PIANO TECHNICIANS
Journal
Official Publication of the Piano Technicians Guild

April 1998 Vol. 41 • #4

Inside:

What Makes a Piano Truly "World Class"?

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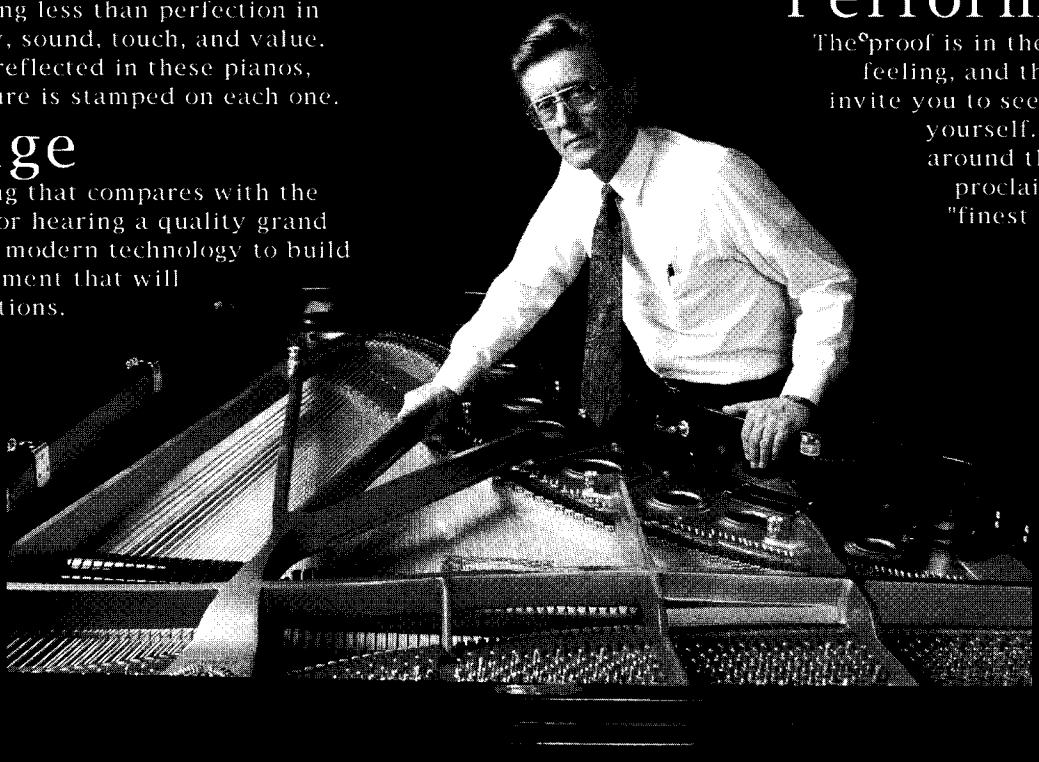

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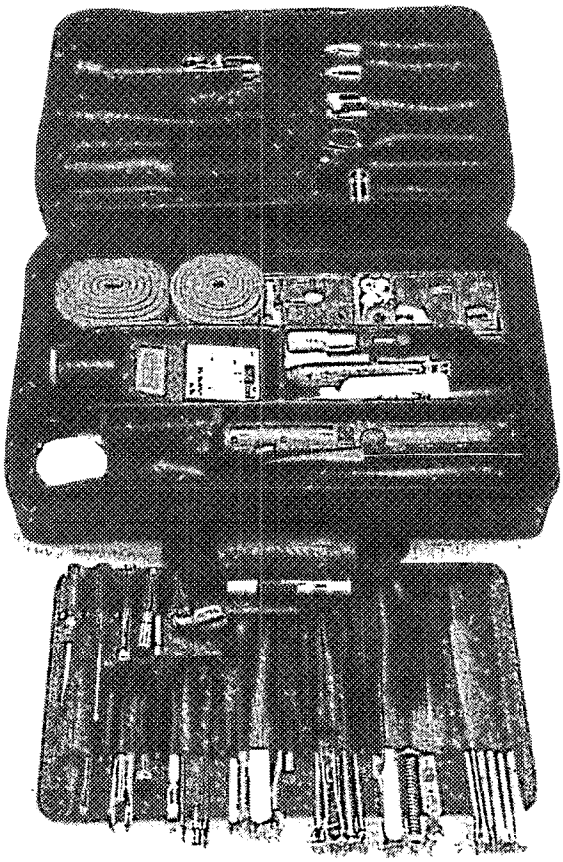

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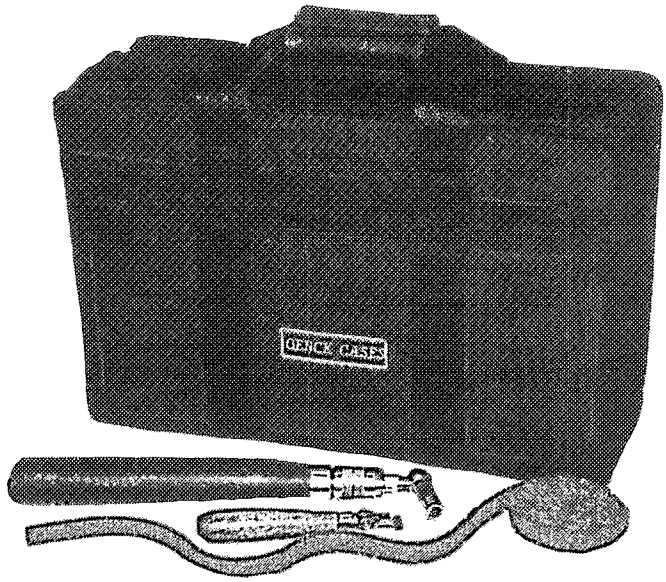

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EDITORIAL PERSPECTIVE
"We've Come a Long Way, Baby"

By Jim Coleman, Sr., RPT
Contributing Editor

There was a time when one tuner would not share any information with another. The thinking was: "If I tell you what I know then you will be smarter than I, because then you will know what you know plus what I know." An example of this was a piano engineer who when asked about some technical question would always answer: "Vell, you jes got to know dat." Six months before he retired from his company, a young engineer was hired to learn all he could from this man. When the young engineer would knock on his door, the older engineer would open the door three inches and say: "Vat you vant?" If the young engineer said he wanted the latest detail on a certain action layout, the older engineer would say: "One moment, please," close the door, then return with the drawing and slip it through the cracked door.

Sometimes we are tempted to think: "Why should I help this young technician?" He will merely become my competitor. Well, my thinking now is this: "If I teach him well now, in a sense, I am serving the public better; I will not always be able to get to everyone on my list. I may need him to help me someday." There are so many pianos which are not being serviced properly that there is no need to fear the competition. In my early days as a tuner (not yet a technician), I found certain other technicians who were willing to help my understanding of pianos. I was encouraged to subscribe to the current magazines on this subject and to join one of the organizations for tuners and technicians. I always gave more respect to those who would take the time to help me. These individuals were always men who were members of one of the organizations.

Our present organization, The Piano Technicians Guild, is in a position to offer much more help to those who are ***committed*** to becoming the very best they can be. We do this through many state and regional conferences and Annual Conventions. This is our collective way of repaying the debt of gratitude for the help which we received in our early stages of development. Local chapters of PTG will usually have good technical presentations at each meeting. Some chapters have special long-term projects such as rebuilding a piano from the casters on up. Other chapters conduct special instruction for beginners by following the PACE lessons in Tuning, Regulation or Repairs. In addition to this, there are many prepared pamphlets, booklets and books available from the Home Office. Of course, trying to learn everything which a piano technician needs to know would take a long time with just these aids. For one to receive a well-structured approach to learning this business, there are private institutions with one- or two-year courses available. Then there are the opportunities for one to apprentice himself to an individual for an extended period of time to get much "hands-on" experience. Then there are the correspondence courses. For those who have had correspondence courses, but lack the directed personal instruction, there are the "Bed and Breakfast" type centers where one can receive personalized high-level instruction.

When one considers the cost of a normal college education, the cost of learning this business is indeed very small. The opportunities for personal advancement are almost unlimited for those who are really dedicated.

Are you dedicated enough to plan for the expense involved in attending one of our greatest conventions which is to be held in Providence, Rhode Island, this summer? The expense will be greatly repaid in terms of your personal improvement. It's all up to you, babe. We're doing our part. And by the way, why not include some extra time and travel throughout the Northeast to pick up historical knowledge of the cradle of the development of this great country, the U.S.A. See some of the famous landmarks, and the monuments to the people of great vision who formed this country. And then, become a technician of great vision.

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

COLUMNS & COMMENTS

DEPARTMENTS

IN ADDITION

COVER ART

This specialty-case Schimmel grand shows the lighter side of the National Association of Music Manufacturers (NAMM) winter show, held this year in Los Angeles, Calif. See Journal *Editor Steve Brady's review of the show beginning on Page 26.*

PIANO TECHNICIANS
Journal
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Change: The One Constant

As we progress from year to year and new people come on the scene while others unfortunately depart, one thing remains constant – that is change.

Have you ever thought about watching a small child grow? It is rather natural to think that there is a very steady growth pattern from birth to maturity. Another view can be had if you pay close attention to a seedling in the garden. In just a few months the small plant will mature and bear fruit; however, the path of development for a child to grow and mature into adulthood will take a considerable period of time.

Marshall B. Hawkins, RPT
PTG President

While the process of learning in the development of a child is significantly different from that of the growth of a plant, there are similarities. By the same token, the process and stages an organization passes through as it develops, some of the same similarities can be observed. There are plateaus which are achieved over time. Sometimes this period of leveling-out can extend for long periods of time before the learning curve turns upward again, and upon occasion, the curve will turn downward for a while and will continue downward if we allow discouragement and the lack of motivation to rule our lives.

If we tend to become discouraged, it is necessary to look at the main thrust of the curve. If it is generally upward despite some plateaus and some setbacks, then there is really no need for discouragement. There is, however, a real difference between man's learning curve as compared to the growth of a small child and some similarities which can be seen in the growth of an organization. It could be called, I suppose, the anatomy of growth.

Plants and small children very often depend on other factors outside of themselves for the fast growth they seem to exhibit. For example, plants need to be weeded to prevent their growth from being choked. They need to be watered and pruned and they have to be guarded against destruction by insects. The small child must be fed, nourished and protected by its parents and other caring adults while growing and learning about the world around him.

