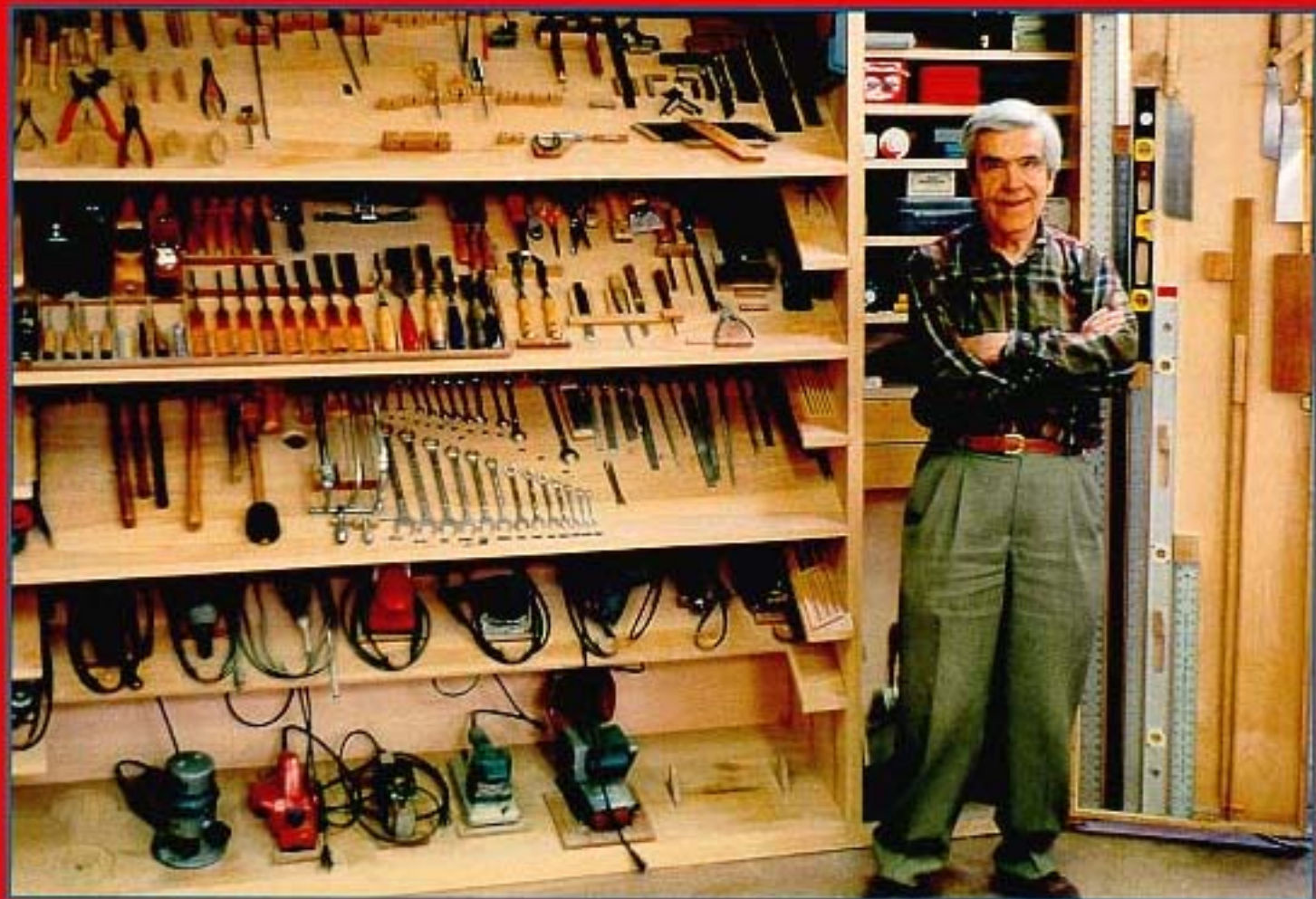


PIANO TECHNICIANS Journal

Official Publication of the Piano Technicians Guild

November 1998

Vol. 41 • #11



A black and white photograph of a Kawai grand piano in a forest. The piano is positioned in the center-right of the frame, with its lid open. It is surrounded by dense foliage and trees, creating a serene and natural setting. The lighting is soft, highlighting the piano's form against the darker background of the forest.

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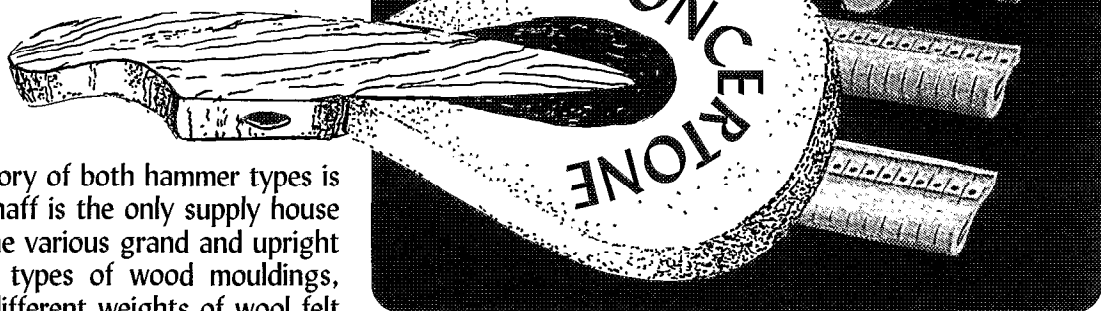
It was the crowning achievement of our multi-year effort to fulfill the "Kawai Environmental Preservation Charter" through re-forestation, energy conservation and natural resource preservation.

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EDITORIAL PERSPECTIVE *Whither the Journal?*

From time to time, an issue of the *Journal* (like this one, for instance) will contain less technical material than usual, and will concentrate instead on the "other stuff" — personalities, figures in the industry, business practices and tuners' health topics. For some this focus may be unwelcome, but if the contents of my mailbox are any indication, most piano technicians are interested in this type of material as well as the usual tuning and technical articles.



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Steve Brady, RPT
Journal Editor

most humorous material will be offensive to someone, somewhere.

By this past spring, however, a larger issue began to appear. The question in my mind changed from "Should we continue the humor page even though a certain number of readers report being offended by material therein?" to "Is a humor page really appropriate in a professional journal?" Of course, this last question begs a pair of even more basic questions: Is this a professional publication? If not, should it be?

Since my tenure as *Journal* Editor began some four years ago, I have attempted to be responsive to suggestions from readers. The problem is, I am necessarily guided by the comments of a relatively small number of readers, those who feel sufficiently motivated — whether by pleasure or displeasure — to write and let me know what they think of the balance of articles and other materials in the *Journal*. The positive comments seem to have outnumbered the negative by a healthy margin, which is gratifying, but I'm not sure the random feedback I receive constitutes a valid sample of the readership as a whole.

Fortunately, you as readers now have the opportunity to tell us exactly what you think of the *Journal* as it is now, and how you think it could be better.

With your dues statement this fall you will receive a detailed questionnaire about the *Journal* and how it fits your needs and desires. I implore each of you to take advantage of this opportunity — take just a few minutes and fill out the questionnaire and send it in with your dues payment. The information gleaned from this survey will aid us in steering the *Journal's* course for the coming years.

Of particular interest to me is whether the majority of the readership favors moving the *Journal* in a more professional/scholarly direction, or whether they would like to see it move into a more "popular" format, or whether they prefer the decidedly "middle-ground" approach we've staked out presently.

Some time ago, a reader wrote recommending that we double the number of feature articles in the *Journal*.

While this goal is commendable, it is, unfortunately, at odds with reality. A number of factors — including the lack of enough quality material, and the fact that even if high-quality

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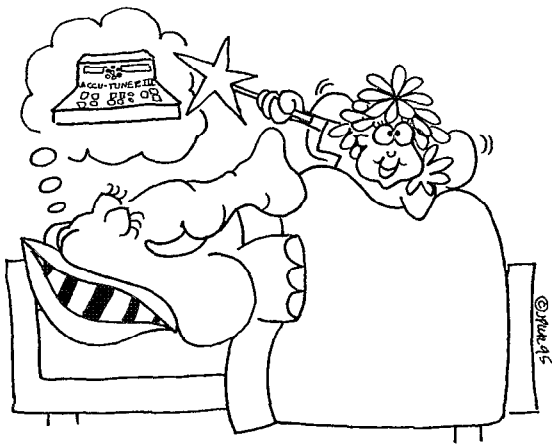
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material were abundant, my editing time would necessarily double, not to mention the increased cost of printing a much larger magazine – conspire to make this an impossible dream. However, there is one way the *Journal* could be made larger and better: to publish it either bi-monthly or quarterly. Many scholarly publications appear quarterly. The advantages to a wider spacing between issues are numerous. To name just two, it would allow us to include a larger number of articles covering a wider range of topics in each issue, and it would allow time for more careful preparation of the issues and more thorough peer review of the articles. Because *Journal* mailings would be less frequent, postage expense would probably be reduced substantially as well.

Whatever your opinions about the *Journal*, let us know them via the questionnaire. I promise we'll do our best to serve the desires of the majority (and try not to forget the minorities!).

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COVER ART

RPT Ted Sambell with some of the tools at the Banff Centre shop. For more on Ted see *The Tuner's Life* beginning on Page 20.

PIANO TECHNICIANS Journal

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The circle of shared information about the System then widens. Your client tells her fellow choir members and symphony volunteers about the positive change in her piano (music lovers associate with *other* music lovers). Her confidence in you is greater than ever. She freely recommends you to others, knowing you will do a great job for them, too. And, as you protect more pianos with climate control, *the referrals multiply!*

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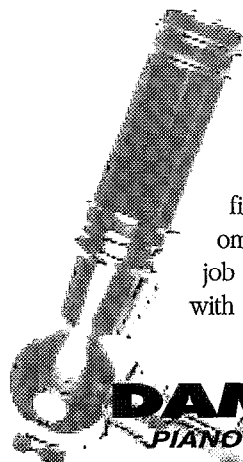
Each time your client notices the System's light panel under the keyboard, she is conscious that the System is working, constantly protecting her piano. When the blinking light calls for more water in the humidifier, she reaches for the watering can immediately. As she pours in fresh water, she is aware the System has used, to good purpose, the water she added two weeks ago. Each time she "waters the piano," the emotional bond with the piano is strengthened.

Meanwhile, her regard for you as a professional has grown. In her eyes, you have taken her average-sounding piano (or highly unstable piano) and converted it to an instrument of which she is proud, an instrument that is dependable and predictable.

More than ever, she trusts and respects your opinion. So, when you suggest ways you can make even more improvements through regulation and voicing, she is more receptive to your proposal. (A written proposal is more effective. For a proposal example, buy the PTG's *Business Resource Manual*, \$20.)

Remember, the Climate Control System you recommended did just what you said it would do. When you explain how voicing or regulation will make a noticeable improvement to the sound and yield greater enjoyment, *she will follow your advice again!*

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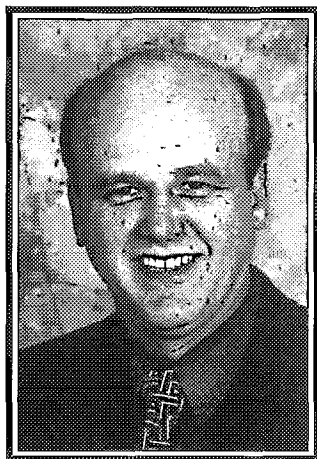
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IF YOU VALUE THE PIANO

Invest in Yourself

Last month in this space I looked at a number of ways to maximize your investment in PTG. The



David P. Durben, RPT
PTG President

basic idea was that "member benefits" include a return on an investment made by others, in that when we participate in PTG activities we benefit from the work that others have put into them, over and above our own efforts.

Now I would like to focus your attention on another part of this investment equation.

The past year should have taught us something about the vagaries of the stock market, with its volatility, and how so much of our surrounding economy is quite beyond our individual control. There is risk innate in stocks, bonds, real estate, and other investments; and when we decide on where we put our money, we must consider how much risk we can handle – practically and emotionally.

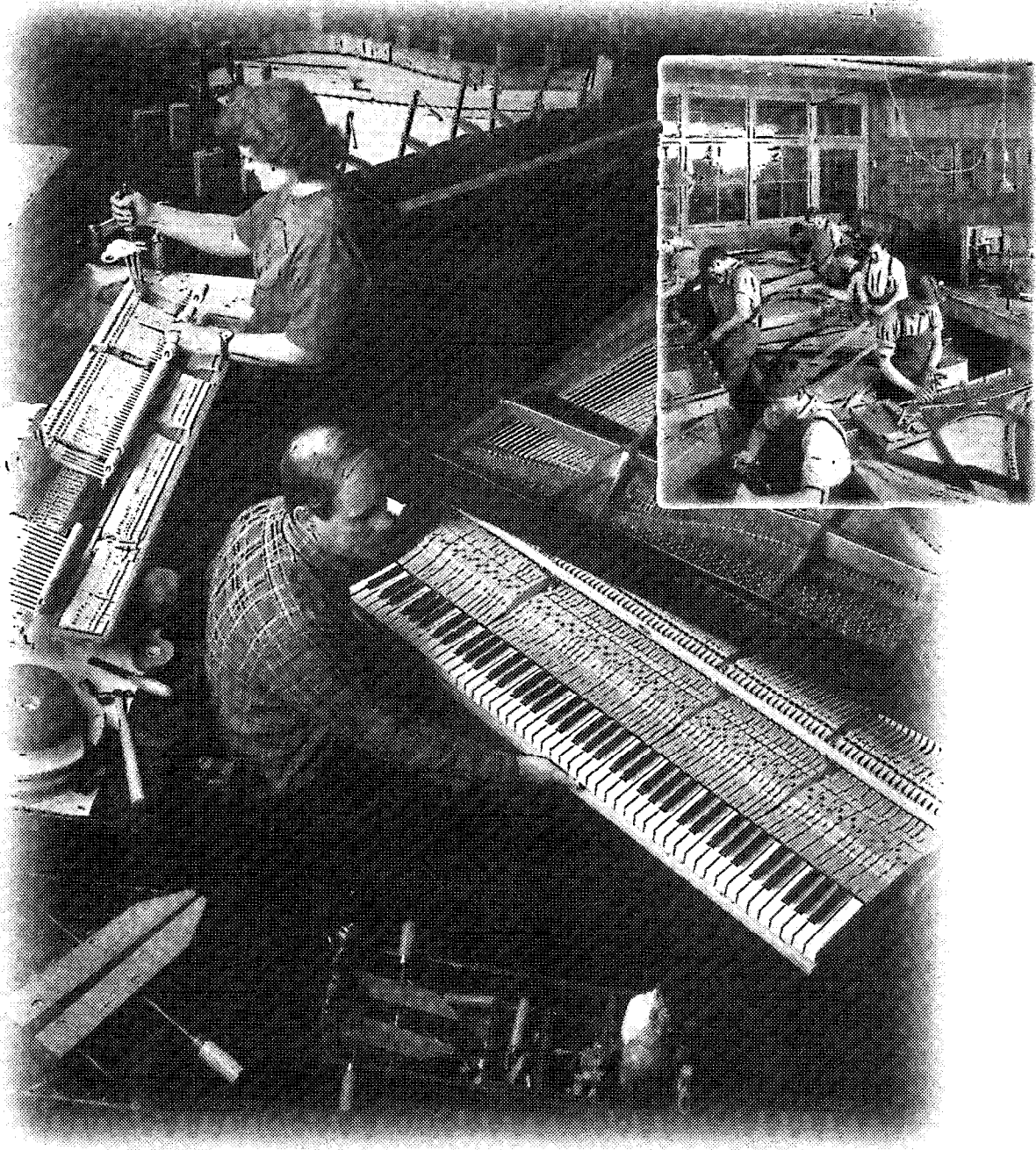
The money gurus would have you believe that you can balance that risk with the correct measures of a variety of products, and they make good sense

for as far as they go. But one thing I rarely hear from any of them is how to make the investment that is not only the safest, but has the highest return of any of them.

That investment is the one we make in ourselves. When we invest time and money in our own education and work to refine and expand our skills, we are making the most solid investment we can. No one can take it away, it's with us for life, and we can immediately direct it into our businesses and our lives to improve both. What could possibly be more certain?

When you consider that this is one investment that is completely under your control, and that by working with others of like mind, the sum of the investment grows beyond your individual contribution, your membership – and especially your participation in PTG – becomes so much more valuable that you can't help but want to invest more. In this day and age of market madness and price fluctuations, global markets that are so new that even the experts are proving to be confused, a sure investment pays dividends beyond its purely monetary value. It can be a much-needed source of peace of mind. ■

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Letters

Daytona Beach Chapter Celebrates National Piano Month

I received a call from Chapter President Walter Pearson inviting me, as RVP, to do a chapter visit for a special meeting with their chapter on September 19 and 20. There was going to be a recital and presentation at the library sponsored by the Daytona Beach Chapter for National Piano Month. There was a square piano on display that Community Piano, Walter Pearson's business, had restrung. I agreed to attend and this was a very pleasant and encouraging visit. At the library there was a table set up with PTG brochures available for the public, along with books and other information about the piano and its history.

I was happy to see that a chapter in the Southeast Region had an event for the National Piano month, and that PTG had

an opportunity to be presented to the general public.

— Robert "Bob" Mishkin,
Southeast Region Vice President

Armonica Feedback

I was surprised to find that in his otherwise excellent article about the glass harmonica (by RPT Skip Becker in the August 1998 *PTJ*), no mention was made of the opinion, or rumor, about 30 years ago that the Armonica fell out of use because the vibration on the fingertips of the players caused some kind of permanent nerve damage. The theory of the lead from the glass leaching into the fingers seems to be related to this story, but was never mentioned in my music history classes at Kansas University.

— Donn Farrar, RPT
Dallas Chapter

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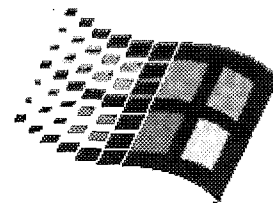
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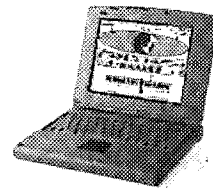
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Tips, Tools & Techniques

Dampp-Chaser Hose Clip Locator

When installing a Damp Chaser on a grand piano, I glue a 1/2" square of red spring rail felt to the underside of the rim, and directly underneath where I have located the clip which holds the filler tube up and out of sight. This allows the customer an easy way to locate the clip and hose when the reservoir needs filling.

— Doug Mahard

Reprinted from The Keybed, newsletter of the Connecticut Chapter



Pedal Rod Replacement Tip

Replacing an upright action in a piano with two or more doweled and end-pinned rods, you may save yourself some effort by inserting the first pedal rod in one damper lift-rod tongue, then inserting the second rod while depressing the pedal of the first rod. This procedure lessens the chance of the first rod falling out while you are lifting or tilting the action to facilitate insertion of the second rod.

