.

Second, inside the factory there is a holding room with even more temperature and humidity control for the backframe components like the soundboards, bass and treble bridges, backframe posts, pinblocks, etc. This strict control of humidity and temperature eliminates any variances that may have occurred while the raw materials were in transit from the vendor.

The third level of control is found in the super drying room (kiln) where special treatment to the soundboard assures that the "permanent crown" is properly built. All in all, a very thorough and extensive preparation is taken to make sure that each piano constructed on the production line is perfect and will withstand any season of the year or outside climatic condition.

The YMM "Tip of the Month"

To assist you in cleaning or polishing the white keys, a wooden fixture can be made that will fit under the white keys. The fixture will elevate the white key level slightly above that of the black keys. This permits buffing or polishing to be done quickly, safely and without the necessity of removing all of the white keys from the piano.

So, stay tuned for next month's information from Yamaha Music Manufacturing.