Within an organization, we are much more responsible to ourselves to reach new heights. It is very important that we exercise control over our learning habits; that we become totally responsible for our learning behavior. Each individual must make the decision to take advantage of what is offered, and in doing so add to the vitality of the group as a whole.

We do this in a few different ways. We depend greatly on one-on-one contact. Chapters have technical sessions as a part of their monthly meetings, and in many instances there are additional sessions scheduled which precede the regular meeting. There are, at times, full-day technical programs planned which focus on specific subjects and, of course, regional conferences which present well-developed educational programs. Then we come to our Annual Institute. This function provides a splendid array of learning experiences for all attendees to benefit from whatever their current level of expertise may be. Within our community there are many fine instructors, both independent and manufacturer sponsored from across the industry. They are gathered to help feed the educational appetite of those who make the effort to partake. The individual gains from this dynamic exposure and the organization benefits from the enthusiasm and positive input from all who share kindred goals.

Failure to continue with these activities can be illustrated by an incident which happened some years ago on the west coast of the U.S. The town of Monterey, Calif., was at the time a paradise for pelicans. After fishermen had cleaned their fish, they would throw the entrails to the pelicans. Over time the birds would become content, fat and lazy. Eventually ways were discovered to make use of the entrails commercially, and the pelicans no longer had their free meals.

The pelicans were observed making no effort to fish for themselves. They would no longer search or struggle for food; they just waited and waited becoming thin and weak. Many starved to death because they had forgotten how to fish for themselves which was work. Continued growth is work also. It is doing something. It is action with a positive inspiration. While we all need to continue to experience growth, it requires us to be responsible and independent as well. We are not children who are tended by loving parents but mature adults who are in charge of ourselves. Unfortunately, it seems many of the folks who regularly attend our functions for the most part are probably the ones who need it the least. Nonetheless, it is a part of the continuing struggle to become even better. Struggle is work.

Struggling has a definite and useful purpose. Struggling forces us to develop our mental as well as our physical abilities, to arouse our enthusiasm and to inspire our imagination. Struggle also keeps us from becoming complacent and encourages us to fulfill our mission in the profession. That mission should be to continue to grow and become more proficient. In the process our organization reaps the benefit by adding to the enrichment of others traveling the same path.

It is not always easy. We must be ready to struggle and we must be ready to act when the opportunity comes along. That opportunity continues this July in Providence, R.I. Don't miss it!

What's Good for Pianos Is Good for Society

The piano industry has reason to celebrate: new piano sales are up, science has shown the strong positive relationship between piano study and cognitive development in children, and the public is increasingly aware of the value of music.

PTG Executive Director David Hanzlick, CAE

These inter-related developments bode well for the inter-related segments of the industry: piano manufacturers, retailers, teachers, and, yes, technicians.

The challenge for the future will be to capitalize on the successes, rather than resting on the industry's collective laurels.

As someone new to the industry (it's been a year now since my column and I first appeared on these pages), I am fascinated by the historic pattern of piano sales in the U.S. A recent article in *Music Trades* notes that between 1920 and 1929, U.S. piano makers sold 2.3 million instruments. More than half were equipped with player mechanisms.

By contrast, annual sales slipped below 100,000 units in the early 1990s before the current uptick.

The questions I find most interesting are: what is causing the recent stronger sales and how can the industry work together to ensure that the growth trend continues?

Several complementary factors appear to play a role. Recent research showing the impact of piano study on cognitive development in children and the relationship music performance and higher SAT scores has no doubt sparked interest among parents in music lessons, particularly piano.

The industry has done a good job in publicizing the fact that "Music Makes You Smarter." Industry promotion, combined with growth in the 8-18 year-old age group, point to continuing strength in the market.

A healthy economy and the promotion of music making to older, affluent age groups, like NAMM's Weekend Warrior campaign, has helped as well.

Indeed, other industries are picking up on the piano trend. I was struck by a credit card advertisement in an upscale travel magazine that featured a man sitting at a grand piano. The ad extolled the priceless quality of learning Mozart at 48 years of age.

The challenge for our industry is to keep firmly in mind that music promotion and market development are ongoing processes, not occasional events to be discontinued when the industry is prospering and hastily reconstituted during downturns. What role does the Piano Technicians Guild play in promoting music and the continued use of the piano? We play a leading role.

We need to consider, for example, the importance of direct client contacts. For the sake of illustration, if our nearly 4000 members each service three pianos each day, five days per week, for 50 weeks, our collective membership will make 3,000,000 calls in one year. Of course, many of our members average more than three pianos per day, while other members average fewer. The point is simply that our members have a tremendous opportunity to talk with, inform, and influence the piano-owning public.

That opportunity for one-at-a-time influence is central to the success of such initiatives as National Piano Month (September), the recently observed Music in Our Schools Month (March), and the rapidly approaching Piano 300 project that commemorates the 300th anniversary of the piano.

PTG members also have the ability to be advocates for music through their chapters. Chapter activities like SPELLS initiatives, piano concerts in shopping malls, talks in public schools, museum exhibits, among others, all raise public awareness of the importance of music, pianos, piano education, piano purchases, and, yes, piano service.

Public awareness is, of course, central to the success, even the survival, of public school music education programs where most people receive the majority of their education about music.

In that regard, I was pleased to read in a recent edition of MTNA's journal, *American Music Teacher*, that 83 percent of people in the U.S. believe local communities should provide the resources to fund music programs; 71 percent believe that states should mandate music and other arts as core subjects; and 88 percent feel that instrumental music instruction should be part of the regular school curriculum.

These trends are important. Increasing public understanding of the value of music both for its own sake and for its ability to improve cognitive development in children translates into improved music education programs, increased piano sales, and an increased need for piano service – and smarter children, who become smarter, better prepared adults.

The segments of the piano industry, the Piano Technicians Guild prominently among them, must build on our past efforts for our future success. The trends benefit everyone. What's good for pianos is good for society!

Tips, Tools & Techniques

Making Leather Button Replacements

This item refers to the leather buttons found on older Steinway pianos. Though a little time consuming, installing new leather buttons is very straightforward, and the results are quite classy.

Get a scrap of suede about 0.040" thick, and a circle punch set from a craft or leather supply (Tandy Leather). Water dyes are available from places such as Constantine's, 2050 Eastchester Rd., Bronx, NY 10461, (800) 223-8087. Order Walnut and Black. Mix the powdered dye with water, using proportions suggested for strong color. Apply to a piece of the suede with a brush until you like the color. Allow to dry.

For the large 1/2" buttons, such as on the lid, punch out a 5/8" circle and a 3/8" circle. You will use the 1/2" punch to set the button into the recess in the wood. Take the 1/2" punch and push the 5/8" leather piece into it, dyed side down, to form a nice rounded dent, as shown in Figure 1. Make certain that the very edges of the leather are not pushed in beyond the edge of the punch. They should barely stick out.

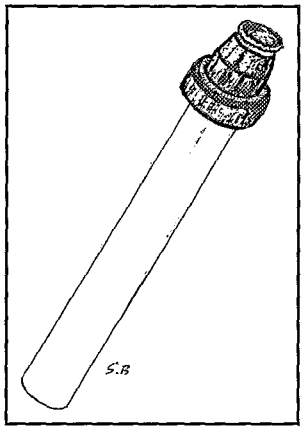

Figure 1 — Five-eighths inch round leather piece inserted in one-half inch punch.

With hot hide glue, attach the 3/8" piece into the center of the dent in the 5/8" piece. Rim the edge of the larger piece of leather with hot hide glue, and set it into the recess in the wood. Use a toothpick to coax the button out of the punch, and to tuck all its stray edges down into the recess. The punch can be used for coaxing, too. With this method you are not drilling out the wood to accommodate a different type of button, and the results are every bit as good as the original.

For the tiny buttons, such as on the cheek blocks, just change the size of your circles. The process is the same. The various sizes of circles can be punched out ahead of time and kept in a plastic bag for later use.

Leather buttons last indefinitely, unlike rubber ones, which squash out. Once you point out the care you take putting in original style buttons, your customers never will be satisfied with anything less.

— Marcia Davis, RPT
Modesto, CA Chapter

Rejuvenating Dead Bass Strings

The reason bass strings tend to go dead is because corrosion builds up between the coils of the wrap which causes the string to lose flexibility. The only way to bring the flexibility back is to disturb the coils (wrap) big time. Twisting the strings will not work unless the wrap is slightly loose, but not loose enough to buzz and there is still lots of flex. I have a tool that I call a bass string rejuvenator. It consists of a piece of wood about 1 1/8" by 3/4" by 14" (being a Canuck, it is a handle from a used hockey stick with the tape intact) with two pulleys mounted on it. These pulleys are about an inch in diameter and are spaced about 1 5/8" apart. These pulleys can come from a small block and tackle lift or an outdoor clothesline spacer. Remove the pulleys and screw them on the stick. You can also lubricate the pulley where the screw goes through, but be very careful that no lubrication is able to come in contact with the string. Loosen the wound strings, disconnect them from the hitch pins and thread them onto a wire or whatever else is handy. Take each string and thread it through the pulleys in an S shape, run the stick up and down the string changing angles and threading and then put the string back on the hitch pin. It doesn't take much and the strings will in most cases sound like new. However, you must be very careful with the smaller diameter copper wound strings as you can go right through the copper to the core if you are too eager. Don't ask me how I know. Obviously a new set of strings is preferable, but if money is a problem, I have no problems with helping someone out on a limited budget.

As far as new strings are concerned, I believe that if they are made properly, they do not need to be twisted when installed. The only reason they should be twisted is if they are buzzing due to a loose wrap which means they weren't made properly. The twisted section of the loop will unwrap about 1/8 to 1/4 of a turn and a string maker will put the winding on so the coil will tighten as the twisted part of the loop will slightly untwist. This is why a newly installed bass string will sound better the next day. In the majority of the pianos that I restring, the strings are not twisted when I take the old strings off, only a 1/8 to a 1/4 turn. There have even been some examples of newer pianos that have had overpowering upper partials that I have gotten rid of by untwisting twisted new strings.