— Roger Gable, RPT

Reprinted from The Tuner's Beat, newsletter of the Seattle Chapter



New Life for Old Pantyhose

While servicing my shop-vac I found, to my dismay, that I was out of pre-filters for the unit. Since I needed it yesterday (sound familiar?) I rummaged in my junk box and found a pair of discarded pantyhose. Now many may think, "What is a single guy doing with so many pairs of discarded pantyhose?" The truth is, I get my female friends, after a detailed and descriptive explanation of why, to save them for me. They are the best things for doing many, many jobs.

I use them for rubbing out a new finish. With rubbing compound, they are an extremely mild abrasive base for the final work on the finish.

They act as a great applicator for certain oil-base finishes, like tung oil. While you can use your hand, the added weave of the hosiery helps to smooth the finish and distribute the covering evenly.

They are great filters for lacquer or other refinishing materials, as the small, tight weave allows the good stuff to pass through, trapping the crapola that magically gets into the product.

When stripping a detailed piece of work like a scroll-saw-cut music desk, a piece of hosiery can and will get into the smallest crevices and in a shoeshine-



like buff, remove the old finish. The process can be reversed when installing stain and finish to the same area.

Thinking of these and other reasons for collecting these versatile garment remnants, I took a piece of pantyhose and an ordinary rubber band (one day I'll regale you with my many tales of rubber band use) and fastened it over the filter port of the shop-vac. Voila! A working pre-filter to *not* take your breath away!

— Bob Bartnik

Reprinted from Update, newsletter of the Richmond, VA Chapter

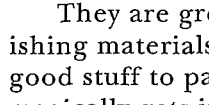
Repairing Stripped Screw Holes With CA Glue

Since I do a lot of player work, I'm always running into problems with stripped screw holes. While browsing the Internet recently, I ran across a one-line sentence in a much longer posting that advocated the use of baking soda and CA glue on stripped holes. It didn't really register with me at the time, and I promptly forgot it. A few weeks later, however, I ran into numerous stripped holes on a job in my shop. Normally, I would use .080" weed-whacker cord (orange) to fill the hole and give the screws purchase. I've used this method for a while because it worked better than toothpicks or shoe pegs, which fall apart after a few uses, but I was still less than satisfied, since holes near the edge of the board tended to split out with the extra material required to fill the hole.

Thinking back to that Internet post, and not being able to find the initial reference, I decided to experiment. I tried packing baking soda in a few holes and applying two drops of medium-viscosity CA glue. This seemed to work, but the medium CA was just too thick. Using a little less baking soda, packing it around the circumference of the hole to leave a small tornado-shaped pocket in the center, and then applying a few drops of thin CA glue did the trick nicely. The CA glue wicks through the baking soda and into the wood, swells the wood slightly, and provides plenty of holding power for the screw. You may even have to pre-drill the screw hole to prevent splitting of the wood. I don't know how long this fix will last, but the feel of the screw in the hole suggests that it will last a good long time.

— Bob Myers, RPT

Reprinted from Butts & Flanges, newsletter of the Cleveland Chapter



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Q&A/EDITOR'S ROUNDTABLE

Knabe Agraffes

Q: I have a customer with a 1924 Knabe grand with a broken bi-chord agraffe. None of my replacements (1/4" or 7/32") fit. Anyone have any idea what size thread is used? I tried Knabe/PianoDisc but they couldn't help. Thanks in advance.

— *Mike Masters*
Cleveland, OH Chapter

A: Leslie Bartlett: Ronald Sanford, 713-473-2688, in Pasadena, TX, is finishing up an incredible restoration of an old Knabe grand – the subject of this month's local chapter meeting. He probably can give you more information than you even want.

A: Thomas Cole, RPT: I once had a problem with Agraffes not fitting. The new ones I bought from Schaff were the same size but would not fit because the thread type was different. There were two thread "starts" (one at 12:00 and one at 6:00) instead of the usual one, such that even though they looked like they had the same number of threads per inch and would mesh with the old ones, the new agraffes would start to bind after about half a turn. All I'm saying is that if you look at the threads very closely, you might discover something.

A: Patrick Draine, RPT: I don't think you'll find an exact fit, so just drill and tap the old hole and put in the next size up. I forget which size that is; check the supply house catalogs or your current stock. I replaced one on an old Knabe last year. It takes awhile if you haven't done it before, but it's really not difficult.

A: Rob Goodale, RPT: Since it is obviously a very old and obsolete size, before retapping the hole for a new size perhaps you could:

1. Chat with some rebuilders in your area. Someone may have an old plate from a worthless piano hanging around that you could pull an agraffe from, assuming you can find the correct size.
2. Instead of retapping the hole for a modern size, recut the threads on a new oversize agraffe down to match the original thread. This way all of the plate holes will remain the same, preserving the piano unaltered for a rebuilder sometime in the future. Just a thought.

A: Del Fandrich, RPT: Yes, it may be an old and obsolete size, but it can be duplicated. We had to have several made to fit an old Knabe we were remanufacturing recently. I measured the thread count with my Starrett™ thread gauge. I don't recall right now what the thread size was, but our machinist was able to duplicate it with no particular problems.

Take one of the good ones to a reasonably competent machinist and have it duplicated. Yes, it's going to be a bit pricey, but so are all of the alternatives. At least this way the replacement will blend in with the originals. (You are going to wire brush and lacquer all of the originals before putting them back in the plate, aren't you?)

A: Rob Edwardsen, RPT: Del, do you remove all your Agraffes from the plate and put them back in when re-

building?

A: Fandrich: Yes. We always remove the agraffes before we clean and spray the plate. We also plug the agraffe holes in the plate before we spray it. If we have to reuse the original agraffes, we ream the holes slightly and wire brush them before putting them back in. If we can, we replace them.

We're pretty careful with them. We thread them on a wire to keep them in order. Note which agraffes have spacing washers under them. Clean any excess paint out of the hole before threading them back in, putting a drop of light machine oil on the tip of the threads before screwing them back in, etc. It is my preference to replace them, but this is not always possible – at least not always practical.

Response from Mike Masters —

Thanks for all the responses. I never did find a replacement, and the customer didn't want to pay the machining fees to have a neighboring agraffe duplicated (along with two more bass strings), so I ended up retapping with 1/4" American thread (36); the agraffe used was a Pianotek AGR-2W 1/4" American-thread wide hole. Turned out fine. I just hope that whoever ends up rebuilding this piano (which it needs badly) in the future notes the agraffe order when removing for polishing.

Cold-Pressed Hammers

Q: Whenever I hear a piano played in an old movie on TV, most of them seem to have a beautiful, singing tone quality I don't hear too often. Of course, this is TV. Am I all wet here or is there something to this – perhaps the lanolin in these early hammers?

Are there any hammers being made today that still have the lanolin in them and not "baked" out? I would be interested in knowing what brands you personally like to use. I have not been real happy with many of the brands available today until I tried a set of Wally Brooks' Abel Encore lights. So far, these have been the best I have used.

— *Jim Turner*

A: Fandrich: The presence of lanolin, or the lack of lanolin, in hammer felt is neither the solution nor the problem. But, in answer to your question, no. There probably is no way to keep any effective amount of lanolin in piano hammer felt from start to finish.

A: Roger Jolly: Jim, like you I am mainly using Abel hammers; I like the consistency. I believe that Ronsen and Isaac are the only quality cold-pressed hammers, but the density seems to be all over the map. What you are hearing on the old recordings is a good-quality elastic shoulder on the hammer and less percussion — the tone is warmer with better harmonic development. I would love for us to get back to the old ways, where piano hammers had to be "broken in" before final voicing. The piano was played for six months to compact the felt, followed by minor reshaping. But these days instant gratification is the only way to sell pianos!

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Q&A/EDITOR'S ROUNDTABLE

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A : Fandrich: I read this sentiment quite a lot. Often the implication is that there is something inherently inconsistent with the cold-press process. Not at all. The lack of consistency that you find is not an unavoidable side effect of the cold-press process. It is the result of poor – or at least inadequate – controls over the process. Some thoughts that come to mind are:

- 1) Inconsistent felt thickness or density. These days this should not be much of a problem. Felt manufacturers are able to hold the sheet tolerances to a reasonably close dimension.
- 2) Inconsistent cutting. This is very possible. Especially in small shops this is done largely by hand, or at least with hand-operated cutters. In the hammer shops I've been in – both large and small – this is usually done incorrectly anyway.
- 3) Inconsistent press pressures. This is the most likely candidate. On hand-operated presses, the pressure depends on the torque applied to the screws. What condition are the screws in? When were they last lubricated? How much sleep did the press operator get last night? etc.
- 4) Poor press adjustment. Are the vertical ram stops carefully adjusted? Are the side caul stops properly adjusted? etc.
- 5) Inconsistent caul shape. This is another likely candidate. If wood cauls are being used, variations are inevitable. As cauls wear, the shape of the hammer will change slightly. What material is the caul made from? Different materials have different friction characteristics.
- 6) Inadequate control of the moisture content of the felt when it was pressed. Is the felt stored in a controlled humidity chamber? Or is it stored in open air?

There are other factors that can affect the density and elasticity equation also. I'm sure I've left out quite a few small details, but you get the idea.

Cold-pressed hammers can have a density and shape that is just as consistent as that found on any hot-pressed hammer. It does require some diligence on the part of the press operator.

A : Jolly: Do you think it would be worthwhile in increasing the pressure from bass to treble on their cold press process to try to get more brilliance in the top end, yet still keep a warm but singing quality in the center section? I'm sure some one must have some data on this. Should pressure be tapered to correspond to the taper of the hammers, or am I nuts? With modern torque wrenches, wouldn't a variable press be easy to design?

A : Fandrich: Sure, anything is possible. Most hydraulic presses have a stop adjustment, however. It is usually necessary to block the motion of the ram to prevent breaking the wood moldings. The wood moldings tend to get a bit thin up in the treble – at least they should.

The biggest problem in the treble is with the way the felt is cut prior to pressing. The saddle should be just barely wider than the molding. Depending on how the felt strips are cut, it is often much wider than that. Sometimes up to several inches wide.

The other big problem with hammers in the upper tenor and treble sections is actually the lack of responsiveness on the part of the soundboard. Last night we demonstrated one of our totally nondescript sow's ear/silk purse pianos to the Puget Sound chapter. The hammers are Abel "Lites" and we

had to heavily needle them down through the upper tenor and treble sections before showing the piano. The sound was simply too bright (and, no, the Abel's were not excessively hard). We've also had to needle down Isaac hammers on other pianos, and ditto Steinway hammers.

It is very rare that we have to do any lacquering at all and when we do it is usually with one light pass with a 1:8 (lacquer to acetone) solution. When I hear reports of hammers requiring heavy juicing to "bring up the tone" I just about automatically attribute the problem to the soundboard. Sometimes the stringing scale contributes, but mostly the soundboard.

A : Newton Hunt, RPT: Some hammer felt sheets have tapered thickness and the density of the felt tapers as well.

Hydraulic presses are most often used, I think. Felt is not a perfectly homogeneous material so there will be hard and soft spots in any good hammer. Hand cutting is practically obsolete. Renner uses routing machines to form their felt, and Isaac uses an extremely sharp two-bladed rail run cutter that cuts extremely evenly.

As Isaac says, "A cannon ball is hard and a cotton ball is soft. Let's talk more about the tone we want and ways and means to get that tone." Different pianos and different venues will require different power and tone elements to sound best.

A : Fandrich: Felt suppliers today are capable of supplying felt that is pretty consistent. It does vary in density from the thick end to the thin end, but this is intentional and fairly well controlled.

I think that the new Steinway presses are also hydraulic. I believe that now only Ronsen still uses hand screw presses.

When I referred to hand cutting I should have been more specific. Hand-operated cutters would probably have been more accurate. Anyway, it's not whether or not the cutters are hand-operated or totally machine controlled. It's how the felt is shaped when the task is done that is important. Too often, that shape is incorrect.

Certainly different pianos and different venues require differences in the hammers. What I find objectionable these days is the general trend toward an ever increasingly hard sound. Not all of this, of course, can be blamed on the hammer.

A : Jolly: Just got back from being away for our Provincial and National music competition. Don Rose and I had some fun with the usual last-minute panics. Three of the pianos were Baldwin model Ls: two brand new ones with Renner blues that I matched for Concerto work. Don used his RCT and analyzed the work on both pianos, other than the top octave of one unit that had been grossly over-doped, and we were both amazed at how close we were able to match the two instruments.

The third L is 13 years old, and is an exceptional instrument by any standard. It has the old medium cold-press type hammers with the gray reinforced lower shoulder. Since the scales are the same, the tuning curves were unbelievably different. Having the units together was quite an education. You know I share the same thoughts as you, Del, why make them so hard in the first place? Even with what I would consider aggressive steaming of the shoulders and medium steaming

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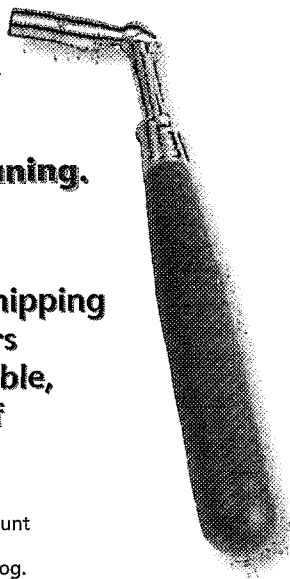
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Q&A/EDITOR'S ROUNDTABLE

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of the strike points, the same type of elasticity can not be recreated. The warm build-up of a singing quality at ppp is very elusive in these hammers.

A : Ari Isaac: People appear to be having lots of trouble getting the tone they want out of this or that make of hammers.

To produce musical tone a hammer striking the strings has to go through the same motions, more or less, as a tennis ball hurled at a wall. It needs to function like a spring – a pre-loaded compression spring.

I compare tone of each note to a rainbow. Just as the rainbow is made up of bands of color so a tone is made up of bands of frequencies, some are partials and one is the fundamental. When a hammer strikes with a given intensity a group of partials will be louder, more predominant, than others. Go back to the rainbow metaphor, some of the color bands will be brighter than others. Change the intensity of playing and – another group of partials will sound louder or, in the rainbow, a different group of bands will look brighter. This is true only if your hammer is made to function like a spring. If your hammer has been heavily juiced or if it has been made using steam to mold or shrink the felt – all you'll have is a volume control. The loudness of the note will change all right, but the predominant partials will remain the same – no color. The change of predominant groups of partials as the playing intensity is varied by the player is, to me, what musical tone is all about.

I have always insisted when ordering felt for making my hammers that it be dense and very springy. I want the hammers I make to function like a compression spring so they can produce the tone so many technicians are after and do so easily.

Please get in touch with me if you have any questions or problems with any make of hammers. I'll be pleased to help you find an answer or a solution. My e-mail address is: isaacah@sprint.ca.

Replacing Keytops

Q : I am preparing to order a few sets of keytops from Vagias. I have never used their product before, although I have their samples and there are some very nice looking tops available.

Questions:

1. What is the appropriate, or personally preferred, adhesive for Vagias tops?
 2. Do they buff up well?
 3. Is there a style that someone would recommend that I not use?
- Thanks.

— Jim Bryant, RPT
Northeast Florida Chapter

A : Greg Torres: Jim, I have used these in the past, but only when the customer wants an alternative to the regular white plastic (i.e., they want the ivory look). The other ones are a softer plastic material. Most of the time I use the molded tops with fronts from American Supply.

As for glue, you can use regular contact cement or the "safety" contact cement by Elmer's™, which is a latex-type base.

I have used a product called Liquid Nails™ also, but *not* the brown flammable stuff – this is a white latex-base in a squeeze tube, it doesn't dry very fast so you can align the tops on the keys easier, and it also fills gouges and imperfections in the key (you know, like what happens when the old top doesn't want to come off without a fight). I am sure that there are other glues that would probably work well also, but these are my choices.

One other thing, if you do use the simulated ivory tops, then you have to deal with either gluing on fronts to match or cleaning the old ones and/or spraying them with white or off-white lacquer.

NOTE: The simulated ivory tops from Vagias are somewhat translucent so the white contact cement or liquid nails is my choice for those. And the key itself has also got to be clean because any dark discoloration will show through the keytop (simulated ivory ones).

A : Wim Blees, RPT: For adhesive, I would recommend the same stuff you use for other keytops. I use 3M's spray adhesive. This stuff is rubber cement in a spray can. I have never heard of having to buff up plastic keytops. It would seem to me that using a buffing machine might actually scratch, if not burn, the plastic. To get the rubber cement off the plastic keytops, I use naphtha. I don't know about style, but I want to relate a problem I had with Vagias keytops about 15 years ago. I used the ivory-grain top. After about a year, the customer complained that the tops were splintering. Sure enough, when I got there, the material was breaking up, kind of like a piece of wood that has splinters in it. I had the same thing happen to another customer a couple of months later. I haven't used Vagias keytops since then.

I have no idea why this happened. I speculate it had something to do with the chemical makeup of her body. Because the plastic is made up of different grades and colors, perhaps the "glue" that holds the different colors together was reacting to her body chemistry. Another theory is that her hand lotion was reacting to the plastic. Anyone out there with some other theories, or similar experiences?

A : Torres: I think the problem is the solvents in the 3M spray adhesive. It is a lot stronger chemically than rubber cement, and it will eat into the plastic, although you can still use naphtha to clean it when it is still fresh. I had a similar experience. I don't believe it is the keytops themselves because when I used the latex-based adhesives I never had this problem.

You can buff keytops if they are acrylic plastic. Only the white ABS top from Vagias can be buffed. The others (Vagias) are made of a softer plastic. The molded tops from American Piano Supply can also be buffed. It is handy to be able to buff a scratch out, especially when you happen to accidentally scratch one when installing.

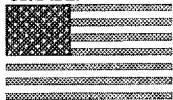
A : Allan Gilreath, RPT: A few thoughts. I have found the PVC-E adhesive to work exceptionally well for gluing on both ivory and sets of conventional keytops. It's easy to work with, doesn't "eat into" the plastic tops, has good gap-filling properties and remains slightly flexible so the top doesn't pop off of the key when subjected to climatic changes.

As to buffing, a standard buffer or bench grinder fitted

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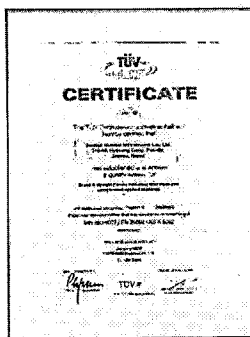
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Q&A/EDITOR'S ROUNDTABLE

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with a buffing wheel is way too fast for buffing plastic keytops. I haven't worked with the Vagias tops, but have had great results buffing other tops with white polishing compound and a slow speed buffing wheel.