— Ray Hopland, RPT
Calgary, AB chapter

Bend-a-Light

The Bend-a-Light™ Pro has been a favorite tool in my case ever since Shawn Hoar recommended it in a class at the Orlando Convention last summer. Made by Steelman™, this flexible flashlight has the staying power of two AA batteries, and can easily be left on in the action cavity while I'm installing grand dampers, yet it can get into tiny crevices in actions or under the plate, or under the keys while I'm leveling and dipping keys. With its flexible

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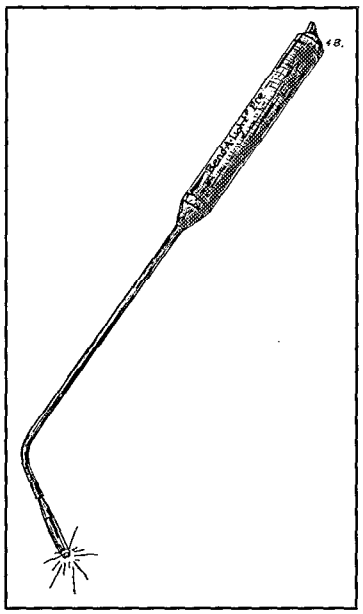

Figure 2 — "Bend-a-Light™ Pro.

Timing of Dampp-Chaser Installation

Q When is the best time to install a Dampp-Chaser system? Just before tuning, a week before tuning, or does it matter?

In most homes in the Cleveland area, it is very dry this time of year. Now, if I install a system just before tuning (or just after for that matter) won't the relative humidity level and wood moisture content level change within a week or so, causing the beautiful tuning I just did to go all out of whack? This makes sense to me, but I just want to be sure.

I have read through all of my Dampp-Chaser literature and I can't find anything about installation and tuning. (Unless I'm just illiterate). If anyone knows where I can find some literature or your own comments, it would be appreciated.

Thanks in advance.

— Mike Masters
Lakewood, OH

A ***Steve Cunningham, RPT:*** Good question. I could go on forever, but here are a few recommendations that work.

1. If the humidity has been stable for a few weeks, install and tune.
2. If the humidity has been over 50 percent or under 35 percent for a few weeks, install the system then wait two weeks or so to tune.
3. Sell the system before you tune. Install it, then tune a few weeks later.

It's usually best to point out that the piano is out of tune from humidity changes (if that's the case). That's the best time for step three. Sometimes a customer will want the system installed after you did a beautiful tuning, after dropping the pitch 15 cents from being too humid. Hopefully you would have installed enough systems to make enough money to cover an occasional call back for touch-up tuning. You can also explain that the tuning may change a little after the moisture content in the soundboard is stabilized. The piano may need to be tuned again at an adjusted price (or your regular price if you prefer). Every technician, customer and situation is different. Adjust accordingly.

A ***Bob Bergantino, RPT:*** My experience is that the Dampp-Chaser effects do not "kick in" that fast. Sometimes I don't notice any effect until the next change of season, and then a year later I can really see the effects. Keep good records on amount of pitch raise, pitch lowering, etc., and then compare records.

A ***Jim Birch, RPT:*** Mike, your question has no correct answer. My choice would be to install the system before the tuning and give the Dampp-Chaser and the piano a chance to get acquainted. It will take some time for the piano to adjust. If the piano hasn't been tuned for some time or was tuned in a different season, it would not matter if you did both tuning and installation on the same day. The tuning would be unstable anyway. Scheduling sometimes decides how the work is done. If you must install and tune at the same time, you might check with your client in a few weeks or make a quick house call to see how the tuning is doing. The service would be appreciated and the client may have some questions about the Dampp-Chaser.

I've done many installations and have never had a major shift in the tuning. Most clients will not detect a slight shift in tuning. As someone once said — "Just do it."

A ***Steve Pearson, RPT:*** Allow me to comment on the "when-to-install-the-Dampp-Chaser" question. Please do not construe this as a statement of Yamaha's official policy regarding Dampp-Chaser systems! Back when I was an independent tuner, I usually tried to schedule an installation at a time of year when the relative humidity hovered around the target range of 42 percent for a spell. There was a time when I might install it, and then ask the customer to write a date on their calendar roughly six weeks before I was scheduled to return (and yes, I scheduled appointments in advance), and plug it in. This, predictably, met with limited success. Otherwise, I found the best way, was to have the components in the trunk of my car, and install them as I encountered a piano which was reacting to humidity swings, and schedule an appointment for six to eight weeks thence. I used the extra time to take a leisurely lunch or get a bit ahead on that day's appointments. Or, even get home (gasp) early. I only once tuned a piano at the same time as I installed a D-C system – and I regretted it. Tough job to explain why I proceeded to tune it knowing this would happen.

Metallic Buzz

Q I have a problem that I hope someone out there can help me with. I have just finished restringing a Sherlock-Manning upright (1916) and got it back up to pitch. There is a strange metallic buzzing when any of the notes from A0 to G1 are played. I have checked for loose parts, checked between the plate and soundboard for pieces of foreign matter, etc. The ends of the wippens aren't contacting the strings. There is downbearing on the bass bridge, strings have been tapped down at all of the bearing points, etc.

I have removed the offending strings and put an additional twist in them with no improvement. I am at a loss as to what is causing the buzz. It is loudest near the bass bridge. The bridge is solidly attached to the soundboard. The bridge cap was separating near the lower end and was reglued with epoxy and clamped until the glue set. Soundboard cracks were repaired with shims and was reglued where the ribs had separated. Any suggestions as to what would be causing the buzz will be greatly appreciated. Thanks in advance.

— Terry Beckingham
Manitoba, Canada

A ***Robert Sadowski, RPT:*** Terry, make sure that you have side bearing on those notes. I recently had a similar experience with an upright. One note confounded me until I checked and noticed that one string was not quite touching its respective bridge pin at the exit point.

A ***Jim Bryant, RPT:*** Two culprits to check for: a) caster not touching floor and b) bass bridge touching plate. Or just use the piano to play "heavy metal" music.

A ***Ron Nossaman, RPT:*** Did you check the bushing in the damper lifter rod? Being behind the action, it's

Continued on Page 14

The 2nd GPA
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The 42nd ARD International
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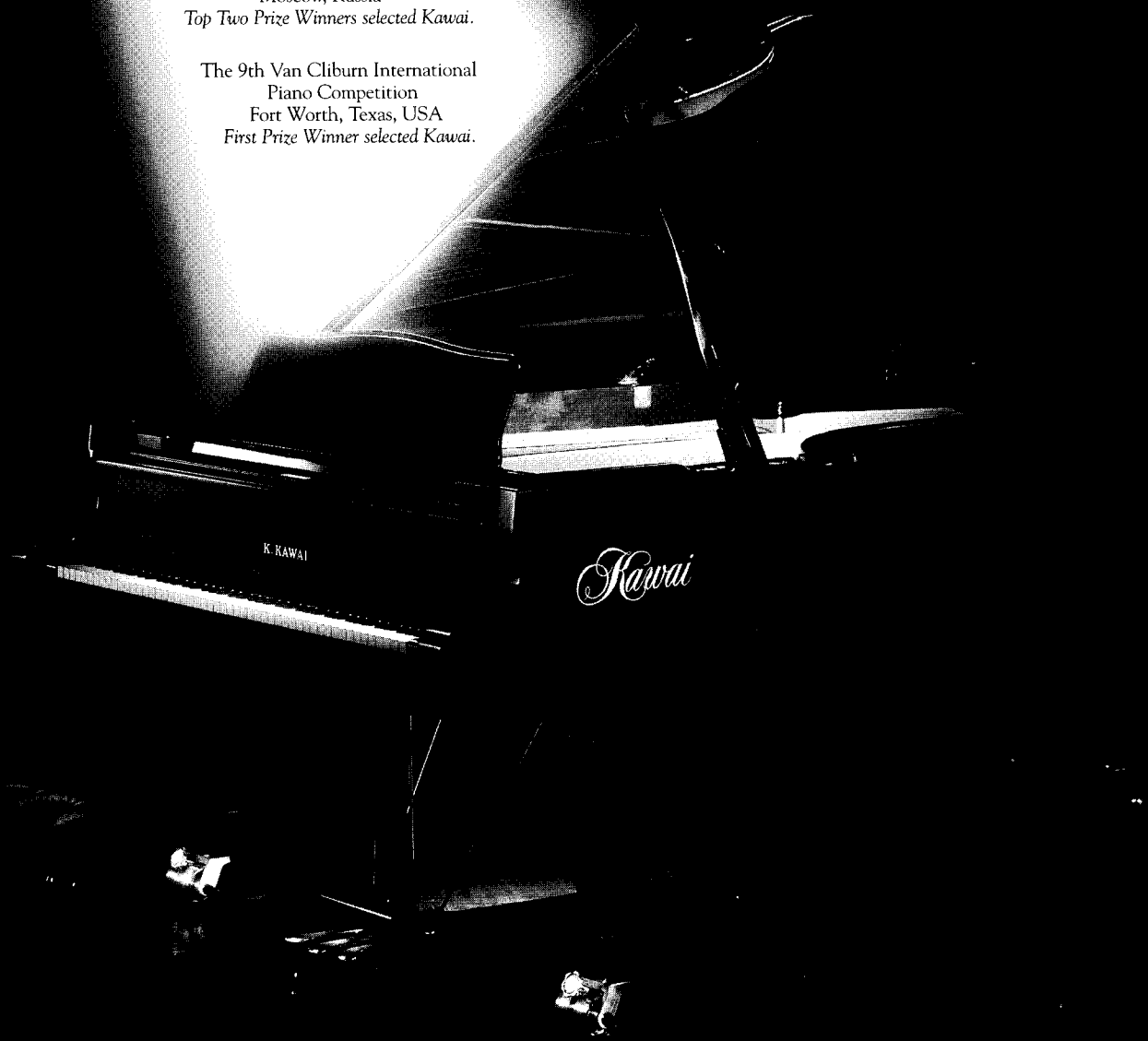
Santander, Spain
First Prize Winner selected Kawai.

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

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

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



It's becoming a familiar refrain.

Q&A/Editor's Roundtable

Continued from Page 12

hard to tell where the noise is coming from. Are the action brackets sitting on the posts firmly? Sounds dumb, but I've had them buzz.

A ***Newton Hunt, RPT:*** Recheck your bearing. Let the tension down on one offending string and unbridge it, then retension. Check that there is not a gap between bridge and string.