A: Torres: I will try this PVC-E next chance I get. By the way, I guess I should have specified how I have buffed an occasional keytop (once every couple of years). With an automotive type-circular buffer and wool pad at about 1200-1400 RPM using automotive-type buffing compound – works great for me.

A: Paul Chick, RPT: I've been able to buff soft plastic by using the compound for buffing polyester finishes, and by modifying my buffing wheel. I cut the top two to three layers of stitching and remove the threads, turn on the buffer and rake the wheel with a wire brush followed by a wooden paddle to remove any captured wire (can that leave a nasty pattern of scratches). The wheel will flare more and carry more compound. Be sure to load it with enough compound – it does the cutting/polishing. The wheel carries the medium and can provide the heat for burnishing. Clean the wheel often with the wire brush and wooden paddle. I learned this trick from a Kimball tech when they took on Bösendorfer.

A: Blees: Is this stuff (PVC-E) sold in hardware stores, or do I have to order it from a piano supply house?

A: Richard Moody: PVC-E or the white plastic glue, not to be confused with PVC plastic pipe glue which is clear and goopy, has to be ordered from a piano supply house. However, the glue sold in sewing stores as fabric glue might be the same. You can use that as a get-by substitute.

I have used it (PVC-E) for keytops, and gluing nylon cloth to player pneumatics, and also pneumatics to decks (but this is controversial), and felt to metal, leather to felt and business cards to insides of pianos. You must, though, apply the pull test, to see how it conforms to your standards of tenacity. It is very messy for keytops.

For keytops on the last two sets, I have used a glue called Goop™. It stinks, (smells bad) but I can't pull the keytop off without great effort, and it is not nearly as messy. I hope it lasts.

A: Bill Maxim, RPT: I assume you have to leave the ivories clamped until the PVC-E has thoroughly set, in order to avoid curling. Is there any way to use PVC-E for on-the-spot repairs in the home?

A: Tim Keenan: I don't know – I generally take any keys that need ivories replaced back to the shop. This is a drag if the piano is a long way from home. That is a problem with PVC-E – being a water emulsion, it does cause temporary curling of the ivory. It occurs to me (just now) that perhaps soaking the ivory in warm water for a few minutes before applying the glue might prevent the curling by expanding it equally on both faces. I think I will do the experiment with some old ivories I have lying about and will report back.

Whitening the Key

Q: It bothers me when I replace an ivory that the darkness of the wood underneath shows through. Is there any way to whiten the top of the key that will dry fast enough so the ivory keytop looks the same as the others when glued on? Thanks in advance!

— Clyde Hollinger, RPT
Reading-Lancaster, PA Chapter

A: Anne Beetem: You can glue a piece of white paper (rag paper, of course) under the ivory slip to eliminate any shadow. This is one of the old, old tricks.

A: David Ilvedson, RPT: I carry that "white-out, liquid paper stuff" in my ivory kit which I paint on the key before super-gluing the ivory on. Of course, if the old wafer is still there and white, I just clean it off with a razor blade and glue away. I carry the glue-impregnated wafers and clamps, but to do a factory job takes quite a while and most customers would rather go with the quick fix.

A: Keenan: Titanium dioxide (commonly used as a paint pigment) mixes easily with PVC-E glue, and has very high opacity. It is also used as a filler/coating for fine paper-making. You can buy it from paint supply wholesalers (often called Titanium White). That's what I use when I have to replace ivories. I didn't invent it — I learned it at George Brown College. I hope someone finds it useful.

A: Richard Wagner, RPT: In addition to using titanium dioxide as mentioned by others, I've found that, in a pinch, good old white correction fluid will work, also. This is the stuff you use to paint over your mistakes when forced to use a typewriter – like just after your hard drive crashes and nothing on your computer works any longer.

A: Marvin McDonald: In our shop we use cold-hide glue mixed with titanium dioxide. The titanium turns the glue white and hides the dark color of the wood and gives you a very stable and white glue joint.

A: Leslie Bartlett: Has anyone ever used Kilz™ to make the keys white enough to solve the problem?

A: Steve Pearson, RPT: Nope — takes too long to cure and is stinky. Pigmented shellac smells of alcohol but is dry in a couple of minutes and is white as the driven snow. It comes in a spray can as well, and makes an easy fix for nasty, dirty wood/glue surfaces. Glue sticks well to it, too. ☐

Attention All Chapters & Committees

The deadline for submitting Bylaws amendments is December 31, 1998. Amendments may be proposed by a chapter, committee or the Executive Board.

Please submit the proposed amendment in writing with supporting arguments to:

Vivian Brooks, Chairperson, 376 Shore Road,
Old Lyme, CT 06371

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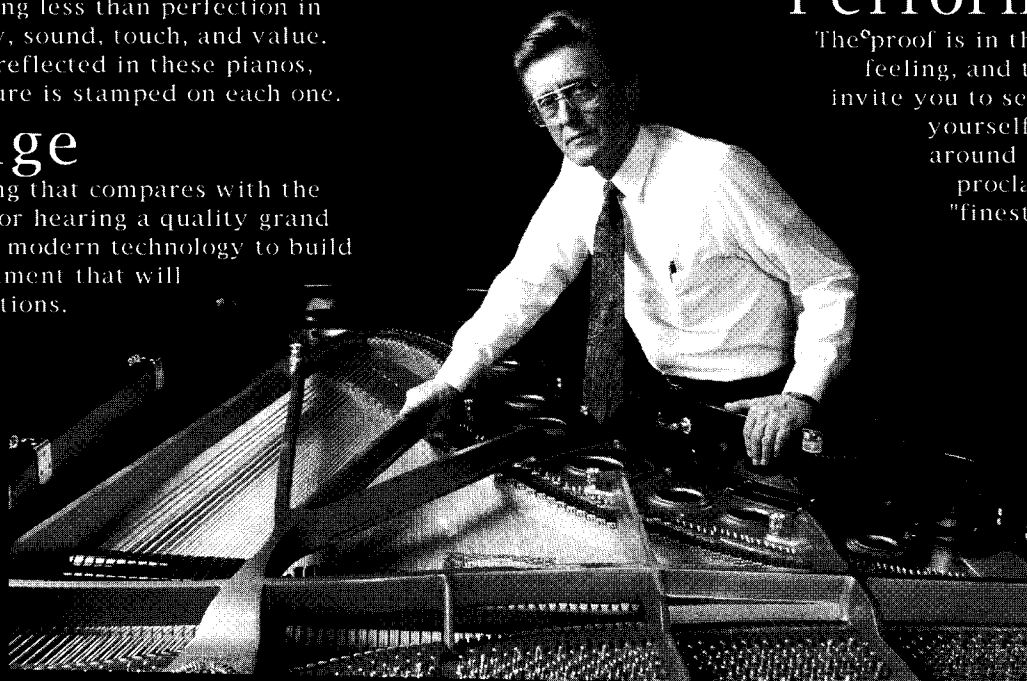
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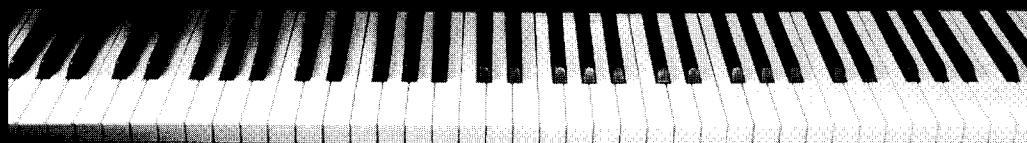
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The Tuner's Life —

Not Stopping Now

— Edward Sambell, RPT

By Susan Kline, RPT
Feature Writer

Frankly, this article is a tribute. Twenty years ago, Ted Sambell taught me to tune and work on pianos, and my life has made better sense ever since. I am strongly biased in his favor. He is calm, gentle, modest, and very determined; and those traits got built into my attitude toward piano work from the very start, which was my great good fortune. I'm sure I'm not the only one who has had this experience.

Three large groups of people have come under Ted's influence: there are those like me, who took his diploma course in piano technology at George Brown College in Toronto, Canada; there are the students and faculty and visiting artists at the Banff Centre in Alberta; the third group are those who have taken his convention classes, or have studied with him through the Banff Centre's Skill Development Residency program.

I met Ted back in 1978, and we've kept in touch ever since. He has grown and changed a lot since then, and now that he is over 70 he shows no signs of standing still. In an attempt to chart his path, let's look at where he came from.

Early Life

Ted was one of 10 children, and grew up in England in south London just before World War II. He describes his neighborhood as a happy, easygoing and very safe slum, where children could wander at will. He grew up during the Depression and his family struggled, though he says he was always properly fed and clothed. His mother was a tower of strength who managed to make everything work out all right for her children. I once met her, and I clearly remember her firm, cheerful character.

His vision was very bad from earliest childhood, and he went to a school for kids with poor eyesight. The teaching there was very rigorous and thorough, and the firm basis it gave him still shows in Ted's way of speaking and writing. Anyone who reads his e-mail posts to the "pianotech" list can witness his articulate and organized thinking and his excellent spelling, grammar, and syntax. They had the idea that children with poor vision shouldn't read small print, and had them write by assembling large rubber letter stamps to form words. He got very adept at picking out the letters he wanted and filling pages with huge printing. The school had music days when a blind pianist would come and play, and a few lucky youngsters (who had a little money to spare) would get piano lessons. Ted loved the piano tone and listened to the beats in a

chord with delight — without anyone pointing them out. He craved a chance to learn to play the piano. His family didn't own one, though his father played jobs with his violin and trumpet.

This schooling continued until he was 14 years old. Then Ted got a scholarship to the Northern Polytechnical Institute, in north London, because the people running his school had the idea that if you had poor eyesight you probably had excellent hearing. (Ted says that this is a myth.)

He started the piano technology course in 1938 when he was 15. The school has a very distinguished history. Samuel Wolfenden had once been principal there. One of his professors was Sidney Alfred Hurren, a brilliant scholar with an urbane manner, who wrote the essay under "Piano" in the *Encyclopedia Britannica*. The course had a lot of flexibility, and allowed people to proceed at their own pace. Ted threw himself into it body and soul and moved ahead quickly, graduating early. Besides giving a good theoretical background, the course focused mainly on tuning and action work, especially center pinning and re-felting. The English climate is easy on soundboards, but pianos there suffer a lot from moth damage and seized center pins.

The course included a lot of practice at tuning, which usually took half the time. The students did a lot of chipping and got very quick at it. I thought that I remembered watching Ted chip a piano in front of our class, raising it a semitone, in only five minutes; but he tells me it was 13 minutes instead. He didn't know he was being timed until after he had finished. The most impressive demonstration of Ted's chipping that I have seen happened late in the school year at George Brown College while I was there. A student had worked for many months on a square grand which had finally been strung but had not been brought anywhere near pitch, and time was running out. Ted said, "Never mind, I'll chip it for you," and the student went off to do urgent things. I settled into a chair nearby and kept quiet, for a change. I wanted to see how he would proceed. He took an A fork and set A0 (the lowest note on the piano). He then chipped rapidly from the very bottom to the very top by semitones, without once checking a note, or turning back. When he got to the very top, we checked the pitch of the highest note. It was right on! He doesn't have absolute pitch (he says this was luck).

His mother managed to get him a piano after his first year in the tuning course, and made it a complete surprise. It was an old sticker-action

The Tuner's Life

upright with a walnut-burl case and loose pins. He was thrilled, and faithfully tuned it once a week with his T-hammer. He never could stand an out-of-tune piano. He bought a book and taught himself to play. He likes playing Chopin and Beethoven. He kept this piano for 10 years, until the family left England for Canada in 1949.

Once the course was over he planned to start working in a piano shop at the "Poly," until he found out that the wages wouldn't even pay his train fare. Instead, he started tuning for a large store in London. Most of the tuners were off fighting the war by this time and, although he was only 18, he was sent out to tune for customers a lot. He did floor tunings for the store and got paid two shillings sixpence a tuning. It seemed like a lot to him. He did 32 tunings a week.

After he had tuned his way through 200 pianos in two showrooms and had started on one of five storage warehouses with 900 more each (where the pianos were left on their feet, covered and labeled, in a heated space, and tuned at regular intervals) he volunteered for the Civil Defense. He started this work in 1941, and he continued it until the war was over. His job was digging out bomb victims and he was on call, 24 hours on and 24 off, continuing through weekends and holidays in the same pattern. If things were quiet, his group was set to clearing rubble and bombed out buildings. In between he did some piano work with his brother, who was also a tuner.

Once the war was over, work was harder to get. He printed business cards and put them through mail slots, and knocked on doors, with poor results. The family had planned for years to go to Canada once the war was over, and they all saved up for it; they had Canadian roots. Ted's father and oldest brother were both born in Canada. In 1949 the family finally had enough money, and made the Atlantic crossing on the Cunard ship, *Aquitania*. They settled in London, Ontario.

Canada

His course of action upon reaching London, Ontario was simple. Heintzman was a major company in Canada, with stores in every city. He walked into the store in London, and asked for a job. He stayed there for many years and organized a shop in the store. He didn't look ahead. He just did the work as it appeared, whatever it was. Gradually (as cream will rise to the top) some concert work came his way. The Heintzman Company had a system where each store would keep a piano for concert rentals. (Toronto had four.) The London store's rental went out to a lot of smaller places for the Community Concerts™ series, and Ted would go with it in the truck, tuning it and helping with the moving. He would come back with the truck or by bus. For private customers or warranty work, he would use public

transit or the customers would drive him to their homes. I wouldn't expect tuning without a car to work very well, but Ted got around the whole region a lot. As well as being totally at home with public transit, he went in for bicycling in a big way.

Cyclist

The work week was five-and-a-half days long. On Saturday afternoon, he would put overnight things in the bike's saddle bags and ride to Hamilton (about 85 miles.) He would stay with friends there, and then they'd ride farther on Sunday, all around southern Ontario. They visited Niagara Falls. When they needed to, they could come home on the train, checking their bikes. One vacation they cycled all the way to Quebec City, by way of Rochester, New York. Coming home on this trip, they decided that they wanted a day to rest, so they did 172 miles in one day in order to get back earlier.

The University of Western Ontario

Ted started working for the university way back in 1951, when they had 20 music students and six pianos. Slowly, the Music Department grew, and grew, and grew. I'll say more about that later.

The Heintzman Factory

This settled period came to an end in 1960 when Bill Heintzman asked Ted to move to Toronto and work in the factory as a foreman. This was intensely frustrating. The company was already declining and "modernization" only sped the progress downhill. What resources were still available were stubbornly misused and his advice was persistently ignored. After six months he had had enough and quit. He moved back to London, Ontario, but instead of working for the store, he rented his old shop from them and soon hired two employees. He reluctantly let them go with six months' notice when the government paperwork got too laborious for him. He got married and moved the shop, including his bass string machine, to his basement. Meanwhile, the Music Department at the University of Western Ontario continued to grow and took more of his time.

About this time, he tuned at the Stratford Festival for the series of chamber music concerts played by Glenn Gould, Oscar Shumsky, and Leonard Rose. Ted greatly admired Glenn Gould and enjoyed working for him. He made several emergency trips to tune for Glenn Gould for concerts in the U.S. and was asked to take on his Toronto tunings. Ted reluctantly

Continued on Next Page

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Not Stopping Now

Continued from Previous Page

turned them down, because he felt that in an emergency situation he might not be able to get there in time from London. He later regretted this decision.

Meanwhile, the University of Western Ontario grew and pleaded with him, and grew some more, until in 1972 when Ted started working for them full time. He built a small shop there which I once got to see. It was exquisitely planned to make use of the limited space. He designed a plate hoist that folded back against the wall so it took up almost no room. He worked for the university until 1977 when he started the course at George Brown College. Four people now do his job at the university.

Teaching at Last

After he left London Ted began tuning for the Banff Centre each summer and one week at Christmas, and he taught at George Brown College in Toronto the rest of the year. He continued this schedule until he left Toronto and moved to Banff in 1990.

When I attended George Brown College in 1978 the course was only in its second year, so I witnessed its early stages. Everything got more organized as time went on, but for those with real motivation, the first year or two was a paradise. The attention and patience Ted spent on us was essentially unlimited, and we had great freedom in our use of time. Those with a tendency to let things slide lost out during those early years, and that type of student probably did better later on, when there was a firmer structure. Ted's lectures were logically organized and beautifully prepared from the first, however.

Ted was changing as I watched those first two years. After a little mountain-climbing excursion at Banff in 1978, he decided he was out of shape. He started jogging and lifting weights. He ran two marathons a few years later. He also was organizing the course, and setting up his bass string machine and a hoist. He was buying some more power tools for the course, he was setting up a tool crib, and he was working hard on the curriculum. He also did concert tuning for Tom Hathaway, a very good rebuilder and dealer, and consulted with Ari Isaac, who was getting ready to start making hammers about then. With both years of the two-year course in residence at the same time, he was sometimes overburdened, and got some nasty cases of flu. Don Stevenson assisted with the teaching during my time in the course, which helped.

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The year after I graduated, Anne Fleming-Read entered the course. She soon became Ted's assistant, and she now is in charge of the program.

Banff

In 1980 I was lucky enough to spend a summer at Banff in their apprenticeship program. I still remember the day of my arrival. There was a concert that evening, and Ted got to Banff with just time enough to tune the piano on stage in the late afternoon. Before leaving Toronto Ted had been having long phone conversations with people at the Centre about problems with this piano. During intermission, several people came up to me and asked, "What did Ted do to the piano? It sounds so much better!" All I could answer was, "He tuned it."

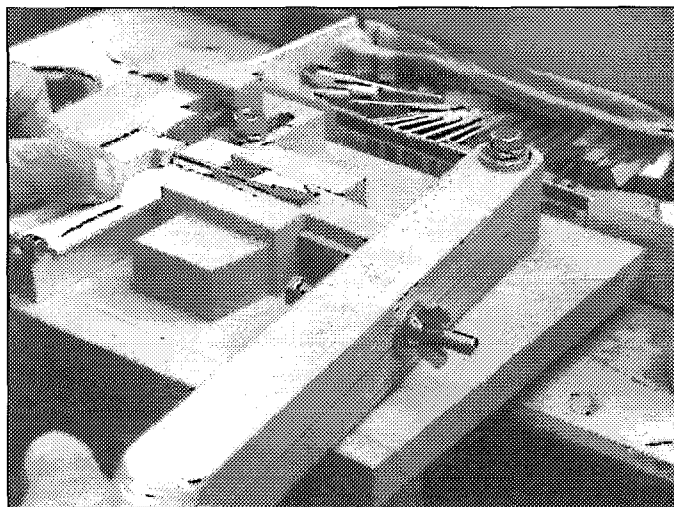


Photo 1 — Jig for inserting backchecks.