A ***Rob Stuart-Vail, RPT:*** Since you have done some work on the bass bridge, did you by any chance break off a drill bit and could a bridge pin be just barely touching the broken bit? Or maybe there's a flake of dried epoxy or glue under the bridge apron, just touching the soundboard?

A ***Roger Jolly:*** One quick thing to try: soundboard buttons can give this nasty symptom – feel if you can rotate them and be careful tightening as they split quite easily. Soundboard glued to liner can cause the same problem.

A ***Ed Guerra, RPT:*** Check for dried glue on any parts on which there may be glue. Also check damper lift rod, hangers and loose bridge pins. Hope this helps.

A ***Mike Jorgensen, RPT:*** Try twisting a wire an additional 1/2 twist and see if it goes away – just a thought. Could it be that the wires had only 1/2 turn before and when you added a full turn the bends now face the opposite way making a buzz at the bridge pins?

A ***Avery Todd, RPT:*** One other thing to check I haven't seen mentioned yet is the bridge notching. If the wire is touching the wood on the speaking length side, you will get a buzz.

Also, have you checked to be sure the soundboard is attached securely around the edges? Even a piece of old hide glue that has come unattached can sometimes buzz if it's in the right location. Just a couple of thoughts.

Another off-the-wall thought. Have you also tried blowing in/around/under the plate/soundboard area with an air compressor? That might find something that a vacuum cleaner isn't powerful enough for. Just a thought.

A ***Ralph Martin:*** I know that the strings didn't buzz before, but I'd still have to try another string, even a universal close to the right size to see if it also buzzed. If not, then it looks like bad strings. If the universal buzzes also – then, at least, you've eliminated the strings. Sometimes a quick substitution can save a lot of sweat.

Beckingham —

Thanks to everyone who gave me assistance in locating the dreaded metallic buzz. I seem to have cured the problem. I am almost tempted to put it out as a quiz, but I won't.

Part of the solution came from Mike Jorgensen and from another tech whom I talked to on the phone. The problem was the strings all right. Mike, the strings didn't require an additional twist. They required NO twist. I had put the bass strings on with one full twist. The tech with whom I talked on the phone suggested that some strings require only a half twist, and some required none at all. I went for none at all. What the heck. I had a 50 percent chance of being right.

I am much relieved. My next step would have been to disassemble the piano and remove the plate again, a job to which I was not looking forward.

Thanks again to everyone.

Tips, Tools & Techniques

Continued from Page 10

1/8"-diameter shaft, the tool is even more useful than I had expected. It's available for $21.99 from Pianotek Supply Co., 1-800-347-3854.

— Steve Brady, RPT
Journal *Editor*

Tuning Technique for Birdcage Pianos

TT&T

As a tuner-technician in the Netherlands I like very much to read the *PTJ*. It has a lot of very useful information and articles for the piano technician. Maybe I can contribute a little with the following information.

One of my private pianos is an antique, typically French-sounding upright piano, Bauvais & Fils, from about 1872 or later. The action is an overdamper "birdcage." After I had been using rubber mutes with chopsticks to get at the strings, I learned the following procedure.

I strip mute as much as possible from bass to treble with a felt mute strip. Then I tune the complete piano, one string per note. After the piano is tuned, I start where the double bass strings begin. I pull the action toward me, pull the felt mute strip from one string and push the action back, tune the string from which I just pulled the felt mute to the string which was already tuned, pull the action forward again, free the next string, push back the action and tune this new string the same way, and so on. This procedure can save you time and your eyes, especially when it is a little dark in the room.

— Jan R.C. Lensing
Amsterdam, The Netherlands

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Glazebrook at 70

By Steve Brady, RPT
Journal Editor

By any standards, British piano technician Bob Glazebrook has had a remarkable career. I first heard of Glazebrook in the mid 1970s when I read a profile about him and other prominent technicians in a *Reader's Digest* article. The article described some of his adventures in preparing pianos for famous pianists all over Europe. On a recent trip to England, I caught up with the still-busy Glazebrook and spent some time with him at his home in London.

Glazebrook began his training at the Steinway "factory" (actually a large rebuilding facility) in London on the 5th of November, 1947. "Interestingly enough," he says, "the first piano I ever worked on was a piano that was being prepared for our present Queen. It was during the time when she was about to be married, and the Royal Air Force bought her, as a wedding present, a Steinway piano. At the time, there was no way you could get a new piano, because Steinway was just getting back in production. So we had an old model B and we had to rebuild that piano. Now, I was the very lowest of the low, because I was just starting, and my job actually was to clean up all the brass work, the pedals and so forth."

Piano work had been in the family, with Glazebrook's father having worked as a representative for Steinway, and his brother, Michael, entering training shortly before he did. His nephew, Keith, is now a deputy manager at London Steinway.

The two brothers both learned "the whole business – restringing, refinishing, trapwork, tuning and so on," says Glazebrook, but since their aptitudes and interests were somewhat different, "Michael went more to the mechanical side and I got very much involved in the artistic side of the business. I spent nine months standing behind my teacher, watching and listening while he voiced pianos. After about six months, I began to hear something."

Glazebrook got his big break in the business when he had been at Steinway for about five years. "At that time, we were having a terrible problem. The famous pianist Roslyn Tureck was recording Bach's *Goldberg Variations* at the EMI studios in Abbey Road, and she was having an awful lot of trouble with the piano. It got to a point where the director at Steinway had sent up two or three technicians, and felt he could do no more. EMI insisted that he send someone else, and as I was the only one left, he said, 'I'll send Glazebrook over and see what he can do,' knowing that I couldn't do anything because I wasn't really trained well enough."

Arriving at the studio, Glazebrook looked at the piano, listened to it, and "though I really wasn't experienced enough, I knew something was wrong with it, something not quite right. I'd never seen this lady before, but 'in for a penny, in for a pound,' as we say in this country, and she went back to her hotel and I decided to have a go at this piano. I thought the soft pedal tone was not right, I thought the quality of various octaves wasn't as I'd like, but I put it down to my own inexperience. Anyway, she came back the following day looking very fierce and very upset with the whole thing, and then she sat down and played and fortunately, she liked the piano. I stayed on at those recording sessions for about two months, while she recorded all the variations, and I enjoyed it very much and learned quite a lot."

After that, EMI would regularly ask for Glazebrook, and his reputation with artists began to grow. He was put in charge of all the pianos at the Royal Festival Hall and Wigmore Hall, traveled with artists like Arthur Rubenstein and Claudio Arrau, and worked recording sessions for Vladimir Ashkenazy.

"The artist has to get to trust you and your judgment, you know the hall, and so forth, and I've always had a great interest in music and knew the piano repertoire and what the pianists were doing. I became so interested in what I was doing that it consumed my whole life, and eventually I got to the point that, with all the people I knew, I was actually selling more Steinways than the sales department." Glazebrook was eventually asked to take over managerial duties at Steinway Hall, a position from which he retired in 1994.

Among Glazebrook's favorite clients was the eminent British pianist, Clifford Curzon, who kept two Steinway D's in his London home, not far from where Glazebrook lives, and another in Vienna. "Clifford would ring me up at maybe 11:00 at night and say, 'Do you think you could pop over in the morning, come over for breakfast?' I loved going to his house about half past six in the morning and I would do his two concert grands, and he had prepared coffee and all this stuff, you know. I used to watch him, you see, because artists used to say to me, 'That marvelous sound that Clifford gets from the piano,' and that was partly due to the preparation of the piano and partly due to him. He liked the touch to be a little bit deeper than normal, so he was getting his sound from the bottom of the key. He

"After about six months, I began to hear something."

The Tuner's Life

was also very fussy about the *una corda* pedal. It was my job to prepare his pianos in that fashion."

Glazebrook's ear has long been legendary, and many years ago he did a test for the BBC. "I got to know some of the producers well, and one of them asked me if I would be prepared to do an on-the-air test. 'We'd like to play you six snippets of the Beethoven 5th Concerto and see if you can tell who the pianists are.' I told him, 'I'll be prepared to have a go at it, but I don't know how well I'll do. I may get one or two of them right.' Well, I got five of them right, and what surprised them was that I also gave them the piano numbers."

Noted for his ability to work with difficult personalities, Glazebrook related the story of one of Sviatoslav Richter's last recitals in London. "He came into the hall about 6:00 p.m. and set the height of the bench, then reached into his pocket and got out one of these spirit levels and set it on the piano to see if it was level. He didn't touch the keys! Well, I knew this trick, so I took a bit of card and put it under one of the legs to level the piano. He walks out at 6:10 and comes back about 7:45, gets dressed, and then leaves the hall. At five to 8:00 he was nowhere to be seen, and the BBC was panicking, as this was a live broadcast recital. They asked me if I knew where he might be, and I said, 'I think he's gone across to Waterloo station to watch the trains. He did that once before.' 'What should we do?' they asked. 'If I were you, I wouldn't do anything at all,' I replied. So, at about three minutes past 8:00, when the BBC announcer has run out of things to say about Richter, about the piano, about the hall, Richter strides into the hall, takes off his coat, hands it to me, and goes out on the platform and plays.

"You learn so much about people, about their way of life, what they want to do, and why they react the way they do. Some artists want to be quiet in their dressing room, others want to talk. I remember when Arrau was doing Beethoven's Opus 110. Two or three minutes before the recital was due to start, I always used to go in and tell him, 'Five minutes, Maestro,' and so forth, and there he was, had the score out, had his finger going along each note, as if he was trying to remember it. He knew I was looking at him, and he turned and said, 'You know, there might be someone out there who is hearing this for the first time; I have to play for that person.'"

"If you don't have that kind of feeling, you shouldn't be in the business."

I asked Glazebrook about something I had read in that *Reader's Digest* article – that he would typically spend about six hours preparing a piano for a concert. "Yes, when I had charge of the concert fleet at Steinway Hall, I had usually about 12 or 13 concert grands, and I tried to prepare them with all different kinds of sounds. For instance, if you were sending a piano in for, say, a song recital, you would not be sending a concerto-type piano. I was fortunate in knowing most of the concert halls in London, and their acoustics, so I would prepare a piano accordingly, and yes, I would spend five or six hours preparing a piano for a two-hour recital – tuning, regulating, touching up the tone, checking and rechecking everything.