PHOTO COURTESY OF EDWARD SAMBELL

Back in 1980 there was no piano shop in Banff. Piano work was done backstage, and Ted had a storage closet for supplies and tools. Soon after I departed the scene, Banff hired a full-time piano technician who stayed all year and Ted would come out in the summer. I don't know who these people were, but I do know that one of them, Otto Keyes, changed the whole future of the Centre when he acquired a large room for a shop. It became *the* shop — the

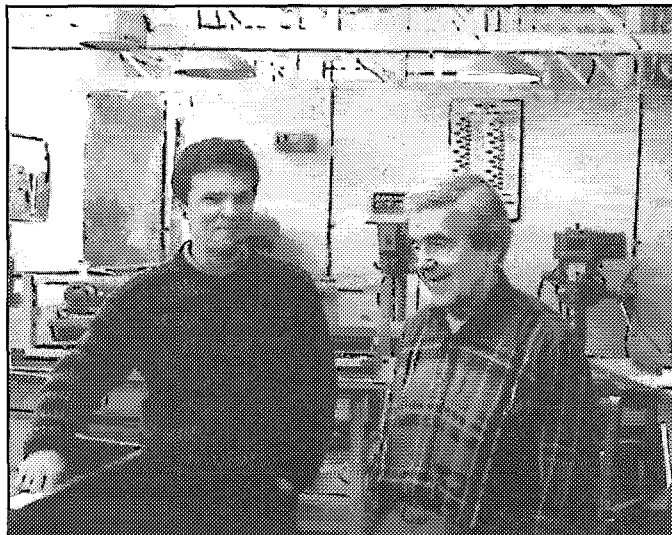


Photo 2 — Denis Brassard and Ted Sambell at the Banff Centre shop.

magical shop that turns visitors green with envy.

Ted has always had strong leanings toward tools, jigs and shop fixtures (see Photo 1), but he did not create the fabulous shop single-handedly. Denis Brassard is the other full-time technician at Banff. He and Ted make quite a team. Denis graduated from the George Brown College course in 1984 and has been at Banff a long time now, building things, exploring computer programs, designing things, and generally enjoying himself, while keeping the pianos sounding lovely. Also, Robert Haist comes each summer when everything gets busy at Banff.

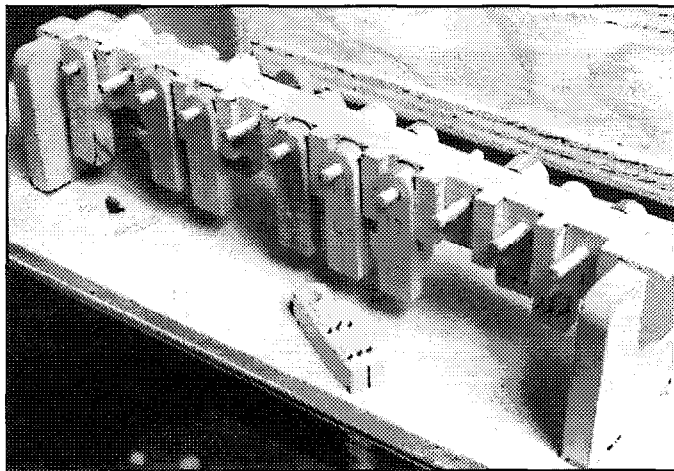


Photo 3 — Punches for bridge layout.

Vision

Ted says that, except for his being unable to drive, his poor eyesight never kept him from doing anything he wanted to do. When I met him, he used contact lenses along with thick glasses, but that certainly didn't hold him back. However, as he got older he began to get cataracts as well. Ironically, this was a good thing. The surgeon was delighted to give him the good news: as they replaced the lenses to get rid of the cataracts they could correct for his nearsightedness, and he would have nearly normal vision for the first time in his life. The first thing he did when he could truly see was to retake all the slides for his convention classes.

Growth

Every once in a while as the years passed I phoned Ted, or came up to Banff for a few days. First I started hearing about capping bridges and jigs for laying out bridge pin locations (see Photo 3); I heard about adjustable lyre props; I heard about an alteration to the Steinway pitman, so it doesn't bind in the keybed.

I heard about the Centre advertising across Canada for Steinway Ds to rebuild. I was there when one arrived from Brandon, Manitoba. Pianos at Banff started to be named because there were enough of them that they could be confused with each other. The one from Brandon is called the "Brandonburg."

Then I started hearing about soundboards and a kiln to dry out the wood for them. Pretty soon I heard about making soundboards from raw lumber. Then I heard

about videos of the soundboard process. I heard about a system to install upright hammers with factory precision. I visited, and saw jigs and new tool racks, regulating tables, a new lathe, a narrow keyboard installed in a Yamaha grand, and more jigs. I heard about making better videos, and the wish to edit them on a computer. I saw a Heintzman upright with a new and redesigned soundboard.

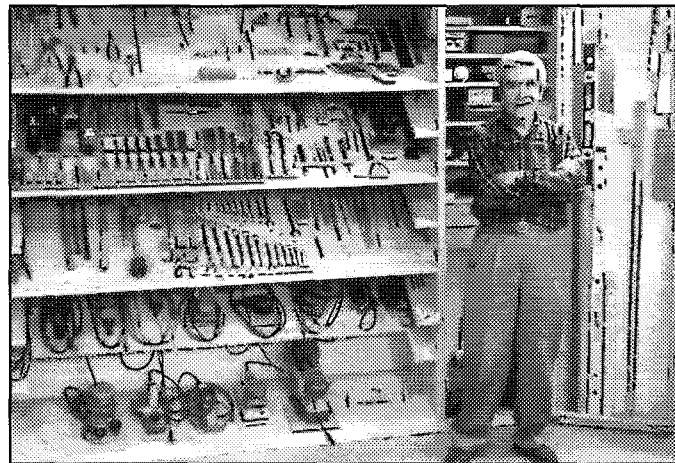


Photo 4 — Ted Sambell with some of the tools at the Banff Centre shop.

I saw a video of a strange electro-mechanical musical instrument called the "Clusterflux" which Denis and Ted had helped an inventor to build. It won the Bourges Prize in France, and the inventor, Garnet Willis, is coming back to Banff to make another version called the "Kinetoflux."

I heard about the Banff Residency program where people can come for a week or more to study a particular aspect of piano work or to do a particular project. Then Ted became the Calgary PTG chapter president, and the Northwest Regional Convention was held at Banff. I was there — which is hardly surprising, I love to go there.

Smiles

At the end of his class on bass strings at the Banff convention, Ted talked about his age. He explained that although he is well over 70 he feels no wish to stop working on pianos and intends to continue as long as he can. "They'll have to scrape me off the keyboard."

Ted Sambell is not hard to locate. He can be found at the remarkable shop or in the Banff Centre "Music and Sound" building most of the time. If he is not in Banff, he is probably either at a PTG convention, or on one of the international tours of piano factories sponsored by IAPBT (the International Association of Piano Builders and Technicians), or he is in Toronto visiting his daughter and two grandchildren.

When I visited Banff people were polite though somewhat distant — until they saw that I was with Ted. Then everyone, from the waitresses and students, all the way up to the faculty and administrators, smiled warmly at me. ☐



By David Patterson, RPT
Toronto, ON Chapter

The Bartolomeo Chronicles

Bartolomeo Arrives

He pulls up to the home still thinking about the person he met earlier in the day. Learning everything he can about meeting people has become one of Bartolomeo's most fascinating lifetime studies. As he approaches the door he prepares for the most important five seconds he will spend. He wants them relaxed so they will like and trust him. He looks in their eyes directly for a few seconds, smiling broadly and genuinely, almost to the point of a grin. No attempt is made to shake hands unless they make a gesture – in which case he is ready. He enters and, as with any professional, follows a definite and specific interview strategy consisting of questions and friendly chatter.

The tuning tools are in a separate pouch within the meticulously-kept main kit. It seems that these same tools are used in almost each situation: the tuning lever, mutes, combination handle, common screwdrivers, lid prop, any muting strips, as well as capstan tool, voicing tool, and even measuring tape, mirror and sample hammer butt. The wood and leather lid prop has saved many walls since he first made it, in a few minutes, years earlier. He reminisces upon his shopping trip for the ideal "kit within a kit." The search came about after two days of carrying his tools miles and miles around a complicated school complex – all containing familiar pianos. It was difficult locating just the right durable leather shaving kit that would accommodate the length of his tuning lever and include suitable zippered pouches. Now, in 70 percent of his situations he removes the pouch from his toolbox and never requires his other tools.

Bartolomeo slips the prop into place, using its many horizontal holes to store screws as he removes them. The top panel is leaned securely along the front bottom of a nearby couch, resting on carpet where slippage is unlikely. The bottom panel is set in the same location and easily clears the finish of the first panel. When the remaining cabinet piece is set on the floor in front of the first two, the entire collection takes up only about 15 inches. He allows the piano owner to witness his painstaking care in moving around the panels. The owner, at this point, is spellbound by the inside of the piano, which is one of the reasons why Bartolomeo reveals it. Since he will normally want to show them certain selected items inside the piano, he is ready even if they enter unexpectedly later in the service call. Also, the pedals require the accessibility at some point.

The homeowner has gone off calling for the children to look at the piano and attempting to track them down. On the paperwork Bartolomeo begins his systematic procedure for assessing the piano. The approach rarely varies by much. The mirror is handy for locating the serial number, and he keeps it nearby for displaying hammer string marks if the need arises. In his Piano Atlas he looks up the year that the piano was manufactured. He measures the height of the piano from the floor to the top of the lid. Each piece of information is noted across the top of the paperwork by Bartolomeo, including the type of finish. A1 speaking length is arrived at by quickly dangling a couple of feet of his small measuring tape beside and below the left-hand action post. The end of the tape is captured near the bass string/keybed area and stretched until it reaches the A1 bridge pin. He holds both ends firmly in place, then lets go of the bottom portion, measuring any leftover amounts at the top area.

Already, he is getting to know the piano.

Next month, Bartolomeo takes a closer look....

Coping with the Pitch Difference Between One String Alone & the Tuned Unison

**By Virgil E. Smith, RPT & M.Mus.
Chicago, IL Chapter**

About five years ago I became aware that in part of the temperament area and above, one string of a three-string unison sounding alone gave off a higher pitch than the three strings sounding together. Jim Coleman Sr. is giving me credit for discovering this phenomenon, but Owen Jorgensen has the name of someone who discovered this around 1860, and I have met at least one other who rediscovered this before I did. However, I may be the first to teach this in a tuning class or write about it in the *Journal*. Even though it has been mentioned in several articles in the *Journal*, confirmed by Jim Coleman Sr. with the Reyburn Cyber-Tuner™, and discussed on the Internet, it has been largely ignored or received with much skepticism by the tuning community. It was not until a meeting at a dealership where two pianos were compared, one where the tuning was adjusted for the pitch difference and the other not, that my own chapter began to recognize its significance. The octaves were stretched much more in the first piano and when you listened as a musician to the octaves with both unisons tuned, there was no beat between the two notes of the octave, but when two strings of the upper unison were muted out there was a definite beat in each octave (on the sharp side) in this area. Listening to the other piano the same way there was a beat in the octave on the flat side when both unisons were tuned, but no beat when two strings of the upper unison were muted out. No one but Jim Coleman Sr. has even mentioned this pitch difference in the *Journal*; evidently no one else feels it important enough to consider or to challenge.

There are several possible reasons why tuners have been reluctant to consider adjusting their tuning to accommodate this pitch difference:

- 1) It doesn't seem logical
- 2) There is no good scientific explanation for it (one explanation from a physicist customer is that a greater mass producing the sound makes the pitch lower)
- 3) Tunings without the adjustment can be excellent and very satisfactory tunings
- 4) The pitch difference between one string sounding alone and the three sounding together cannot be heard when tuning octaves with matching coincident partials
- 5) It would require learning a whole new approach to tuning for those who tune octaves by matching partials.

How should tuners respond to this pitch difference in the unison between one string sounding alone and the three strings sounding together? Can we ignore it completely as long as we have passed the PTG tuning exam and our customers are very happy with our tunings, or should we adjust our tuning to compensate for this even though it may mean learning a whole new tuning technique? There is a difference in pitch; it is not psychological, imagined, or how we listen to the note. There is a difference in pitch between one string sounding alone and two or three strings of that unison sounding together in at least the 4th and 5th octave of every piano I have tested. The difference is very slight or inconclusive when measured with a machine – but it is obvious to the ear when listening to the two notes of the octave as the ear hears them naturally, all the partials sounding on each pitch. The difference is just a slow beat in octave 4, but becomes greater in each octave higher as the notes in that octave are tuned to a still higher pitch.

If one tunes without adjusting for this pitch difference, the treble will end up lower than planned, perhaps a three or four instead of a five or six in Dean Reyburn's list of acceptable octave stretches. If the tuning is adjusted for the pitch difference, the treble will be considerably higher; Jim Coleman Sr. found it necessary to use Reyburn's No. 8 octave stretch to match my tuning in the first Tune-Off. Tuning without the adjustment will not be a problem as octaves with a slight beat on either the sharp or flat side can be very acceptable, but if you want to improve your tuning, or if you are fortunate enough to work for musicians who can hear and appreciate subtle differences in tunings, adjusting for this pitch difference in your tuning can be a big plus. Typical comments from musicians are: "My, you really do stretch your octaves," "It is great to have the top notes really in tune," or "The piano has never sounded this good, even when it was new," and "What did you do to the action; it feels so different, so much more responsive?" Actually nothing was done to the action; the increased resonance because of octave alignment accounts for the greater responsiveness. If you want to tune as well as or better than Jim Coleman Sr., you will want to consider adjusting your technique to deal with the pitch difference in the unison. I could not have come close to his fine tuning without doing so.

One of our Chicago Chapter RPTs who is now adjusting for this unison pitch difference in his tuning recently had an interesting experience as a result. He was engaged to tune a Steinway B for a concert at a small college in the area. He found

Continued on Next Page

Coping with the Pitch Difference Between One String Alone & the Tuned Unison

Continued from Previous Page

out several days later that it had been tuned the day before by the RPT who services it regularly. Still, he had to raise the octaves a great deal to eliminate the beat between the two notes of the octave when the unisons were tuned. A few days later the lady who had arranged for him to do the tuning called, claiming that the piano had never sounded better. She then asked him to tune her personal piano and several of her friends have been calling for tunings on her recommendation. This would seem to be another indication that pianists are able to hear the difference in a tuning when the adjustment is made for the pitch difference in the unison.

The problem of the difference in pitch between one string alone and the entire unison is made more complicated by the confusion that still exists as to the source of beats and how we hear them. It is unfortunate that we have acquired our understanding of tuning and beats largely from science and have more or less ignored music's input and what the ear can actually hear, which science and the electronic tuning device are still unable to duplicate. Science can only explain and measure beats by matching coincident partials that the ear does not naturally hear. Although many have trained their ears to hear these partials, the ear naturally hears all the partials of each note as one sound and pitch, and the actual beats by which an interval is expanded or contracted from its pure form for tempering. I call these beats the natural beats. It is easy to distinguish between natural beats and beats between partials; beats between partials involve only one partial from each note and one basic pitch, the natural beat involves all the partials of each note and two different pitches. It is then possible when tuning aurally to hear and work with beats in two different ways. I find that most tuners, even those who work with partials, hear and deal with natural beats in their tuning, although they may relate them to partials in deference to science.

If it were not for the ability of the ear to hear the natural beats between the two notes of the octave, it would be almost impossible to deal accurately in tuning with the pitch difference between one string and the three strings of the unison. The machine's reading of this pitch difference is very indefinite and inconclusive; it cannot be heard when working with

partials, but it is obvious when listening to the two notes of the octave. An octave beatless with only one string of the top note sounding will have a definite beat with all three strings sounding, and a beatless octave with all three strings sounding will have a definite beat with only one string sounding. The best way for any visual or aural tuner desiring to deal with this pitch difference is to work with natural beats, and of course this can only be done by ear. Since the ear can hear natural beats, the aural tuner need not bother with partials at all; the speed of the natural beats, not matching partials, is what is important in tuning.

Cracking the Unison

In the area of the piano where this pitch difference exists, tuning the single string becomes a real problem. No matter where it is tuned, the pitch will change when the other strings are tuned.

I spend a minimum of time tuning the first string; I tune it close or slightly above where I want the final pitch to be and wait until I have tuned the second string to check for accuracy. I have never been able to detect any difference in pitch between two or three strings sounding together.

If the pitch is correct with the two strings sounding I move on, but if it is only slightly off, I work with the two strings to correct it rather than starting over again with the single string. Tuning checks will indicate whether it is sharp or flat, then I use a technique I call "cracking the unison" to correct it. I tune one of the strings in the proper direction until I hear the slightest change in the unison sound, then tune the other string to match it. If the error were slight this usually corrects it, but if it doesn't, I repeat the process until it does.

I find this much quicker and more accurate than trying to guess again how sharp to tune the single string. I find myself using this technique more and more with great success in my tuning. Whenever I find a note just slightly off I work immediately with the two strings to correct it.

Tuning A=440

Because A4 lies in the area where there is a pitch difference between the one string and the three strings of a unison, tuning A4 to exactly 440 becomes more difficult. This is a problem if the piano must be at A=440, or if one wants to avoid tuning the piano to a different

pitch than it was tuned to at the last tuning. I tune one string a little sharp, and then work with two strings until the pitch is at 440.

Tuning A=220

Even more difficult for me is tuning A=220 to A=440 (A3 to A4) so that the octave is accurate when both unisons are tuned. I want to avoid having to change A=440 when I come to it in tuning above the temperament for the same reasons mentioned in the above paragraph. I work with the two strings of F3 and A3 until I am sure all three pitches are correct. The F3-A3 3rd must beat at close to 7 bps, the F3-A4 10th obviously faster, and no beats between the two pitches of the octave. I am then ready to build my temperament around A3.

Temperament Tuning

Problems in tuning an accurate temperament can exist because generally only part of the temperament lies in the area where there is a pitch difference between one string and the three strings of the unison. An accurate one-octave or two-octave temperament on single strings with the strip in will not be that accurate when the unisons are tuned unless one retunes all the notes where the pitch changes when the unisons are tuned. Because of this I devised a temperament where the accuracy of each note with the unison tuned could be determined immediately, helped by the piano itself indicating the correct interval beat speeds for that piano. This is accomplished by working with two notes at a time, first tuning single strings, then working with two strings of each note until the interval is correct.