"But I was not one to keep playing around with the tone, because I think you can keep needling hammers to the point that you break them open. Ashkenazy used the same piano, #860, for about five years, and I don't suppose I made hardly any alterations to the tone, because once you settle it down, it may get a little brighter here or there, but you just tidy that up. Some people were always 'skinning' the hammers, always needling, and the piano was never right. I think once you settle on the tone, you should keep it at that level, without continually stabbing at it. The piano has a naturalness, and you shouldn't alter that. Some have a thick sound, others have a very thin kind of quality, and you shouldn't try to alter that, you should build around it, around what's coming from the soundboard. I would not try to make something of a piano which wasn't there anyway."

When building tone in Steinway hammers, Glazebrook prefers to do it gradually: "I would use a very thin solution. I'd rather do it three or four times than once with very thick stuff that hangs around in the hammer and gets this very nasal sound. I would also try to retain as much felt on the hammer as possible. Some people take a lot off to get tone, but in my opinion this results in a very short sound. I would try to keep much felt on the shoulders so you get that deep, punchy sound, which I thought was much better, rather than getting an immediate result by filing the hammers up almost to a point and getting a very percussive sound. My method would take longer to achieve, but I think the result was better in the end."

While our conversation was still on piano tone quality and musical artistry, Glazebrook admitted to not caring for recent trends. "You can call me old-fashioned," he said, "but I think that much of today's piano tone is too metallic and hard. Also, there's too much 'gymnastics,' or athletic playing, and less musical playing." He recalled working with the legendary Italian pianist, Michelangeli, ("he got the most divine sounds") and the great Richter. "Richter would judge a piano on how *softly* he could play it, not how loudly."

Glazebrook's clientele have often taken him far from home, like when he would tune for the Sultan of Brunei.

Concluded on Next Page

Glazebrook at 70

Continued from Previous Page

"It's the most hilarious thing, really, because it's so expensive for them to fly me there. You have to go through Singapore, and you can't get to Brunei in one day. I used to go there and sit in the Sheraton Hotel in the capital, and wait for two or three days until they called for me. It was quite boring, actually.

"I did a concert once in Cypress with Ashkenazy. It was a benefit for the Red Cross, and he was giving his services for nothing. It was this concert grand in Nicoceia, and I got out there about two days ahead of Ashkenazy to put it in shape. I had never seen the instrument before, and it was about 40 years old, not in very good condition. I worked on it for about 20 hours to get it into some kind of shape. I did the best I could, but I wasn't very happy with it. Ashkenazy tried it and said, 'It's not bad – about 90 percent of your usual.' The program opened with Beethoven's *Appassionata*, and though the audience was made up of Cypriot 'high society' people, they broke into rapturous applause at the end of the first movement and left the hall, thinking it was the interval (intermission).

"For this concert I had gone to Cypress on Cypress Airways, and I happened to be sitting next to a Cypriot woman who lived in London. She explained to the stewardess that she was returning to Cypress for a very special concert by a famous pianist named Mr. Ashkenazy. 'And it's very special because my piano tuner in Cypress is looking after the piano. He's the most famous piano tuner on the island, and Mr. Ashkenazy has asked specially for his services.' I didn't say anything, but it all came out in the end because there was a reception after the concert, and the same woman came up to Ashkenazy, who was talking to me, and asked for his autograph. Then she looked at me and asked, 'Didn't I sit by you on the airplane?' I said yes, and she asked, 'Well, what do you do?' I replied, 'I look after Mr. Ashkenazy's piano.' She didn't know what to say!"

Glazebrook lives in central London with his wife, Marian, because he likes to be in the middle of a busy music and theater scene. "I love live performances. The trouble today is that we get so used to recordings and television where everything is so perfect. It's nice to go to a performance, and just take it for what it is – it's there, it's immediate, it's what's happening to you at this moment in time."

"You learn so much about people, about their way of life, what they want to do, and why they react the way they do."

As he approaches his 70th birthday, Glazebrook continues to work. "I went out this morning about a quarter past 8:00 and went to South London, where I'd been asked to examine a Steinway piano, to give an opinion on what it needs and whether I could do it. I got home about midday, had some lunch. Now you and I are talking, and this evening we're going to go out. Tomorrow, I'm going to East London, and I have to spend the day there doing a one-day check-over on a Steinway. Thursday I'm doing a day's work in Brighton on a Grotrian-Steinweg piano." Glazebrook still does shopwork – mainly action and keyboard jobs – in a small shop near his home, and does most of the work himself, hiring out only casework and refinishing.

"It all went a bit wild," he says, "because when I retired from Steinway, I thought I'd do an occasional tuning, maybe the odd job in the shop to keep myself useful. But without exaggeration, I've got a year's work in front of me, and all decent jobs. Of course, now that I'm retired, if we want to go away for a long vacation, we can do that. Marian and I have a very full life. We travel a bit, and we're both very much 'book persons,' and enjoy music and theater and so forth. I always say to a customer, if you want the job done by next week, then I'm not your person."

I asked Glazebrook if he had any advice for novice tuners, and he offered a few pointers. "Go to a manufacturer," he said, "and get yourself a thorough training, learning from the bottom up." It may be difficult for people in North America to follow that particular bit of advice, but not impossible. It would require spending a few years in London or elsewhere in Europe, working at a factory. Next best would be to enroll in one of the remaining residence schools in the U.S. or Canada, even if it means temporarily relocating to do so. He also mentioned that he had sometimes attended PTG meetings when in the U.S., and expressed admiration for the *Piano Technicians Journal.*

What else? "Listen to what pianists have to say about pianos, and about your work," he continued. "If, as a technician, you play the piano yourself, it helps you to understand the musician's point of view. It's also important that you try to learn all you can about the music. I feel very passionate about having the piano in good shape for the pianist. The pianist has worked very hard to get to this point, and has a right to expect a piano in very good condition. I've made it my work to do that. If you don't have that kind of feeling, you shouldn't be in the business."

Looking back over his long and legendary career, Glazebrook feels blessed and fortunate to have been in the right place at the right time, and to be still involved in meaningful work he cares so much about.

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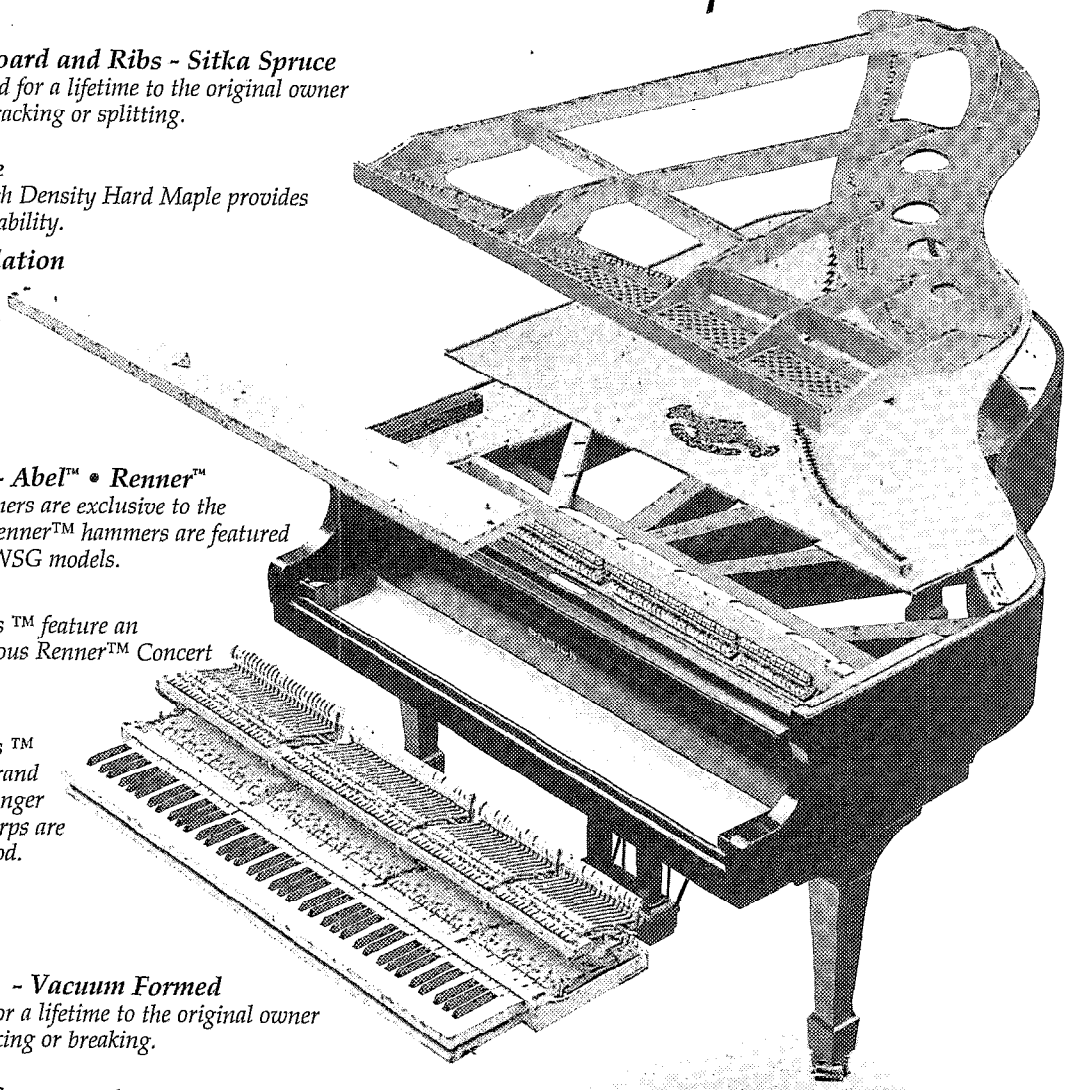

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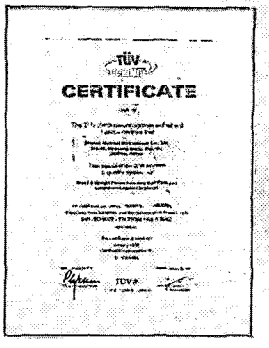

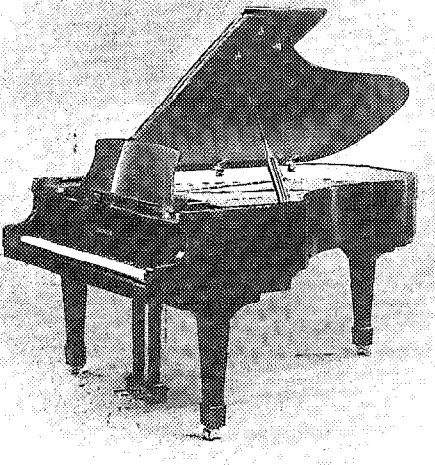

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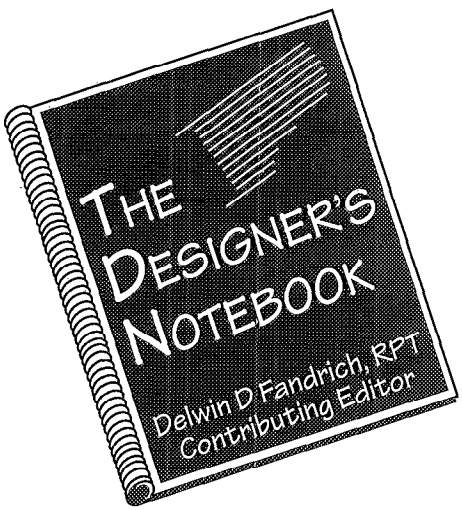
The Problem Of Small Pianos – Part II

The Bass/ Tenor Crossover

By Delwin D Fandrich, RPT
Contributing Editor



[Editor's Note: Part I of this article appeared in the July, 1997 issue of PTJ. – SB]

Introduction

In Part I we looked at some of the thinking that goes into a new piano scale. We established the basic overall parameters for our ***Matchless Concert Console*** *piano[1]. We determined its height, scale length, etc. And we began to lay out its stringing scale starting with the bass section. In this installment we'll continue on with the string layout, starting with the bass/tenor crossover.*

From this point there are still several divergent paths we could take in developing this design that would result in an instrument having a reasonably good balance of performance and ease of manufacturing. The choices we make will be a reflection of the goals and prejudices of the manufacturer and the designer. Since this design is going to be very "tone" oriented, allow me to elaborate on what I would expect from this design. I freely admit to being a sucker for a wide dynamic range of tone color along with a clean and clear voice. Soft should be really soft – not just less loud. Loud should be clean and authoritative, not brittle, harsh or raspy. This tone should come from relatively soft hammers of reasonable size. No lacquer, acrylic elixirs, or hard-pressed hammers need apply. The pitch of each note – even in the bass – should be clean and well-defined and there should be a clear and long sustaining tone. The piano should need every one of those 72 dampers that it is going to get. There should be good continuity of tone color throughout the scale. That is, the piano should sound uniform and of a piece. It should sound like one piano, not like parts of two or three different pianos stuffed together into one case.

Notice that in this list of desirable qualities I've not had much to say about acoustic power. I'm not particularly impressed with "power" as a selling feature – particularly as the word has come to be used of late. We select hammers for "power." We then voice these hammers for "power." We bang on the keys harder than any reasonable musician would ever actually play to demonstrate "power." And it's all nonsense. A piano should have an adequate amount of acoustic power for its intended home – and this one will. It is intended to fit in a small- to medium-sized living room or family room. Occasionally, it might find its way into a practice room. In fact, this design should be capable of producing somewhat more acoustic power than is found in most instruments of its size. But, in the end, we must remember that this is a small piano. Both the short stringing scale and the soundboard configuration dictated by a piano of this type conspire to limit its acoustic power output – particularly in the low bass section. If more acoustic power is needed than this – or any other particular piano design or size – is capable of delivering, then a larger instrument should be chosen. Provided, of course, that the acoustic design is a good one and that it is working correctly. Within any given design there will be an optimum balance of tone quality, dynamic range and acoustic power. Taken beyond this balance, additional "power" ***always*** *comes at the expense of tone quality, a sacrifice no piano designer or technician should ever willingly make. The word "power" is too often used to denote "brightness" – dare I suggest harshness? And with this brightness and hardness comes a lack of dynamics which results in a very linear sound – not at all what we should be demanding from a true pianoforte.*

And now, back to our story ...

Tenor String Angles

Before we can establish the unison center spacing across the bass/tenor break we're going to have to figure out what to do with our tenor section string angles and the centerline ($^{c}/_{l}$) spacing within the section. Step one will be determining the $^{c}/_{l}$ angle of the first tenor string set.

In this design, the first tenor unison is F33 and the strings in this unison have a speaking length of 900 mm. As with the bass strings we have to add some additional length for the bridge pin spread and some more for the back scale. In this case the bridge pin spread is going to be 17.0 mm and the back scale length is going to be 145.0 mm.

These numbers are not chosen arbitrarily. The bridge pin spread is selected by figuring the diameters of the bridge pins to be used (#8's) and the average diameter of the music wire to be used and then selecting the appropriate geometry to give an adequate amount of string offset to effectively terminate the speaking length of the string. As with the bass strings, this angle is determined by solving a simple right triangle geometric relationship. We know the height (the distance from the center of the plate hitch-pin riser to the strike line) and the hypotenuse (the length of F33 from the hitch pin to the strike point) and we simply solve for the included angle. In this case we find that a string angle of 28.0 degrees will provide space for the full length of this string set to fit onto our back and plate assembly. Yes, a string angle of 28.0 degrees is fairly steep, but once again this is one of those necessary trade-offs we'll simply have to accept in order to fit a reasonably powerful scale onto a relatively small back assembly such as this one. The back scale length specified is the minimum I would want to use considering the frequency of this note (F33) and the expected soundboard excursion in the region of the board where the tenor bridge will terminate. I would actually prefer to have a back scale length of 175.0 mm to 200.0 mm here. But to use a back scale of that length on a plate and back assembly of this size would require a string $^{c}/_{l}$ angle of between 31 degrees to 33 degrees. This would create even more difficulties at the bass/tenor break. It would require higher hammer bore angles, and it would move the low end of the tenor bridge even closer to the side of the piano.

This 28.0 degrees string angle will apply only to F33. From that point up, the string angle will decrease until at some point it becomes zero. In many, if not most, pianos the string angles used in the top section (or the top two in a four-section design) are zero, or pretty close to zero. That is, the unison $^{c}/_{l}$'s are perpendicular to the hammer strike line. While traditional, this is not necessarily the best way to lay out a string scale. In this design we're going to try something a bit different. Without going into all of the theory as to why at this time, let's just specify that the string angle sweep will be continuous throughout the tenor and treble sections, starting with F33 at 28.0 degrees and ending with C88 at 0.0 degrees.

Action Center Spacing

In most, if not all, of our older pianos the action scale spacing is not uniform except in those areas where the string angles are 0.0 degrees from perpendicular (or 90.0 degrees to the strike line). This is quite deliberate. The spaces between the unison centers must be wider where the string angles are greatest. For example, a space of 14.0 mm or 14.5 mm between the $^{c}/_{l}$ of notes #33 and #34 might be required for hammer clearance while a $^{c}/_{l}$ spacing of only 12.5 mm or 13.0 mm between notes #87 and #88 would be sufficient. The idea is to give those unisons using larger hammers, and hammers that are installed using greater bore angles, a bit of extra room between them and make spacing them a little less critical. The same rules apply here as were worked out in Part I of this article. On the other hand, we don't want to waste space and make the scale stick unnecessarily wide, so as the string angles decrease

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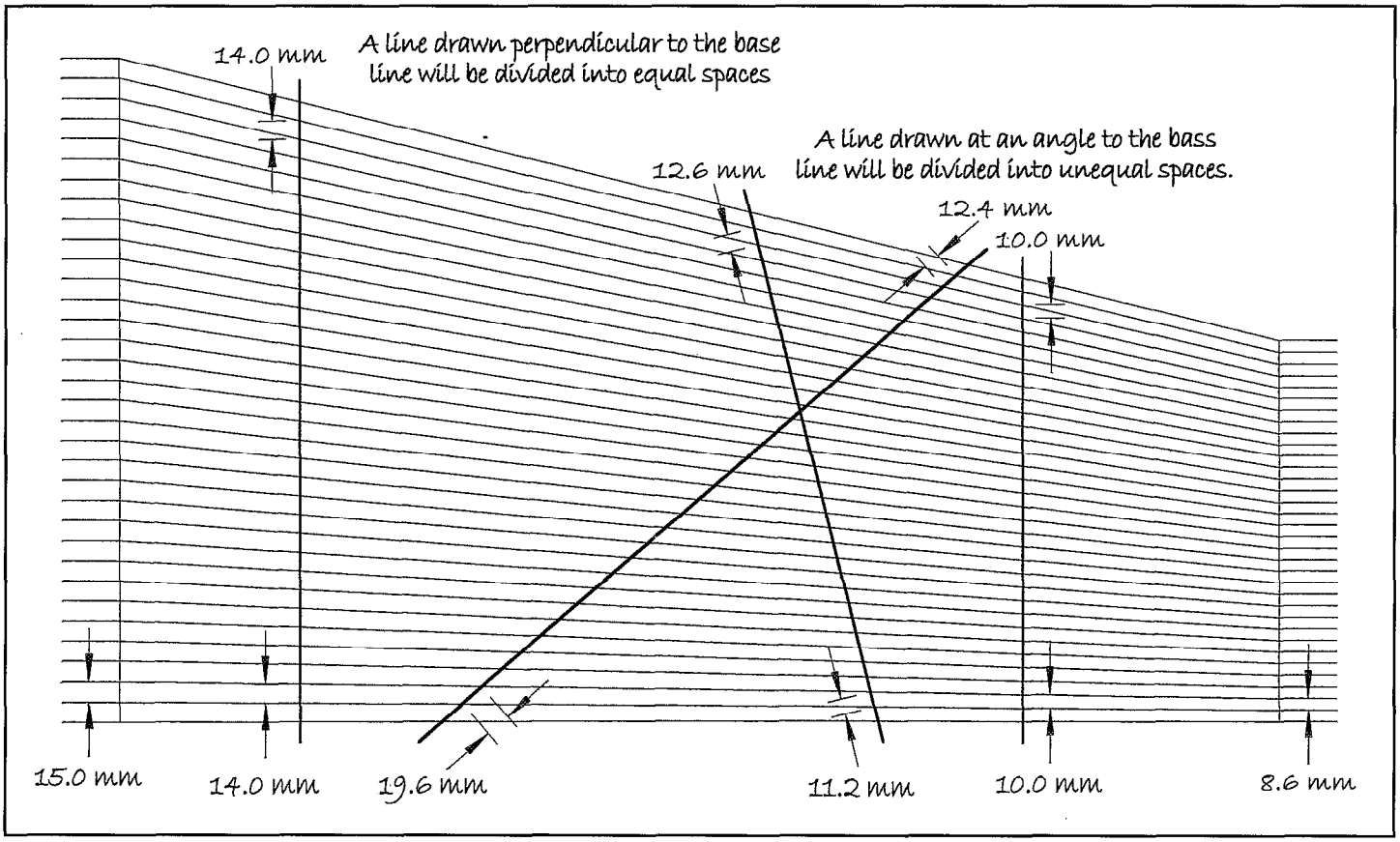

Figure 1 — The fan scale provided a simple way of spacing unison (or action) centers progressively wider or narrower at one end of a section than at the other.