The complete accuracy of the F3-A3 3rd cannot be assured until the speed of the 3rds has been established, but it is still a valuable aid in establishing the accuracy of the D3-D4 octave. The D3-F3 m3rd beats faster than the F3-A3 M3rd, but slower than the F3-D4 M6th; the A3-D4 4th is faster than the D3-A3 5th, and there is no beat between the two notes of the octave when the unisons are tuned. The speed of the 4ths is determined by working with E3 and G3 until the D3-G3 4th and the E3-A3 4th beat the same speed, and the E3-G3 m3rd beats a hair faster than the D3-F3 m3rd (they may sound almost the same speed), but enough faster than the F3-A3 3rd so that it will be faster than the G3-B3 3rd when it is tuned. The speed of 3rds is determined by working with D#3 and G#3

until the D#3-G 3rd matches the E3-G#3 3rd, and the D#3-G#3 4th beats the same speed as the two surrounding 4ths. The F3-A3 3rd can then be checked and adjusted if necessary to match the other 3rds. If a change were necessary, other slight changes may need to be made as well. The rest of the notes between D3 and D4 can then be filled in to complete the temperament. All major 3rds, minor 3rds, and major 6ths should gradually increase in speed as they ascend with the difference between neighbors so slight that they almost sound the same speed. 4ths and 5ths will beat the same speed with the 4th slightly faster than the 5th. As soon as the accuracy of a note with two strings sounding is established the 3rd string may be tuned to complete the unison.

Octave Tuning

Octave tuning is the area most affected by the pitch difference in the unison. A beatless octave with one string sounding in the upper unison will have a definite beat when the unison is tuned and a beatless octave with the unison tuned will have a definite beat when only one string is sounding. Since this can only be heard and adjusted for by dealing with the natural beats between the two notes of the octave, dealing with this becomes a real problem for those who tune their octaves by matching coincident partials. I am not concerned about octave stretch, although I know my octaves are stretched mathematically more than most.

My concern is that every octave is beatless when the unison is tuned. I understand that in one sense beatless octaves are impossible because only one set of beats between partials can be eliminated at a time, but it is possible to eliminate the natural beat between the two notes of the octave, and in that sense it is a beatless octave.

In tuning octaves above the temperament I first check the pitch of the lower note of the octave. There is no point in tuning to it if the pitch is not correct with the unison tuned, and the slightest beat in the unison makes tuning a pure beatless octave impossible. When tuning from below I raise the single string until the beat between the two notes of the octave is eliminated. This tells me what I want the octave to be when the unison is tuned. To achieve that I must raise the single string by about one beat. If coming from above I lower the single string until the beat slows to about one bps. In both cases I then tune the second string to the first and check for accuracy of the octave.

If the octave is not correct, tuning checks will show if it is sharp or flat, and I can use the "crack the unison" technique to correct it. The pitch difference in the unison will be obvious in octave 4 and 5, but will be more difficult to ascertain in the upper octaves – no problem as long as you end up with beatless octaves when the unisons are tuned. In the upper octaves it is easy to be satisfied with an octave on the flat side. To avoid this I prefer approaching the upper note of the octave from above. I tune the single string high enough to hear a definite beat, then lower it concentrating on the high point of the beat until it becomes a continuous sound with no rise and fall in volume. If the lower octaves are correctly tuned, it will have the same continuous, warm sound when played with every note below it with the same letter name.

Octave tuning checks are a great help in octave tuning, and they are also a great time saver, for it can take much longer to listen to an octave to be sure there is no beat than it does to hear the beat speed of a check interval. My favorite is the 4th-5th check with the common top note the same as the top note of the octave because it can be played with one hand. Too much or too little difference in the beat speed of the 4th and 5th not only indicates that the octave is not right, but also tells the direction it should be tuned to correct it. It is amazing how the slightest beat in the octave makes a noticeable difference in the relationship of the 4th and 5th. I also use the 3rd, 10th, and 17th in parallel progression and with a common bottom tone. The 10th should beat faster than the 3rd with a common lower tone, and the 17th faster than the 10th with a common lower tone. The beat of the three intervals should gradually increase as they ascend, but the speed between neighboring intervals will be less than that between intervals with a common lower note.

Tuning Without the Strip

I notice several top tuners are now advocating tuning with rubber mutes rather than a strip, and tuning unisons immediately for best results. Coping with the pitch difference in the unison finally drove me to do fine tuning with rubber mutes only. I now only use a strip for pitch-raising or for the first tuning when the tuning is enough off that the final result will be better and faster with two tunings rather than one. Using a strip when fine tuning is difficult because of the pitches that will change when the unisons are

tuned. Some have suggested stripping the entire piano and just leaving the pitch slightly lower when the unisons are tuned, but this will not work since not all unisons will change pitch when tuned. The only way to be completely accurate is to tune unisons immediately throughout the entire tuning. Another advantage to this approach is that we are able to catch and correct unisons that may change slightly a few minutes after they are tuned.

Now that we are aware that there is a difference in pitch between one string alone and two or three strings sounding together in the unison, technicians will need to decide how they will cope with the situation. Adjusting for the pitch difference is not that difficult once we understand and master the technique. Questions we may ask are:

- 1) will it help my business
- 2) is it economically feasible
- 3) will my clients hear and appreciate the difference?

This may not be the right tuning for every situation; I have one customer who objects to the higher pitches in the treble, and another who objects to the fast 17ths in the treble. In areas where the humidity is high in the summer, there could be a problem with fall tunings that are expected to last several months. When the humidity drops so will the pitch in the center section, causing beatless octaves to go out of tune more quickly than if they were left with a slight beat on the flat side. Some may worry about extra tuning time that may be necessary. Quality work always takes longer, but there are factors that may save time such as:

- 1) not having to decide which set of partials to match for the best octave
- 2) no need for compromise in various octave combinations.

I am not a fast tuner, but I have no problem in doing a tuning with this technique in 1-1/2 hours or less, a little longer if two tunings are necessary, and still longer if I tune to this level in one tuning when I should have done it in two. My greatest pleasure when I am through tuning is playing five or ten minutes on a freshly tuned piano – of course my own piano is rarely tuned to that level.

Every tuner should work with the natural beats between the two notes of the octave until he or she clearly hears the difference in pitch between one string alone and the whole unison, and then decide how to cope with the situation. ☐

Psychological Troubleshooting

By Willem Blees, RPT
St. Louis, MO Chapter

"You never get a second chance to make a first impression."

That is true when you enter a room, when you answer the phone, or talk to a customer in their home. There is a lot of psychology involved when dealing with customers. How you react, talk and work with your customers will help you in your relations with them. Although technical troubleshooting is important, sometimes the problems aren't with the piano, they are with the customer.

What customers remember most is how they are treated when they talk to you, either to set up an appointment, ask a question, or complain about the work you did. You never know if the person you are dealing with is "just shopping around" when they call you on the phone, or if he/she is the piano person at his/her school district with 100 pianos and willing to pay full price; therefore, we need to treat each person we deal with as the most important person in the world.

A big rule of thumb when talking to a customer is to know what it feels like to be on the other end. In other words, don't forget the golden rule: "Do unto others, as you would have them do unto you." Treat each customer like you would want to be treated.

We live in a service-oriented society. People skills are as important – and sometimes more important – than technical skills. The customer is a person who buys your service. You should always keep in mind, for instance, that no matter how aggravating answering the phone might seem, that the customer calling you is not an interruption to your work, the customer is your work.

When customers call a place of business, they are looking to make a long-lasting relationship with that business. So it is up to you to keep those customers. However, there are many reasons why customers do not go back to a place of business.

- 1 percent of the time the customer died.
- 3 percent of the time they moved away.
- 5 percent of the time they formed other loyalties, like a neighbor, a friend, a relative, etc.
- 9 percent of the time, they left for competitive reasons, like a coupon, or an ad in the paper, or a recommendation from a friend.
- 14 percent of the time they left because of service dissatisfaction.

But the most overwhelming reason customers do not go back to a place of business – 68 percent of the time – is because of indifferent attitudes or rudeness on the part of a representative of the company. The phone wasn't answered right away, or not at all, or the person answering the phone was rude, or didn't know the answer, or showed indifference to the caller. Or the service representative of that company was rude on the job, didn't know his/her work, or showed indifference to the customer or the product that was serviced.

Therefore, always treat the customer with respect and courtesy, by following the Seven Cs of customer service.

1. **Customer comes first** – This is an effective means to take care of the customer. Let the customer know he is important to you.
2. **Craftsmanship** – Know the technical aspects of your job.
3. **Courtesy** – Treat the customer as you would like to be treated.
4. **Confidence** – Show that you know what you are doing.
5. **Creativeness** – Find new ways to solve recurring problems.
6. **Calmness** – If a customer gets mad at you, take it professionally,

not personally.

7. **Caring** – What goes around, comes around.

Dealing with Customers in their Home or on the Phone

When you deal with a customer, whether it is on the phone or in person, try to gain rapport with the customer by gaining a harmonious or sympathetic relationship. There are several ways to develop this.

Body posture — You don't have to come to attention, but at least pay attention to the customer. When you are on the phone at home, if you are sitting in an easy chair, your voice will emulate that posture. If you are working on a project, the inflections in your voice will reflect that. When you are talking to the customer in person, stand or sit up straight, and look at the customer when he/she is talking to you.

Voice tone — The way your voice sounds is important to the customer. Your attitude towards the customer is reflected in your voice. If you are angry with someone else, don't let that anger be heard by the customer. If you show disgust, even if it is not meant for the person you are dealing with, the client will sense that.

Energy level — It is hard to be "up" all the time, but when you are at a customer's home, or talking to her on the phone for only a few minutes, "pump yourself up." It will make a difference in your attitude.

Smile — You can hear a smile a mile away. Be pleasant, and even if you are having a bad day, smile at the person who is giving you your paycheck.

Speaking Rate, Enunciation & Diction — All three of these are related. What you say is only as good as how it is heard by your customer. This is especially true when you are on the phone. If Mrs. Jones has to ask you twice how much you charge, or when you will be there, she might call you back to cancel the appointment because she doesn't want to be embarrassed to say she could not hear or understand you. On the job, if you have to explain what you are doing more than twice, perhaps it is because the customer didn't hear you, or understand the words you spoke. Therefore, always speak clearly, slowly, and with good diction.

Volume — Don't speak softly, but don't pretend the customer is deaf either.

Listening Ability — Be sure you understand what the customer wants.

Watch Your Language — Emotional trigger words and expressions can annoy your customer, which could create an adversary rather than an ally. To increase cooperation with your customers, use positive wording, or at least neutral language. Instead of saying "you have to," or "you must," or "you should," try saying things like, "I would like to recommend" or "you could" or "it would be better if you tried." Take an attitude of helping the customer, and give positive responses. "What do you want me to do about your problem?" comes off better as: "How can I help solve the problem?" "That's impossible" and "I don't know" are better phrased: "I don't think that can work," and "I'll try to find an answer."

Keeping Control Of Phone Conversation

One way we can be better on the phone is if we can take control of the call when it comes in. The first thing is to try to

answer the phone within three rings. There is a psychological advantage to this. The customer is ready to make an appointment, and is in a positive attitude when calling. If the phone rings more than three times, the customer is already starting to think of other things that have to be done or other phone calls that have to be made.

If you must place a customer on hold, don't apologize for it, but also don't take it for granted that the customer is going to hold. Ask if the person wants to be put on hold, or if calling back is better. If you know it will be a few minutes, give the customer the opportunity to call back, or be called back. A minute on hold feels like an hour. And when you get the customer back, again, don't apologize for putting her on hold, but thank her for waiting.

When you answer the telephone, be assertive and firm, but friendly. The first things said are most important, because they set the tone for the rest of the conversation. "Hello," is not a good start. Neither is "who is this?" The least you should say is the name of your company or service. There are three additional items that will help the customer:

1. A greeting: "Good morning, Blees Piano Service."
2. The person with whom the customer is talking: "this is Mr. Blees."
3. And a question: "How may I help you?"

All of these items will identify with whom the customer is talking, and let him know you are there to help, which is why he is calling in the first place.

People want to hear their own name. It makes them feel important. When you have answered the phone, and the customer gives his/her name, write it down. Then use it at least three times during the conversation. At the very beginning: "Yes, Mrs. Jones, what can I do for you today?" During the conversation. And at the end: "Thank you for calling, Mrs. Jones."

Staying in control of the conversation is important because you want to control how long you want to stay on the phone. Usually when you answer the phone, you are working on something to which you want to get back. When a customer starts with a long dissertation about all the problems she has had with her back, and how her daughter has moved out of the house, and her husband doesn't care about her any more, be assertive, but friendly, and interrupt. "Excuse me Mrs. Smith, but how may I help you today?" If she continues with how her mother died five years ago, again, in a firm but friendly voice say, "Excuse me, Mrs. Smith, but I can best help you if I see the piano."

Try to keep the conversation with the customer to the point, by getting back to the point as often as is necessary. Help the customer by asking questions that are directly related to the problem. Questions that seem elementary to you are important to the customer. However, since there are no dumb questions, only dumb answers, do not talk "down" to a customer.

Dealing With Angry Customers

Dealing with angry or dissatisfied customers is probably one of the least enjoyable aspects of our business, but it is also one of the most important aspects. According to a survey conducted by the Research Institute of America, 96 percent of unhappy customers never complain about rude or discourteous treatment. But, 90 percent or more who are dissatisfied with the service will not come back or call again. What is even more disconcerting is that each unhappy customer will tell his or her story to at least nine other people, and 13 percent of those unhappy former customers will tell their stories to more than 20 people. So you can see how one unhappy customer can be more disruptive to your business

than a negative campaign ad.

There are five major reasons why people complain:

1. The customer didn't get what was promised.
2. An employee was rude to the customer.
3. The customer felt indifference from the company.
4. The customer felt no one listened.
5. An employee projected a "can't do" attitude. (Of course, in this case, the "company" and "employee" is you.)

Although we tend to ignore and treat with disdain the complaining customer, it would be to your advantage if you thought of the complaining customer as your best friend in the business. Only your best friend would tell you that you have bad breath. If customers didn't complain, you wouldn't know you had a problem. They point out areas that need improvement. They give you a second chance to provide service and satisfaction, and they provide you with a good opportunity to strengthen customer loyalty. When an angry customer calls you, she has a script ready, and that script has been rehearsed, and she is ready to let you have it right between the eyes. The best thing you can do is to let her talk out the script. The more you try to interrupt, the angrier she will get, and the more determined she will be to be dissatisfied with you; therefore, to avoid losing the customer, follow these six steps on how to handle the angry customer.

1. **Don't buy into it** — Take the call as a professional. Unless you said something derogatory, the customer is not yelling at you personally, but is complaining about the work you did — so take the complaints as a professional piano tuner. Avoid the dangers of name calling, denying your mistakes, or placing the blame on the piano.
2. **Listen to understand** — Try to understand what she is complaining about. Hear the customer out and don't interrupt. Remember that script. Let it be told. This doesn't mean you have to agree with what she is saying, but until you hear the whole story, you will not know the complaint.
3. **Show empathy** — Reflect the feelings of the customer. Let her know you understand that she is upset. "I can understand your feelings. I am sorry I didn't provide the service you expected."
4. **Identify the problem** — This is extremely important. Repeat the problem you just heard. If you don't repeat back what you think you heard, there could be a lack of communication. Make sure the customer understands what you just said.

Many times, after you have repeated the problem back, she will realize the problem is not as bad as it seemed, and it will assure her that you do understand.

5. **Find a positive solution** — Ask how can you help come up with a solution to the problem. If you ask the customer to come up with a solution and work to solve the problem, you will find that she is much more willing to have you come back and fix it — than to demand a refund.
6. **Thank the customer for calling** — As was mentioned before, the complaining customer is your best friend.

You don't need a degree in psychology to know how to treat a customer with respect and dignity. Making yourself aware of how a customer feels, and knowing what to say, and what not to say, might mean the difference between keeping a customer, and losing a lot of business. "You never get a second chance to make a first impression" is a very important rule to live by. How you react, talk and work with your customers will help you in your relations with them. Although technical troubleshooting is important, sometimes the problems aren't with the piano, and knowing a little psychology might be very useful. ■

Trigger Point Self-Massage for Piano Technicians

Part VI — The Arms & Hands

By Clair Davies, RPT
Bluegrass, Kentucky Chapter

This month we'll look at the muscles of the upper arms, forearms, hands and fingers. On the surface this doesn't seem like very much to take on, but under the skin it gets complicated because of the sheer number of muscles involved.

The Concept of Referred Pain

The mystery of referred pain also is more of an issue in the arms and hands than anywhere else in the body. Before wasting a lot of time giving yourself simply "feel good" massage on your arms and hands, it would pay to consider that a considerable portion of your trouble may be referred pain. Check the scalenes first for trigger points, along with the pectoralis major and minor, and the four muscles of the rotator cuff — subscapularis, infraspinatus, supraspinatus and teres minor — all of which have been discussed in earlier installments. Trigger points remaining in these muscles will muddy the waters when it comes to locating trigger points in the arms and hands themselves.

I've had my own difficulties with pain in my forearms and hands from overuse — the combined activities of doing massage all day, then long hours typing and retyping these articles. Along with painful finger flexors and extensors in my forearms, I found that operating the computer mouse was also causing a particular kind of grief all its own. Keeping my hand on the mouse for long periods with my arm held forward and out to the side, kept the supraspinatus continuously contracted, and trigger points would develop in it. In addition to referring pain to the outer shoulder, the supraspinatus sent pain down to the forearm near the outer elbow (the lateral epicondyle) where the finger extensors attach. Without recognizing the involvement of the supraspinatus, I would never have gotten rid of the pain in the forearm. Massage would have felt good where I felt the pain, but it wouldn't have made the pain go away.

Although firmly committed to writing this series and doing massage, the pain became so great that I was afraid I was going to have to give up one or both activities. But by exploring self-massage techniques a bit further I found some new tricks with which I was finally able to extinguish the pain and keep it at bay. I learned that if I paid attention and could detect the beginning of trouble, I could nip the problem in the bud with a minimum of work in just the right places.

The Upper Arms

Trigger points in the biceps and triceps are found most often just above the elbow. The tips of the fingers can be used in the "claw" tool for working the triceps, but the leverage isn't very good and the fingers tire quickly when used that way. For effective massage of the triceps, use the first knuckles of the fist of the opposite hand resting on the knee. (See Figure 1) Slide the back of the arm across the knuckles until you locate a trigger point, then lean harder on your fist, using your weight to generate the force for ischemic compression.

For trigger points in the biceps, use the supported thumb (see Figures 2 and 3). The supported thumb is one of the best tools for deep and very specific work, provided the thumbnail is kept short. If deep massage of the biceps and triceps doesn't decrease the pain significantly within a couple of days, look again to the shoulder for sources of referred pain.

The brachialis muscle lies right under the biceps near the elbow and does a great share of the work ordinarily credited to the biceps. The biceps must be pushed aside to get at trigger points in the brachialis, and this muscle can be traced halfway up the arm on the outside, trigger points being found all the way along it. Again, use the supported thumb.

The coracobrachialis is on the inside of the upper arm and is about the size and shape of a very limber, rubbery pencil. It begins halfway up the arm and goes up into the armpit and a bit beyond. This sneaky little muscle refers pain to the outer deltoid, the triceps, the back of the

"As you may remember from previous articles, ischemic compression is the maintaining of pressure on the trigger point for up to 30 seconds."

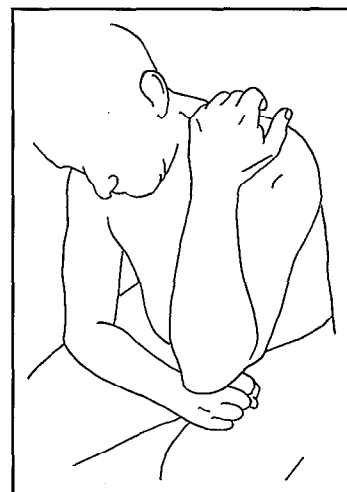


Figure 1 — Massaging triceps with knuckles supported by knee.

forearm and the back of the hand. Use the unsupported thumb to work the coracobrachialis well up into the armpit, and locate the muscle by

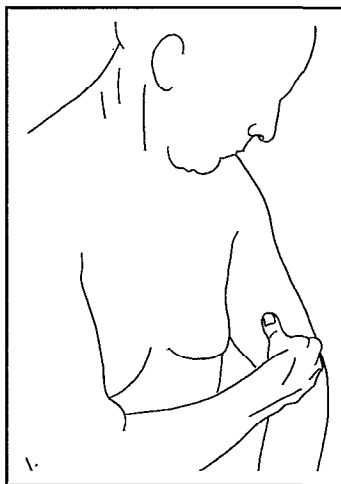
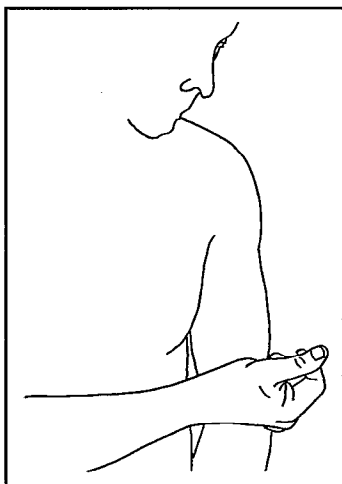


Figure 2 (LEFT) — Thumb supported by fingers for massage of biceps. Figure 3 (RIGHT) — Massaging biceps with supported thumb.

feeling it contract when you press your arm against your side. (See Figure 4)

The Forearms and Hands

After dealing with referred pain from the shoulders and upper arms, most of the pain in the hands and fingers will be found to be coming from the forearms. The forearm is incredibly complex, with a daunting tangle of muscles and tendons on both surfaces, front and back. The muscles on the underside of the forearm, the soft side, are called the flexors. The muscles on the hairy side are the extensors. For all movements of the fingers, muscles in both sides of the forearm must contract at the same time to counterbalance each other for fine control.

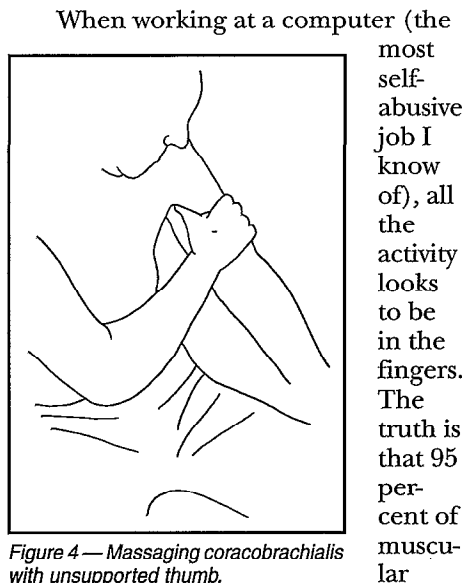


Figure 4 — Massaging coracobrachialis with unsupported thumb.

action and contraction is occurring in the forearms, and it's in the forearms that the trigger points form. At the conventional keyboard, the hands are kept suspended in front of the body with the wrists cocked and the hands turned inward (pronated) literally as far as they will go, which is a strained position to begin with. Even with wrists and elbows supported in some way, the extensor muscles in the forearm have to stay contracted to some extent just

to hold the hands up. In addition, the muscles in the neck, shoulders, upper arms and forearms are all in a continuous state of contraction as long as the

"Before giving yourself a 'feel good' massage on your arms and hands, it would pay to consider that a considerable portion of your trouble may be referred pain."

fingers are on the keys. When not actually clicking the keys, it's best to keep your hands in your lap, just to give all those muscles a break. Incidentally, good ergonomics dictates that the elbows be supported by chair arms at a height that keeps the shoulders neutral and the hands at the same level as the elbows.

Again, the trick in massaging the forearms is to avoid using the fingers. Both arms will usually be in trouble at the same time, and since overuse of the fingers is ordinarily the cause, it makes no sense to continue overusing the fingers to try to fix the results of overuse. Trigger points in the forearm tend to be deep down under the superficial layer near the bone, and the supported thumb is once more the best tool for reaching that depth. Feel around for the most sensitive points right at or within two or three inches of

the epicondyles, the outer or inner bony projections of the elbow, and do ischemic compression on them, rather than stripping massage. As you may remember from previous articles, ischemic compression is the maintaining of pressure on the trigger point for up to thirty seconds. This technique is good anywhere, but especially so on the forearms. Once a trigger point is found and deactivated, follow the muscle two or three inches down the arm half an inch at a time looking for secondary trigger points and work them too. The pressure used should be at a level slightly above what you think you can stand.

Using the tip of the thumb this way, most of the force is generated by the big muscles of the shoulder and abuse of the thumb muscles is minimized. After all their work is done, the muscles around the base of the thumb and in the web between the thumb and index finger can easily be worked with the elbow. (See Figure 5) For best leverage and best results, rest the hand on the knee on the same side as the tool (the elbow). After a good and thorough job of forearm massage with the supported thumb, I'm able to work comfortably for days at the computer and at bodywork before trouble begins building up again.

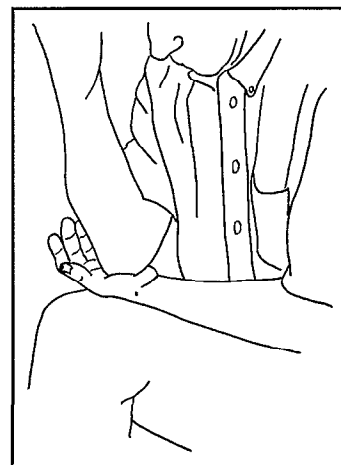



Figure 5 — Massaging muscles at base of thumb using elbow as tool.

Next month, we'll talk some more about low back pain. Despite all we hear about displaced vertebrae and supposed deteriorating disks, I'm convinced that most of the pain in the low back is referred pain from trigger points in strained and overused muscles not actually in the back. Travell and Simons confirm this point of view, as does my experience with my own pain and that of my massage clients. Don't miss this article. 

Interview with Ray Negron

— Ronsen Piano Hammer Company

By G. Earl Kallberg, RPT
San Diego Chapter

The inspiration for this interview was a series of three technicals we did in the San Diego, CA Chapter relating to voicing. We began in the first session with wool production and felt manufacturing, the second was an overview of the history of hammer making, and the third was hammer-voicing techniques.

In the early 70s I was living where I had been living since the late 50s, in the New York/New Jersey metropolitan area. It was at this time that we acquired some acreage in the northern Catskill Mountains in New York State some 2-1/2 hours north of New York City. We built a cozy hide-a-way to which we would often escape to get away from the hectic pace of the metropolitan area.

The Catskills are a range of rolling mountains that rise to a height of 3,000 feet. They are covered with maple, paper birch, and oak, which turn spectacular colors in the fall, as well as various species of evergreen. Because of the elevation, even during the hottest, most polluted summer days in New York City the air in the mountains is clean and cool.

During the 20s and 30s this area was known for its resort hotels. Vacationers would travel by boat from New York City and up the beautiful Hudson River to locations where they would board trains that would carry them west to the various hotels. Many of these hotels were owned by Jews, and it was in these venues that many of the great Jewish comedians perfected their art. It became known as the "borscht belt."

People from France, Germany and Switzerland were attracted to this area as well, because it reminded them of their homelands. As a result the area still abounds in excellent restaurants that offer these kinds of cuisine. To this day this area still remains a bit of a secret although it is known and frequented by artists, writers, and theater people, and even a well-known concert pianist has his home in this area.

As I have said, we were introduced to this area in the early 70s. It was about the same time that I received my first instruction in piano tuning. A few years later I joined the Guild and became a member of the New Jersey Chapter. As I continued my studies in piano technology I became aware of the businesses that supply us with the products that we need to do our work. Now we even have a guide to these resources.

One of the company names that stuck in my head was

Ronsen, because it was similar to the electric shaver I used at that time. One Friday night (summer Friday nights were always special and our first drink was always toasted to Friday nights in the Catskills) we left the New York State Thruway at Kingston as usual and headed west on Route 28 to Delaware County, passing through the quiet villages along the way. As we were driving through Boiceville, just before we got to the high school, I looked to my left and

there it was; the sign advertising the Ronsen Piano Hammer Company. Needless to say, I soon stopped in and introduced myself to Bob Johansen and was given a tour of the operation. That was my introduction to Ronsen, and later I was to learn how highly this hammer was regarded by many technicians.

Now, 20 years later, I live across the continent in San Diego, Calif., and I have hung many sets of Ronsen hammers. So in putting together this series of technicals, I thought it entirely appropriate to request this interview with Ray Negron. It was fortuitous in that we learned for the first time of this family's long tradition of hammer making which extends over two generations. To my knowledge, Ronsen is one of only three hammer makers remaining in this country and the only manufacturer not associated with a piano builder. I was pleased that Ray was available and willing to engage in this interview, and I wish to express my

thanks to him for taking the time to do so. I also wish him and Ronsen much success in the future.

One final word about the Catskill Mountains. When an annual convention is scheduled for the New York/New Jersey metropolitan area, a side trip to the Catskills would be very worthwhile. You might even want to stop in for a visit at Ronsen. Tell them Earl sent you.

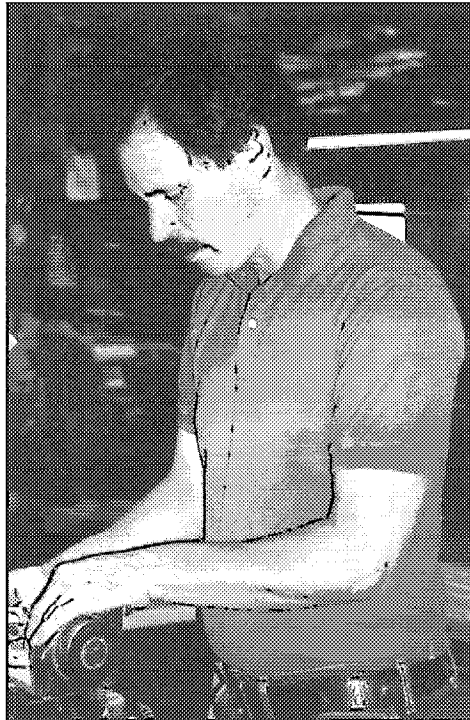
G. EARL KALLBERG: You've been in the business of making hammers for some time. How long exactly?

RAY NEGRON: I started working summers in 1961.

EK: I am frequently asked how I got involved with piano technology. What was it about hammer making that made you decide "this is what I'm going to do?"

RN: I was brought into the business by my father, Mario Negron, one of the founders of Ronsen, who previously managed the piano hammer operations at Pfriemer.

EK: When we think about piano hammers, we think about sound or piano tone. Did you have a particular tonal image that you set as your goal as to the sound your



Ray Negron at work in the Ronsen hammer factory.

hammer would produce?

RN: We have tried to manufacture a hammer that produces a sound like the hammers made before World War II. Our hammers are not as hard as modern hammers.

EK: Was there a particular musical experience that influenced your taste that had an influence on that goal?

RN: We decided to pursue this line of manufacturing after speaking with many piano technicians, trying to ascertain what they wanted in a piano hammer. Most of them had high praise for the hammers made in the 1920s and 1930s. We decided to try to manufacture our hammers in that style.

EK: I know you worked with Bob Johansen for a number of years. He has left to pursue furniture making in Georgia. Do you have a new partner or are you going it alone?

RN: Ronsen was actually started by my father, Mario, and Bob's father, Bill, in 1958. Both had worked at Pfriemer. When Pfriemer moved from New York City to Pennsylvania, they decided to stay in New York and start their own business. The name Ronsen comes from NegRON and JohanSEN. I work with my brother, Bob.

EK: You have mentioned the name of Pfriemer. Can you tell us something about them?

RN: Pfriemer was a piano hammer and felt manufacturer until a few years ago. Charles Pfriemer started the company around 1870. They were probably the top piano hammer manufacturer for many years. My father worked for them until he started Ronsen in 1958. They bought a felt mill in Pennsylvania around 1930-something. Before that, they purchased felt from the other felt companies. They sold their hammer-making equipment to Steinway and a Chinese company. Baldwin purchased their felt-manufacturing facilities. I believe they stopped manufacturing piano hammers in the late 1980s.

EK: Is there quality manufacturing of felt in the USA today?

RN: Yes, there is quality felt manufactured in the U.S.

EK: From whom do you get the felt?

RN: We get felt from Bacon Felt Co., which we feel is good felt. We have also started buying European felt.

EK: How many felt makers are there in the US today?

RN: To the best of my knowledge, there are three piano felt manufacturers in the US today: Bacon, American Felt, and Baldwin, who purchased Pfriemer Felt.

EK: Is the quality of the wool that is available today good?

RN: The quality of wool available today is as good as it was 20 years

ago when I first started paying attention to those things.

EK: How does European wool compare with American wool?

RN: It has been a while since I have spoken to them, but European manufacturers have told me that they buy their wool from South Africa. The wool does not seem much different to me.

EK: What is the best wool for hammers?

RN: I am not sure how to answer that question. Our hammers produce a different sound from other hammers. The fact that we are still in business means that different technicians have different tastes in what kind of sound a hammer should produce. Different manufacturing processes by felt makers can produce a different result from the same wool.

EK: It was stated in *Secrets of Piano Construction*, that at that time, 1916, it was desirable to use a blend of different wools for the various sections of the piano. Is this practice still done today?

RN: From what we have been told, felt manufacturers still use a blend of different wools and different lengths to manufacture piano hammer felt.

EK: What is your definition of a good/perfect sheet of felt, and what qualities do you look for in a sheet of felt that you know will make a good set of hammers?

RN: What I look for in a sheet of felt is resilience, hardness and a certain "feel" which I can't put into words.

EK: How consistent are these sheets, and what is the rejection ratio with regard to the sheets of felt, 1 of 5, 10, etc.?

RN: It has been my experience that felt is consistent within each run, but not consistent from one run to another. I have not been using my latest European felt long enough to know if it will be the same with my next order. I don't keep track of the rejection ratio.

EK: After shearing, the wool is cleaned. In your opinion, how and how much should the wool be cleaned?

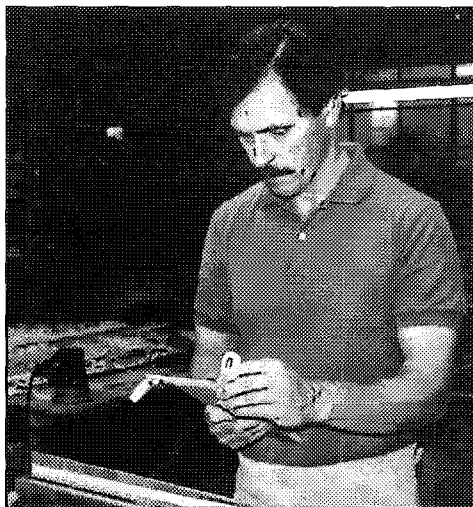
RN: As far as the cleaning of the wool goes, raw wool is very dirty and must be thoroughly cleaned in order for the fibers to felt properly.

EK: Lanolin is removed in the cleaning process. After cleaning, an amount is returned to the wool. Why is this necessary and what is the ideal/correct amount?

RN: Wool is hair. Removing the oil can make hair brittle. Lanolin is returned to the wool to prevent this from happening.

EK: In felt manufacturing, can you describe the processes of carding, fulling and stepping-up?

Continued on Next Page



Interview with Ray Negron — Ronsen Piano Hammer Company

Continued from Previous Page

RN: The main purpose of carding is to open up the small tufts and rearrange the individual fibers uniformly, so that they are approximately parallel to each other. This is done on a machine with rotating cylinders covered with leather or fabric in which are set fine wire teeth, which comb the wool. Fulling is the process where heat, agitation, and moisture are introduced to the felt in order to cause the fibers to interlock.

EK: Is it important or necessary that the wool fibers run parallel to the strings?

RN: We don't feel that the fibers need to run parallel to the strings. We feel that a stronger and harder felt can be made if the layers are put down perpendicular to each other.

EK: Most manufacturers of harder hammers introduce heat during the manufacturing process. Do you use heat?

RN: We use a temperature of 105 degrees Fahrenheit to cure the glue.

EK: When ordering hammers, I'm asked if I want a 12-, 14- or 16-pound hammer. Those numbers relate to the weight of the sheet of felt from which the hammers are made. What is the size of those sheets?

RN: The size of the sheets that we get are 38-and-a-half inches by 42-and-a-half inches.

EK: Does the weight have a bearing on the size of the finished hammer, or does it pertain mainly to the density and weight of the felt?

RN: The heavier the weight of felt, the bigger and heavier the hammer.

EK: How do the terms 12-, 14- and 16-pound hammers made with soft felt relate to the same weight of harder hammers? Is the softer hammer going to be a larger hammer?

RN: We have just begun using some harder felt. The size is about the same, but the harder felt makes a heavier hammer. To us, this is not desirable. So we are learning ways to work with this harder felt to produce a hammer that is not too heavy.

EK: How does the size/weight of the hammer relate to the size of the piano? In other words, what is the largest vertical/grand size on which one should use a 12-pound hammer? Conversely, what is the smallest size vertical/grand on which one should use a 14-pound hammer?

RN: There seem to be no absolutes with regard to the size of the piano and the weight of the hammer. Generally speaking, we recommend the smaller hammer for the smaller piano, and the larger hammer for the large piano.

EK: Ronsen offers two types of molding – maple and sapele. Where does sapele come from?

RN: Sapele comes from Africa. We use it instead of mahogany because it is a stronger wood.

EK: Why do you offer the sapele molding?

RN: We offer sapele because it is lighter in weight than maple, easier to work and nice looking.

EK: When would you suggest that rebuilders use either molding? Is the sapele more suited to smaller grands, say less than seven feet and the maple on nine-foot pianos?

RN: Sapele should be used when you want a lighter hammer.

EK: Should the choice of the molding be determined by when the piano was made?

RN: The choice of molding has to include the technician's method of working with hammers as well as the sound you are trying to achieve from that piano.