The Problem Of Small Pianos - Part II

Continued from Previous Page

and the hammer size and angles decrease, the unison $^{c}/_{l}$ spacing can also decrease.

Today it is a fairly simple matter to write a little routine that works out this spacing automatically in our computers. It wasn't quite so easy in the late 1800s and early 1900s when many of the scales that are still in use today were laid out. Marking off this spread was usually done with the aid of a "fan scale." See Figure 1. The fan scale was drawn on semi-transparent paper. The number of lines drawn had to equal or exceed the largest number of unisons in the widest section used on the piano scale being drawn – usually that was either the bass section or the tenor section. In the ***Matchless Concert Console*** this would be either the bass section or the treble section, both of which have 32 unisons in them. The spacing of the horizontal lines on the left and right were somewhat arbitrary. It was only important that, once some particular spacing dimension was chosen, all of them were equal. The overall width of the fan scale was typically about 1,000 to 1,200 mm.

Once the designer had determined the number of unisons per section and the overall width of the section he would lay out the $^{c}/_{l}$'s of the first and the last unisons of each section along the strikeline on his scale drawing. The appropriate number of lines would be counted off on the fan scale and it would be aligned over the strike line so that the individual action centers could be pricked off. With the master scale drawing laid out on a wood panel or drafting pad, a sharp prick-punch was used to punch tiny holes through the fan scale to the drawing below along the strike line. Once the scale drawing was complete the action centers would be transferred to a square or rectangular strip of carefully dried and surfaced wood called a scale stick or rod. This scale stick then became the master guide for all subsequent drilling and layout operations. Drilling centers for all action rails, the damper rail(s), bass string wraps – everything – could ultimately be traced back to one or more of these scale sticks. And all of the various scale sticks could be traced directly to the master scale drawing.

Later drawings will show the complete string layout for the V-107 scale. For now we will concentrate on the area just above the bass/tenor crossover.

The Crossover

The mechanical requirements for the bass/tenor crossover would seem to be fairly basic, yet this is an area that frequently causes servicing problems in small piano designs. The stringing scale is laid out along the hammer strike line and a gap in the unison $^{c}/_{l}$ spacing must be provided between the last bass unison and the first tenor unison for a plate brace and to provide space for the dampers of the lowest few tenor unisons. If the scale were laid out in a "straight-strung" configuration this gap could be as little as 25.0 to 30.0 mm. We would need just enough room for the brace plus a bit of space to allow the strings to vibrate without striking that brace. The dampers could be placed just below the hammers with no interference from any other strings.

The ***Matchless Concert Console,*** however, uses an overstrung scale. Mechanically, over-stringing is accomplished by simply passing the bass strings over the top of the tenor strings and the tenor bridge at some appropriate angle. For plate strength and stability there is usually a brace running approximately parallel to the tenor strings and under the bass strings. Using an overstrung scale introduces the problem of damper clearance. (It also introduces a considerable amount of torsional stress into the assembly – but that's another story.)

The problem most often encountered by piano technicians is with the dampers working on the first two or three unisons of the tenor section. In the typical small piano, there is often very little space between the hammer and the overstrung bass strings for a damper head of any reasonable size to be fitted. Figure 2 illustrates the problem. In this drawing the strings are drawn at their final angles and the unison $^{c}/_{l}$ spacing across the break is 30.0 mm. While this spacing would have been adequate with our straight-strung scale, it isn't going to work here. It is obvious that with a 1.7 mm long damper on the strings of F33 there is going to be just a bit of a damping problem. (Let's assume that installing one or more "overdampers" – placing one or more damper heads above the hammers – is not an option, please.)

There are three basic approaches to solving this problem. First, if we provide just a bit of extra space between the bass/tenor break we can install a fairly short, but hopefully still functional, damper head. This approach is illustrated in Figure 3.

Historically, this has been a fairly common approach to this little problem. By increasing the spread between unisons #32 and #33 to just 50.0 mm we can fit a damper block up to 16.0 mm long between the #33 hammer and the #32 bass strings. There are a couple of difficulties with this design, however.

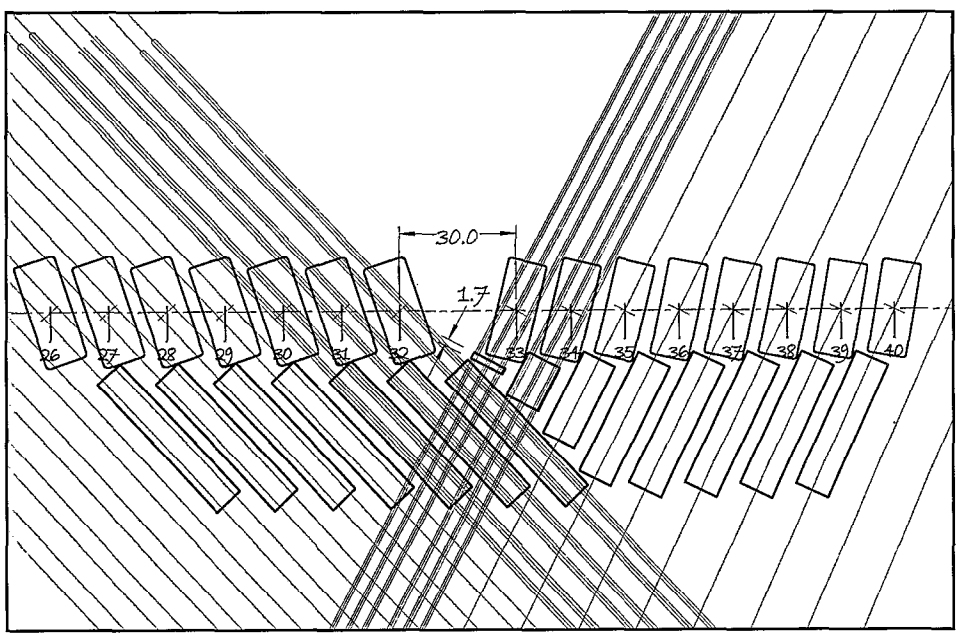

Figure 2 — With a space of 30.0 mm between the centerline of E32 and F33, there is virtually no space to fit dampers on F33 and F#-34. Even at G35 it's going to be crowded.

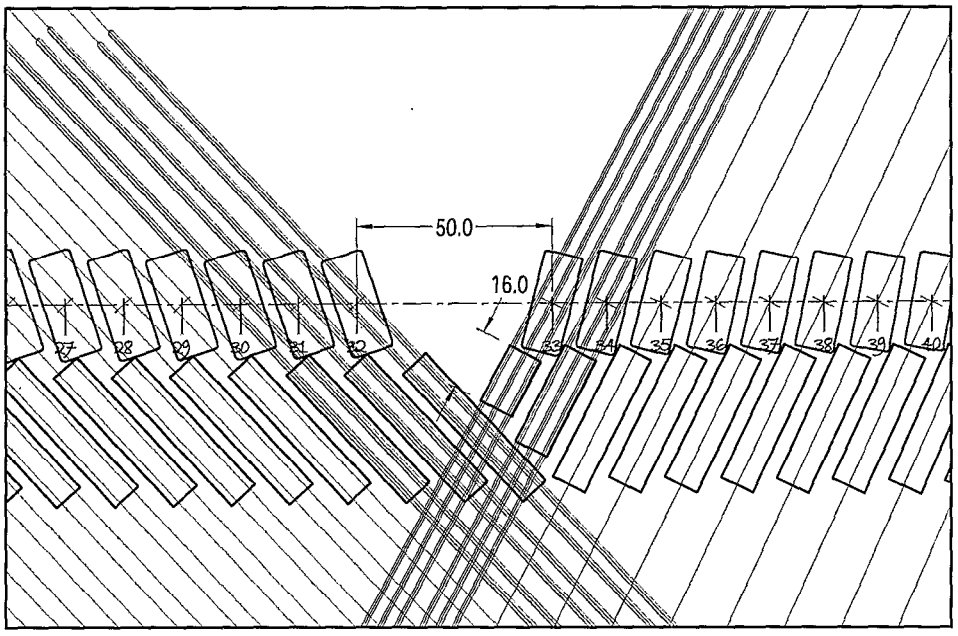

Figure 3 — The bass/tenor break spacing has been increased to 50.0 mm. There is now room for a slightly longer damper – up to 16.0 mm – below the hammer.

Unison #33 is the longest and most powerful tri-chord string set used in this piano. It is going to take a fair amount of damping to effectively stop these strings from vibrating at the rate demanded by most pianists. A 16.0 mm damper head does not present much of a load to these strings. Because the damper pad is so short, and because it is inevitable that it will be located at, or close to, the nodal point of at least some vibrating partials along these wires, its damping effectiveness is going to be fairly limited at certain harmonic frequencies. The solution most commonly used to increase the effectiveness of this short damper head is to simply use a tri-chord wedge instead of a pad and hope for the best. Unfortunately, for a tri-chord damper to work well, it depends on precise alignment to the string set and it demands stable string spacing. Neither of which are easy to achieve in a small vertical scale without using agraffes. In many small, inexpensive pianos string alignment was (is?) an iffy thing at best. Particularly near the bass/tenor break where tuning pin spacing gets tight and there is a very short space between the V-bar/pressure bar and the tuning pins. Even so, with the string spacing perfect, and with the damper well fit, there remains the ringing harmonics problem. No amount of fitting or regulating will make a damper this short work effectively on this string set. So, while this solution does work – kind of – it is not a great solution.