EK: Have you done any testing of the strength of the sapele molding?

RN: We have tested many woods for strength, weight and workability. If we find something that suits our needs better than sapele, we will use it.

EK: To achieve brilliance, particularly in the treble sections and even at times throughout the whole piano, it is necessary to add chemical hardeners to the hammer. Do you have any problem with that?

RN: We have no problem with technicians adding chemical hardeners.

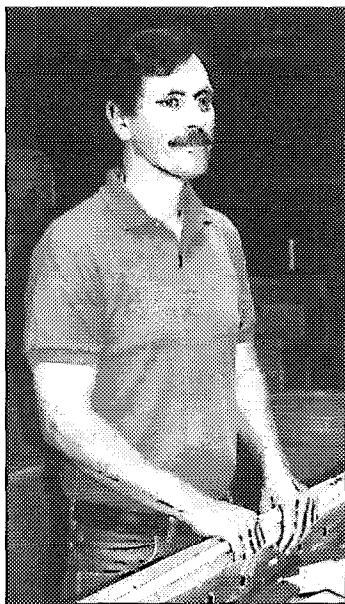
EK: There are at least three combinations of chemicals that are commonly used today: lacquer/lacquer thinner, sanding sealer/acetone and plastic keytop granules/acetone. Is there a best method? Is there a method of the three that should definitely not be used?

RN: All three methods you describe for hardening hammers work. Any one of them can be used. A technician should use the method with which he/she is most comfortable.

EK: What effect does heat have upon the fiber as compared to chemical hardeners?

RN: Heat takes the resiliency from felt. Chemical hardeners, if (mis)applied..., can do the same thing.

EK: In *Secrets of Piano Construction*, S.W. Widney defined hardness and resiliency in this way. "Hardness is the power of a given body to resist penetration. Resiliency is the power to react to the normal position after compression." In the process of voicing a set of hammers, we use these terms with some frequency. We know that the hammer has to have a certain degree of hardness to produce tonal volume and this can vary according to the piano, its location and the needs of



the pianist. Resiliency is more of a mystery. Besides the need for the hammer to return to its original shape after compression (striking the string), why do we need it? How does it affect the tone the hammer produces. How and when is this quality put into the hammer? Is it the obligation of the felt maker, the hammer maker or the voicer? If there is resiliency in the hammers when we get them, but in the voicing process we find that we need to chemically harden the shoulders, are we altering that resiliency, and will deep needling the shoulders restore the resiliency?

RN: We feel that a resilient hammer will produce a more well-rounded tone than a hard hammer. To produce a resilient hammer, the manufacturer must have good quality felt and use a method that does not take the resiliency out of the hammer. That is why we use a low heat process. The application of hardeners, if done wrong, can take the resiliency out of the felt.

EK: In the hammer that has been chemically hardened from low on the shoulder including the area around the staple, would you agree that the stiffened area would act as a support for the top of the hammer? During the early days of hammer making, there was a lot of concern about the flattening out of the crown of the hammer after a relatively short time. Alfred Dolge developed a molding that was shaped like clasp prongs in between which the hammer felt was forced and secured by a metal agraffe or staple. It seemed to work well but was too expensive to manufacture. Steinway used a method of saturating the felt with a chemical hardener a little more than half-way up to the crown. This was done to preserve the shape of the hammer, but didn't it also prove to be beneficial to the voicer? What I'm asking here is this; let's say that we have a hammer that has been chemically hardened. The shoulders have been deep-needled to restore the resiliency in the areas 10:30 and 1:30. Now, as the crown of the hammer compresses as it is forced against the string, the deep-needled areas absorb the shock and the energy passed through to the "reinforced" area. If the reinforced area is of adequate firmness, doesn't it seem logical that the energy which was created by the impact of the hammer against the string – in a downward direction – is now reflected back to the crown of the hammer restoring the shape of the hammer and aiding the hammer in a quick rebound from the string?

RN: Stiffening the shoulders will act as support for the top. Your description does sound logical. It is also true that felt is made better today than it was in the years of Alfred Dolge, and heat, which also hardens the felt, is used to cure the glue today. Heat was not used back then.

EK: The hammers that I have gotten from you in the last few years have been very nicely shaped. Do you recom-

mend that further shaping or filing be done by the rebuilder?

RN: Again, every technician has his or her own method for working with hammers. If you deem it necessary to reshape, do it. The properties of felt allow you to reshape if you don't get what you need from the hammer. If you screw up, you can reshape again.

EK: I have noted that a Ronsen hammer at key 88 will have considerably thicker felt at the strikepoint – more like the European manufacturers. Do you recommend that this dimension not be changed?

RN: We think the felt should be as thick as you can get away with. That allows for longer wear. If you screw up, you can reshape again.

EK: I notice that the Ronsen hammer has a thinner underfelt than other manufacturers and it is eliminated altogether quite far down in the treble. Is this done for tonal reasons?

RN: We use thinner underfelt because we think that produces a better sound. Our company manufactured hammers mostly for spinets from its inception in 1958 until about 1984. Our machinery was set up to manufacture that type of hammer. We stopped the underfelt at that point because that's what our customers wanted. We have not changed it because hardly anyone has asked us for anything different. We can and do put underfelt to #88 when asked.

EK: Tell us something about the hammer presses you use. For example, if I wanted to start manufacturing hammers, where would I go to get a hammer press? I can imagine the expression on the faces of guys at my favorite tool store if I asked to see their catalogue of hammer presses.

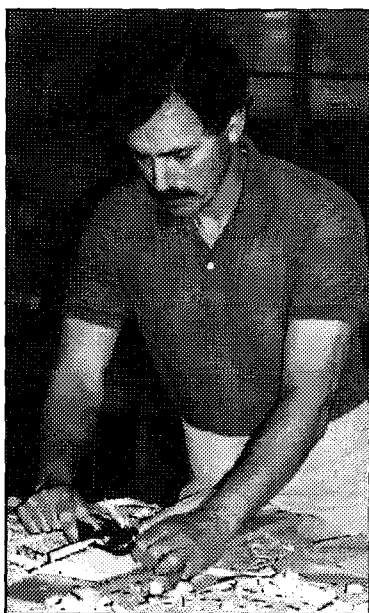
RN: Parts of our presses are about 100 years old, other parts are relatively new and custom manufactured to our specifications.

EK: How do you see the future with regard to the manufacture of piano hammers?

RN: I expect a gradual slowdown in the volume of business. I don't expect any drastic changes in the materials or methods used.

EK: Finally, have you any words of advice for rebuilders and technicians that you might want to add in working with hammers in general and the Ronsen hammer in particular?

RN: When choosing a hammer, keep in mind what the piano can achieve, and what products can best help you to get there. If the Ronsen hammer is not best for that piano, don't use it. Our hammers do require more work than hot-pressed hammers, but, according to our customers, they also produce a sound you can't get from any other hammer. ■



THE PUZZLER

By
Dan Levitan,
RPT

Puzzler #13 — *Mysterious Messages*

This month's Puzzler comes to us courtesy of Ken Churchill, RPT. In the course of his work in the Los Angeles schools, he was often given written complaints about the condition of, or work that needed to be done on, certain instruments. (Ken guarantees that these are actual notes.) Often he found these messages puzzling until he saw the instrument in question. Can you figure out what the following notes referred to?

1. The wheels are flat.
2. The teacher says right after you last tuned the piano, the music fell.
3. The piano dropped a step, and a leg came off.
4. The teacher reports having a broken leg after trying to move the piano.
5. The piano be flat.
6. Major problems on C# minor.
7. The piano needs voicing.
8. The piano has lost its tone.
9. The keys are stuck.
10. The piano was rescued from the burning gym, but now doesn't work.
11. All the strings are broken.
12. The piano hit our principal.
13. The paint on our piano is melting.
14. The stick that holds the piano up is missing.
15. Our piano was stolen.

Solution to Puzzler #13 — *Mysterious Messages*

1. Worn dolly casters.
2. The music desk broke.
3. Leg broke moving upstairs.
4. Same as #3.
5. The sharp was broken on an A#.
6. Broken string on E32.
7. The muffler rail was engaged.
8. The piano was vandalized; all the hammers were torn out.
9. Glue poured over the keys.
10. The piano was soaked with a fire hose.
11. Mice ate the bridle straps.
12. The fallboard fell on the principal's knuckles.
13. India ink poured on the soundboard and strings of an ebony piano.
14. The lid prop is missing.
15. The piano was not visible in the dark auditorium. (When all the lights were turned on it became evident that the piano had been badly burned.)

Puzzler mail (snail mail only) should be sent to Daniel Levitan, Puzzler Editor, 530 First Street #6, Brooklyn, NY 11215. Elaborations on previous puzzles will be printed, even at the expense of the Puzzler Editor's dignity. Especially welcome are ideas and suggestions for future puzzles, subject to whatever modification the whim of the Editor may deem necessary.

PTG Review



PIANO
TECHNICIANS
GUILD

DEDICATED TO PTG NEWS • INTERESTS & ORGANIZATIONAL ACTIVITIES

History of the Jahn Company

Alfred Jahn, the Jahn Company founder, was born at the turn of this century in Eisenberg/Thüringen. He started on his way in the piano industry at Messrs. Sippach Piano Parts in this small town with a famous piano tradition. By the 30s he had

become the buyer for the leading supply house, Messrs. Zacharias in Leipzig. Dur-

ing these years Alfred Jahn established friendships, some life-long, in spite of substantial changes in the piano industry.

There was a break when war began in 1939. At the end of World War II Alfred Jahn and his wife, Elisabeth, relocated to Kronach in northern Bavaria. As that place the new beginning was prepared, friendships that had been lost were renewed.

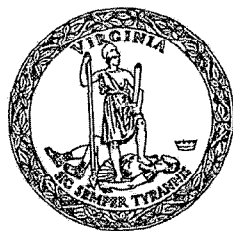
Continued on Next Page

INDUSTRY NEWS

Jahn Piano Parts

For 50 years supplier of high quality:

- parts for pianos
- tools for piano technicians
- bass stringing machine
- piano lamps and other accessories for pianos.



CERTIFICATE of RECOGNITION

By virtue of the authority vested by the Constitution in the Governor of the Commonwealth of Virginia, there is hereby officially recognized:

PIANO MONTH

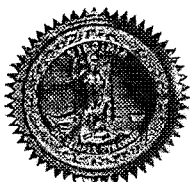
WHEREAS, the study of the piano has been found to increase cognitive learning skills in children; and

WHEREAS, the study of music is part of a well-balanced education; and

WHEREAS, playing the piano has, for almost three centuries, been a pleasurable and relaxing way to entertain both the player and audience; and

WHEREAS, the study and mastering of the art of playing the piano is a life-time pursuit;

NOW, THEREFORE, I, James S. Gilmore, III, do hereby recognize September, 1998, as PIANO MONTH in the COMMONWEALTH OF VIRGINIA, and I call this observance to the attention of all our citizens.



James S. Gilmore, III
Governor

Anne P. Otten
Secretary of the Commonwealth



State of Rhode Island and Providence Plantations

GUVERNATORIAL PROCLAMATION

Whereas, September marks National Piano Month, a celebration of the piano and piano playing which holds a particular significance for the nearly 4,000 members of the Piano Technicians Guild; and,

Whereas, The Piano Technicians Guild is a 41 year old non-profit organization of piano tuners, technicians, and other piano service specialists throughout the United States, Canada and the world that stands for quality piano service; and,

Whereas, The year 2000 will mark the 300th anniversary of the invention of the piano, and will be celebrated at the Smithsonian Institution in Washington, D.C. with an initiative called Piano 300;

NOW, THEREFORE, I, LINCOLN ALMOND, GOVERNOR OF THE STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS, DO HEREBY PROCLAIM,

September, 1998

as

National Piano Month

in Rhode Island and encourage all of its citizens to join me in celebrating the importance and benefit of such and instrument.

In recognition whereof I have hereby set my hand and caused the Seal of the State of Rhode Island and Providence Plantations to be hereunto affixed this 1st of September, 1998

Lincoln Almond
Lincoln Almond
Governor



James R. Langevin
James R. Langevin
Secretary of State

September was National Piano Month in the Commonwealth of Virginia by Proclamation of the Governor (ABOVE LEFT). A similar Proclamation was issued by the Governor of Rhode Island and the Mayor of Providence, Rhode Island. Congratulations to the Rhode Island Chapter and Richmond, VA Chapter for the successful promotion of National Piano Month.

History of the Jahn Company

Continued from Previous Page

1948

After monetary reform in war-ravaged Germany, Alfred Jahn & Co. Piano Parts was established by Mr. Jahn and the assistance of a friend. His friend was in possession of a garage without a car, and Alfred had the ideas, contacts and the professional knowledge of the piano industry. By establishing his company in Coburg he built a bridge from his time in Leipzig before the Second World War to the new situation in Western Germany and the market requirements of the rest of Europe and around the world.

1950 – Business Improved Fast

Twenty co-workers moved to Coburg/Bavaria into a larger business office, with representatives and branches in Berlin, Vienna, Venice, Sweden, and later also in Paris.

1952

Alfred Jahn was one of the founding members of the International Music Fair in Frankfurt. Jahn Piano Parts has been exhibitor there since the First Music Fair in Frankfurt.

1964

After the death of Alfred Jahn, the management of the company was taken over by his widow, Elisabeth Jahn, with assistance from the previous buyer for the company, Fritz W. Finzel, and the piano technician, Jürgen Harke.

Jürgen Harke, son of piano technician, Willi Harke, joined the company with great experience in the piano industry. After his apprenticeship at Messrs. Schimmel in Braunschweig and journeyman's years, also at Messrs. Neupert in Bamberg, he joined Jahn as a volunteer in 1960.

1968

F.W. Finzel and J. Harke Establishment of Alfred Jahn GmbH & Co.KG Piano Parts

Fall of the Berlin Wall – 1989

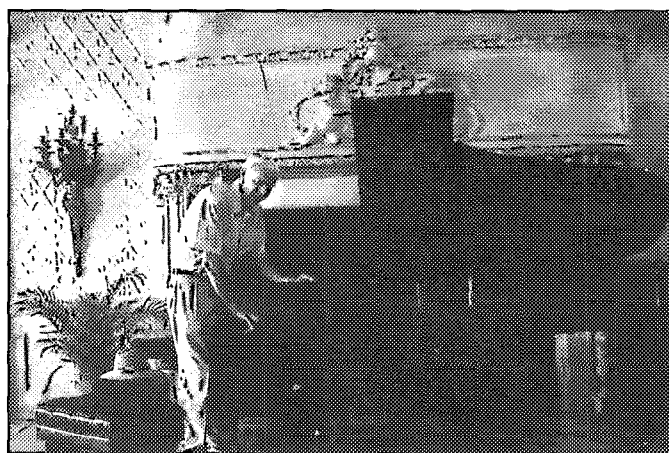
The fall of the Berlin Wall was a political turning point and created new challenges, and the name "Jahn" was the key unlocking many of the doors of changing markets. In 1996 the Jahn Company took part in a Music Fair in Moscow.

1996

Fritz W. Finzel retires from the company and Andreas Harke Jr., took over Finzel's position of the managing partner.

Andreas came to know the piano "by its parts" in early childhood. While in school he supplemented his allowance by

Continued on Next Page



Larry M. Brown, RPT, caught on the job at the Newport Music Festival

Newport Music Festival Holds RPT Hostage

I had always been told that Larry Brown, RPT of the Rhode Island Chapter, never came to the PTG Annual Convention because of his job tuning the pianos for the Newport Music Festival. This year both Larry and his son, Larry, who also helps keep the many new Yamaha grands in concert condition, took a few hours off to visit with us in Providence.

After the convention I went down to Newport to take in some of the musical offerings. While on tour of the Mansions, I came upon the Larrys in Ochre Court of Salve Regina University. Larry, the elder, had just finished tuning when I caught him in this photo opportunity. It's nice to see PTG members involved in a major concert series.

— Jim Birch, RPT
PTG Vice-President

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History of the Jahn Company

Continued from Previous Page

working in his grandfather's workshop. In 1987 he entered into an apprenticeship for piano manufacture at Messrs. Seiler. There he learned about piano manufacturing while working his way up through the ranks.

1997

Membership in PTG.

Jahn - Piano Parts at Present

An excellent program of piano parts and accessories production has been established during the past 50 years, and every day our employees ensure the highest quality standards for JAHN tools and piano parts.

For more information about our company, you can contact us at: Alfred Jahn GmbH & Co. KG, Coburger Strasse 43, D-96271 Grub am Forst, Germany, or phone: 1149 9560 8034, or fax: 1149 9560 1734, or e-mail: Jahn-Pianoteile@t-online.de

Our partner in the United States: Pianotek Supply Company/Michigan.

Nominations for 1999-2000 Officers are due by Feb. 1

The Nominating Committee is soliciting nominations for President, Vice President, Secretary-Treasurer, and for Regional Vice Presidents. Any chapter may submit a nomination. An RPT may offer a nomination for himself/herself or for any other RPT in good standing. Names must be submitted no later than Feb. 1, 1999, to be included in the Nominating Committee report, which will be printed for the Council session in Kansas City in July, 1999. Nominations may be sent to the Home Office, to me directly at 45 Allen Mill Road, Amherst, MA 01002-1612, or to any of the Nominating Committee members:

Ward Guthrie

2 Cloninger Lane
Bozeman, MT 59718
406-587-4088

Leon Speir

7110 Forney Road
Dallas, TX 75227
214-381-0212

Richard Bittinger, 1st Alt.

209 Saddleford Ct., N.
Lancaster, PA 17603
717-293-8639

Carl Lieberman

121 Clubhouse
Venice, CA 90291
310-392-2771

Fred Tremper

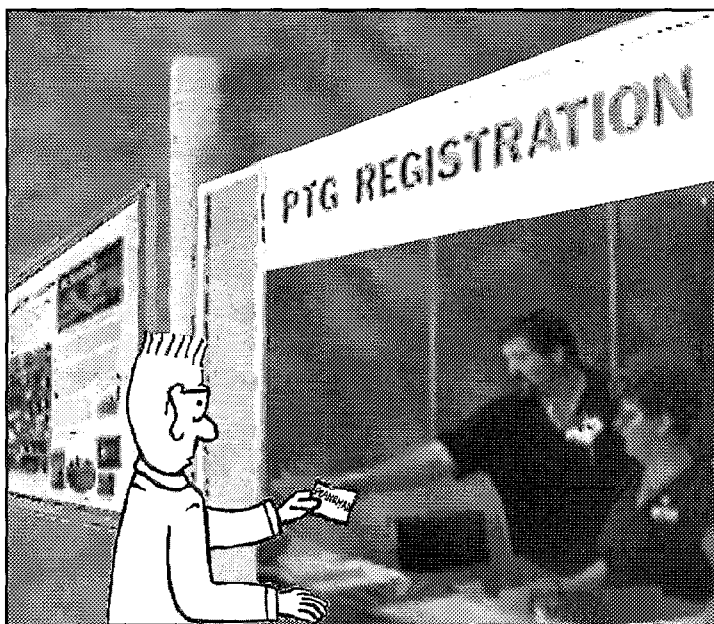
110 Baird Music Hall
Morehead, KY 40351
606-783-2478

Jim Ellis, 2nd Alt.

114 West Newkirk Lane
Oak Ridge, TN 37830
423-483-9534

— Jack Stebbins,
Nominating Committee Chair

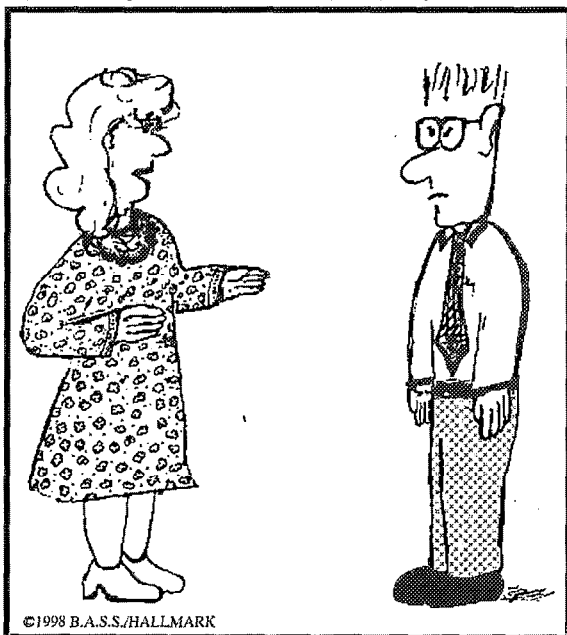
PIANOMAN ADVENTURES by Alan Hallmark



Here is your badge. . . No the membership classifications haven't changed. It's either RPT or Associate. There is no classification for "Loony Tooner"

PIANOMAN Adventures by Alan Hallmark

The Trouble With Discounts



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"Well let's see, you give a 10% discount for two pianos and a 20% discount for three pianos. . . If I get ten more pianos together will you tune them all for free?"

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A complete resource to the products and services used by thousands in the piano industry.

What if you had the opportunity to advertise in a resource that was used by thousands? A guide that offered its readers information to lead them to the specific products and services they needed. A directory which detailed categories and gave a description of the kinds of products and services you offer.

With the Piano Technicians Guild's *Guide To Resources In Piano Technology*, you get all the above. Your listing can include the name of your company, address, phone, fax and 800 number, as well as an e-mail address and contact name. The best news is that it can be listed in the specific categories that describe your products and services best. In addition to the categorical listings, this guide offers separate sections for company descriptions, manufacturers listings, a quick reference telephone directory for fast information at your fingertips, and is completed with a page index of each listing and display advertiser. In addition, as in 1997, *The Guide* will be combined with PTG's *1998 Membership Directory* and *PTG Business Merchandise Catalog*.

Display advertisements are available, and with a shelf life of at least one year, your advertising dollars will keep working for you long after you insert the ad, making this resource a cost effective way to reach a target audience of piano service industry professionals.

The Guide To Resources In Piano Technology is growing. To add your name to our mailing list, and insure your listing in the next edition of *The Guide*, complete the information below and return it to:

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You will receive the category listing packet to complete and return, as well as display advertising rates and an insertion order. Remember, you do not have to insert a display advertisement to be included with your listing.

Don't be left out of another edition of *The Guide*. Let us hear from you today!

Yes!

Put my name on your mailing list to receive more information about the next edition of...

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☐ I am also interested in display advertising rates and deadlines.

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COMPANY NAME

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PHONE

Deadline For Being Included in The Guide is Dec. 1!

Health-Related Coverage Available to PTG Members

Individual & Group Major Medical

Both individual and small group (2+employees) medical plans are available.

These plans offer a wide range of comprehensive benefit choices that allow for individual design.

These benefit plan options and choices include:

- Deductibles from \$250 to \$5000
- Coinsurance from 50/50% plans up to 90/80%
- \$0 Accident deductible
- Doctor visit copays
- Prescription drug card
- Maternity & wellness options
- Life insurance for self & dependents

The cost of the plans depends on state of residence, age and family size.

Long Term Care (LTC)

As Americans live longer and healthier lives, the need to plan for long-term health care is becoming increasingly important. Long-term care insurance provides long term security for you and your family by protecting your income, savings, your estate and your independence.

Typically, LTC insurance will pay 100% of a selected daily benefit after an elimination period is satisfied. This benefit is paid for periods as short as two years or for a lifetime while confined in a long term nursing care facility.

Home Health Care (HHC)

This type of insurance pays benefits in the same way as LTC except the benefits are paid for services in the comfort of your own home. Most people prefer to recover from an illness at home instead of a nursing home. With confinement at home instead of in a LTC facility the cost of HHC insurance is less costly than LTC insurance.

Individual Disability Income

What if your income suddenly stopped for a month . . . a year . . . or the rest of your life . . . due to a disability from an accident or illness? How prepared are you?

- The chances are 1 out of 20 you will have a disabling accident this year.
- The chances are about 1 in 4 you will be disabled for one year or longer before age 65.
- Disability is the cause of nearly half of all home foreclosures.

To rely on Social Security alone for disability protection may not be a wise choice. Social Security may only pay a fraction of your lost income.

Individual Disability Insurance is the only source of income that will pay you for your time when no one else will and the only source of income that starts when you need it.

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Cancer treatment is expensive. The American Cancer Society estimates hospital and medical costs represent only 40 percent of the true total cost of cancer treatment. Therefore, 60 percent of cancer related costs are non-medical and not covered by major medical or hospital insurance policies.

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Call Ralph S. Passman & Associates, Inc. at (800) 255-6029 for details and proposals for any of these programs.



Passages

Robin L. Campbell
May 22, 1950 - September 3, 1998

It is with great sadness that we in the Austin Chapter must inform you of the death of our good friend and colleague, Robin L. Campbell, RPT.

Robin passed away on Thursday, September 3, 1998 in Austin, TX, following a lengthy and courageous battle with cancer.

Robin entered the piano technology field rather late in his life.

Although he was in the midst of waging a long and tiring battle with his disease, he managed somehow to find the strength to pass his exams and become an RPT. Achieving RPT status was an important personal goal for Robin, and he pursued it with the same determination and spirit that allowed him to live much longer than his doctors had first predicted.

Robin's kind and gentle nature, his enduring optimism, and his indomitable spirit during the last few years of his life were an inspiration to us all. We in the Austin Chapter are fortunate to have known and worked closely with Robin and we will all miss him dearly.

Robin is survived by his wife and two children. He was 48 years of age.

*—Tom Seay, RPT
Austin Chapter PTG*

Lloyd P. Winn
October 30, 1902 - September 13, 1998

Lloyd was a graduate of the University of Utah. He taught music at Uintah, Wasatch, and Murray High Schools. He was an active member of the LDS Church. Lloyd was a member of the Composers Guild and an RPT in the Piano Technicians Guild.

As a music teacher, composer, piano technician and friend, he enriched the lives of many. Those around him came to realize that perpetual motion was a man named Lloyd Winn.

In July 1966 Lloyd received the PTG Presidential Citation signed by Charles P. Huether, President. Part of the citation read, "When the new tuning examination was developed and problems of administration were being worked out, Lloyd was a leading figure in solving them and avoiding pitfalls."

Lloyd is survived by a son and daughter, six grandchildren, and ten great-grandchildren. His wife, Caroline Evelyn Meik died on October 17, 1974.

*—Ralph M. Barrus, RPT
Salt Lake City Chapter*

CALENDAR of EVENTS

February 12-14, 1999

CALIFORNIA STATE CONVENTION

Hyatt Regency, Long Beach, CA

Contact: Peg Browne (714)530-4768

11511 Wasco, Garden Grove, CA 92841

March 11-14, 1999

PA STATE

Holiday Inn Central, Greentree, PA

Contact: David Barr (412)828-1538

700 Center Ave., Verona, PA 15147

April 8-10, 1999

PACIFIC NW REGIONAL CONFERENCE

Provo Park Hotel

Contact: Vince Mrykalo (801)378-3400

694 North 100 East, Provo, UT 84606

April 23-24, 1999

FLORIDA STATE SEMINAR

Ft. Lauderdale Marriot

Contact: Mark Shapiro (561)451-2136

23360B S.W. 53 Ave., Boca Raton, FL 33433

April 30-May 2, 1999

NEECOS / New England Eastern Canada Seminar

Hotel Gouverneurs, Quebec

Contact: Isabelle Gagnon (418)822-3550

6769 Royale, L Ange - Gardien, QC G0A 2K0

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 the Home Office, your event will be listed six-months prior and each issue until 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.

New RPTs *in September*

Associates Pass The Test

REGION 1

054 Vermont

Lowell D. Wakker
Rd #2, Box 650
West Rutland, VT 05777

REGION 2

282 Charlotte, NC

Howard E. Adkins, Jr.
209 Small Avenue
Concord, NC 28027

REGION 4

467 Indiana

Charles T. Wesco
13765 Jackson Road
Mishawaka, IN 46544

481 Detroit-Windsor, MI

Stacy J. Yoak
3607 Plumey Road
Northwood, OH 43619

REGION 6

956 Sacramento Valley, CA

Terence R. Miller
1418 Muir Street
Napa, CA 94559

NEW MEMBERS

Join In September

REGION 1

078 New Jersey

Richard M. Pierro, Jr.
45 Lackawanna Avenue, #228
Wallington, NJ 07057

REGION 2

201 Washington, DC

Paul A. Jacques
6924 Fairfax Drive, #434
Arlington, VA 22213

296 Western Carolinas, NC

Ellison Bodin
3101 No. Blackstone Road
Spartanburg, SC 29301

327 Central Florida

William A. Schell
10102 Winder Trail
Orlando, FL 32817

Wayne A. Witt
6501 Horse Shoe Bend
Orlando, FL 32822

REGION 4

405 Bluegrass, KY

Thomas C. Fullington
130 Greenbriar Rd.
Lexington, KY 40503

452 Cincinnati, OH

Robert D. Grubb
13 Hilltop Drive
Gallipolis, OH 45631

601 Chicago, IL

Dave N. Lennard
4013 Bonhill Drive, #1B
Arlington Heights, IL 60004

REGION 6

891 Las Vegas, NV

Walter J. Slack
P. O. Box 1302
Beatty, NV 89003

Welcome



Phyllis Tremper
PTGA President

AUXILIARY *exchange*

DEDICATED TO AUXILIARY NEWS AND INTERESTS

Looking Ahead to KC

Did you see the brochure that the North Carolina Regional Conference put out, complete with spouse program? It looked like Annual Convention all over again. What fun it must have been. I trust that one of our auxiliary members took notes of the tour and will send me an article about it. Brenda, thanks for your article about it on our pages a few months ago and please let me know how it went. Please, anyone who attends one of these regional seminars, send me a run down of events so that we can spread the word about your activities. I also would like to hear from you if you have Christmas or Hanukkah parties in your region.

By the time you read this, I will be learning to walk all over again. I had hip replacement surgery on October 27th and hope that I will be able to run and jump with you on the tour next summer. Speaking of the tour, there will be a tour. I am afraid that I will have to raise the price this year, however. But I will be having two prices, one before the registration deadline and one after the deadline. Our luncheon will be more this year as I will be arranging the mystery theater that we liked so well before when we were in Kansas City. Watch this page for more news about the tour and I hope that after the first of the year, I will be able to provide you with information on Kansas City and things to do there. We'll try to do it all so start saving your pennies now. Of course, you all

know about the Hereford House, which is within walking distance of the Hyatt Hotel. It is absolutely a must for the consummate diner.

By now you have received your newsletter with the minutes of last July's Council and the new revised by-laws. Please read all of it carefully and report to Evelyn Ternstrom if you have a question or comment. We have a little work to do on the revisions yet and we want to finish that at Council in KC. Remember – all suggestions need to be printed and distributed to the membership before the meeting so it all takes time. Thank you for your help in that matter.

I have been asked to have the tour on Thursday this time, which is the first day of the Spouse program. That way people can get acquainted with members and then have the business meeting on Friday. Maybe a little change is good. Let's hear your comments on that.

Until next month, don't eat too much turkey now. Remember that *Music Is The Spice Of Life*.

Scholarship Fund Contributions

From:

Jewell Sprinkle
Eckard Circle Lot 11
Winchester, VA 22602

In Honor of:

Esther S. Stegemen

Other numerous contributions were made to the Scholarship Fund through the raffle of the hand-made afghan.

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(606) 783-1717

E-mail: f.trempe@morehead-st.edu

CAROLYN SANDER

Vice President

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Shepherdsville, KY 40165
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Fax (502) 922-9452

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

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Piano Technicians Journal,
3930 Washington,
Kansas City, MO 64111-2963.

FOR SALE



ACCU-TUNERS FOR SALE. Sanderson Distributor. James Acheson, 7906 Elliott Street, Vancouver BC V5S 2P2 Canada. 604-325-6751.

RCT WINDOWS 95. Finally, the best piano tuning software in the galaxy runs on its most popular platform! Reyburn CyberTuner 3.0 for Windows 95 now available (minimum Pentium, 90 mHz, 16 megs RAM) Windows 95 and Macintosh versions of RCT 3.0 are identical. RCT 3.0 \$795 (Windows 95 and Macintosh) order with \$200 advance deposit before Sept. 30 and receive free the Chameleon 2+ Library (200 pianos/2000 tunings) and an RCT T-shirt. Mitch Kiel, RPT, 1-888-I-LUV-RCT (1-888-458-8728)
mitchkiel@reyburn.com www.reyburn.com

SANDERSON ACCU-TUNERS, including the SAT III 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.

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

DAMPP-CHASER PRODUCTS, PROTEK LUBRICANTS. Fully stocked inventory for same day shipping on all orders. Free installation advice and tech support. Call today to place an order or for a free price list. **PIANO CLIMATE CONTROL SUPPLY**, Steve Cunningham 1-800-443-7509.

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1993 STEINWAY B, Light Mahogany, satin luster finish; originally owned by Bruce Stevens (President of Steinway); serviced quarterly; complete humidity control system; immaculate; \$47,500, commission. David Flanders, RPT, 401-792-3245.

PianoDB - Easy to use DATABASE FOR WINDOWS by D C AL CODA internet site: <http://www.dcalcoda.com/>, kenhale@dcalcoda.com

FRANKLIN DUPLEX SLIDER. This exciting and ingenious new tool was invented and designed by a tuner for tuners exclusively, to tune any kind of rear adjustable duplex harmonic bridge, individual oblique or contiguous. Call or write. **SINGING TONE** Box 2063, Peter Stuyvesant Sta., New York, NY 10009. (212)677-5760.

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"Let Off Rack" Modification kit. Adjustable straight edge that improves APSCO design. Faster to set up than Jaras and works just as well. \$25 plus postage as seen at Convention. Bill Maguire, 146 Broadway, Greenlawn, NY 11740. (516) 261-6799.

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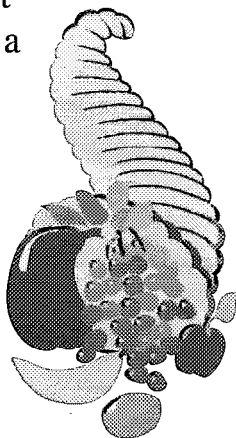
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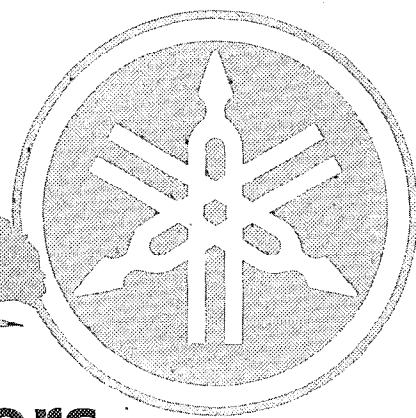
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EGAZETTE

November 1998

YAMAHA



A Tip for Ringing Dampers

A large part of my service business deals with new piano preparation. I want to share a tip that just might help turn a frustrating service call into a painless experience.

The situation almost always presents itself on new or fairly new grand pianos. You are tuning the piano for the first time. You have tuned the bass without a problem. Tuning the tenor, you notice a ringing sound on one or more notes. Your immediate impression is leaking tenor dampers. You proceed to spend the next half hour trying to seat them. You have no luck. Next, after bending and twisting tenor damper heads to no avail, the light goes on. Maybe it is coming from somewhere else. Now you are on the right track. By carefully muting different sections of the piano while playing the offending notes, you discover the ringing is coming from the bass. More specifically, it is coming from several of the right strings in the bi-chord section. You begin to remove dampers and bend wires until all bi-chords dampen. Total time, if you are experienced, is close to an hour. You corrected the symptoms, but how did it get this way?

A grand piano begins its journey from the manufacturer on its side. Its bass side. How long was it on its side before being set up? If you experience the above problem, I can guarantee it was a long time. During this time, gravity works on the damper heads to



Richard Davenport

compress the left side of the guide rail bushing and eventually the damper felt, especially, the bi-chord felt. On larger grands with tri-chord bass dampers, it affects them the same way.

There are additional hints of compression. Step on the sustain pedal paying particular attention to the bass dampers. In severe cases, dampers travel toward the left. If you pluck the bi-chord strings with dampers down, the right string has a longer ring than the left. You now know there is a problem. How do you solve it?

Before making spectacular claims, let me say this method works most of the time

on new grand pianos. If it does not, use conventional techniques. But, try this first. Loosen the bass damper guide rail screws. Reaching under the bass plate strut, use your fingers to gently pry the guide rail toward the treble (about 1mm.). Still applying pressure, tighten the screws. Recheck the dampers for even damping on both strings. If you went too far, the left string has a longer ring. Try again. When you are done, be sure to check all the bass dampers. You may need to correct one or two, but seldom more. Pat yourself on the back and remember this tip the next time a tenor damper is ringing "but isn't it"!

Richard Davenport started his career as a piano technician in November of 1973. "My teacher was a wonderful technician named Fred Odenheimer," Davenport relates. "The most enjoyable aspect of piano work is the freedom it allows. My service specialties include major rebuilding, soundboard, bridge and pinblock replacement, complete action replacement, some finishing, concert and recording work and consulting. I tuned my first Yamaha in 1974. I have been a consultant for Yamaha since 1980. I love working in an industry with peers who, like myself, ended up here after two or three false starts. We all seem to share the same desire to improve our skills and the piano industry."

His life before pianos included an eight year stint with a country rock band playing fiddle, bass and trumpet. During this period, he taught junior high school instrumental music in Los Angeles. Richard is originally from Manhasset, Long Island, NY. He and wife Jeanne have a 12 year old son named Jeffrey.

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