Figure 4 illustrates another method of providing adequate room for dampers at the crossover. In this design the bass/tenor break is still 50.0 mm, but the hammers at the low end of the tenor section have been raised somewhat above their design strike point on the string. This does allow enough room under the hammer for a damper of adequate length, especially if a tri-chord wedge is used, but once again, some new problems are introduced. The most obvious is the changing hammer strike point. As the hammer strike point on the string set changes, so does the harmonic spectrum of the resultant tone.

The bass/tenor break is already one of the most difficult areas of the scale to voice evenly. Between unisons F33 and E32[2], there is a transition from the last set of strings at the bottom end of the tenor bridge – located well down and to the left where the soundboard is becoming fairly stiff because of its proximity to the soundboard liner – to the first set of strings at the top end of the bass bridge which is located up and to the right in an area of the soundboard that is somewhat more flexible. Very often, the transition from tri-chord plain steel tenor strings to bi-chord copper wound bass strings also takes place across the bass/tenor scale break. The transition from plain steel to wrapped strings could, and often does, take place on the tenor bridge, but, unless some provision is made to shorten the wrapped strings somewhat, this practice introduces yet another voicing problem to contend with. Since building a tenor bridge to accomplish this offset would add cost and complexity to the design it is not commonly done with vertical pianos. The most common practice, when bi-chord wrapped strings are used in the tenor section, is to simply curve the end of the bridge a bit and foreshorten the bi-chords as much as is practical on this bridge. This is better than making no provision for the bi-chords, but not by much.

Raising the hammer strike line simply exacerbates these problems.

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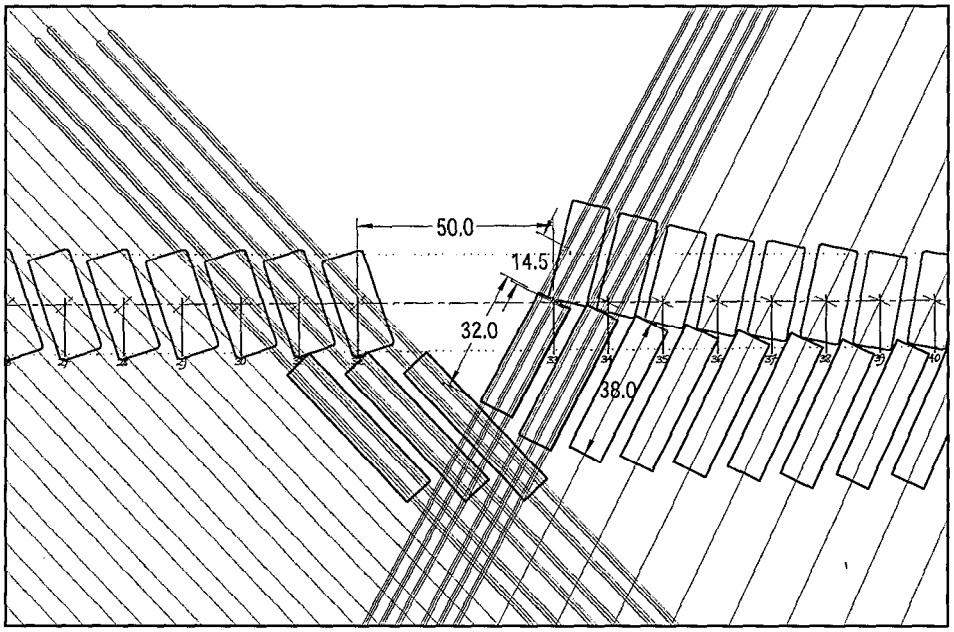

Figure 4 — The bass/tenor break is still 50.0 mm, but the hammer line has been raised to allow additional room for the damper block.

The Problem Of Small Pianos - Part II

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Another fairly obvious problem with this design is the changing hammer blow distance. Well, either the hammer blow distance is going to increase or each hammer shank involved is going to have to be shimmed by some specific amount to keep it equal. Doing this, of course, would change the key-to-hammer lever ratio. And then, either the aftertouch would increase or the key dip would have to be decreased appropriately. Neither of these is a particularly attractive solution. Typically, then, the least objectionable resolution is to simply allow the hammer blow distance to increase a bit. This, at least, allows the key dip and aftertouch to remain the same.

Aside from the aforementioned voicing problems caused by deviating from the desired hammer strike point, the most common adverse side effect comes from the longer hammershanks that are necessary to raise the hammer: there will be some increased amount of hammer shank whip with medium to hard hammer blows resulting in some loss of power and further complicating voicing.

Figure 5 illustrates the third approach to the problem. In this design the space between the $^{c}/_{l}$'s of E32 and F33 has been increased to 80.00 mm. The hammer line is now back where it should be and there is adequate space for a normal size damper block between it and the E32 bass strings.

There are only two potential problems with this solution; and, by comparison, they are both fairly minor. The first is that the overall scale stick length – and consequently, the width of the piano – will be a bit wider than it would be with the two previous approaches. Generally with the way console pianos are laid out this is not really a problem.

The other is that the flare of the keyset must increase to accommodate the increased width of the scale stick. Using this spacing across the bass/tenor break will result in an overall scale stick width of about 1300 mm – perhaps a bit more. While not impossible to accommodate, this is a little more than I would like to see. (We'll get back to key flare in Part III.) In the end, we'll probably compromise once again and bring the spacing across the break back to about 75.0 mm and shorten the damper block just a bit and use a two-pad trichord damper set. We'll count on drilling the plate with a CNC drilling machine which should enable us to keep the strings in line well enough to assure good damping even after the piano gets tuned.

Coming up

In the next article of this series, we'll put the whole thing together. We'll show the completed scale layout and we'll take a look at the key and action requirements.

Notes

1) I would like to remind the reader that this is a new design – albeit not a complete one since I don't intend to publish the completed drawings for the soundboard and rib set, nor do I plan to publish the complete plate and back assembly drawings. Even though I personally have no plans to build this piano, I still retain all rights to its use. Please understand that it would be both unethical and illegal to build an instrument using this design for commercial use or production without my permission.
2) The bass/tenor break does not always occur between E-32 and F-33. In fact, in older scales, it is often much lower down in the scale. My own experience has led me to believe that in a scale of this size it is acoustically better to keep the bass/tenor break up in this region. I also prefer to not use any wrapped bichord unisons on the tenor bridge unless some provision can be made to shorten them appropriately. Since this usually involves making a somewhat more complicated bridge I am left with this arrangement. This is actually a fairly good compromise since by so doing, and with some creative soundboard design, the bass/tenor break can be made essentially transparent.

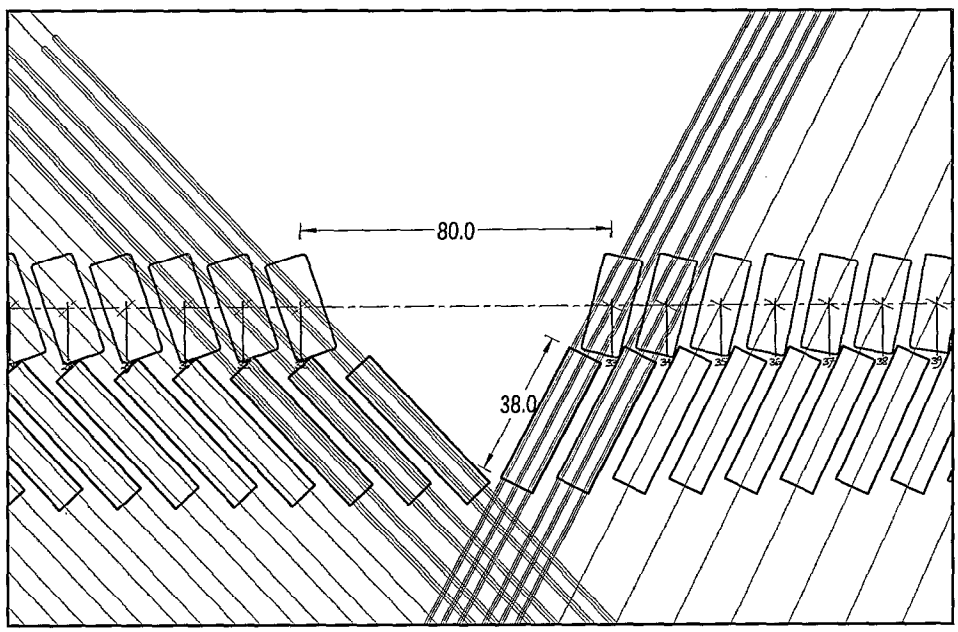

Figure 5 — The bass/tenor break is now drawn at 80.0 mm. The hammer line is straight and there is adequate room for a normal damper.

1998 NAMM Show Review

Piano Industry News from the 1998 NAMM Show

By Steve Brady, RPT
Journal Editor

The annual trek to the winter NAMM show has become a familiar ritual for me: fly into the Orange County airport, take a cab into Anaheim and check into one of the ubiquitous motels surrounding Disneyland and the convention center. The convention center itself, and the locations of the various piano company displays, had become familiar, too. This year, though, the show was held in Los Angeles instead of Anaheim, due to remodeling of the Anaheim convention center. Downtown LA is quite a different place than Anaheim, to be sure, but the biggest difference was getting acquainted with a different convention center, and piano displays that were pretty much all over the place. Once again, I'm reviewing things at the show which caught my attention and which were interesting to me; I've probably left out more than I've included.

Recent Trends

Industry trends, for the most part, are continuing along the same lines reported over the last few years. Interest in Chinese piano production continues to be high, and the quality of pianos made in China continues generally to improve. The trend towards consolidation of piano companies continues with more and more makers forming joint ventures – especially with Chinese companies – but for the time being, the U.S. piano industry seems to have stabilized since Kimball's exit from piano manufacturing and PianoDisc's acquisition of Mason & Hamlin and Knabe last year. The trend toward hybrid pianos which contain various electronic gadgets in addition to traditional piano actions and, in some cases, soundboards and strings, has shifted into high gear. The upscale market niche of hand-built pianos and unique case stylings continues as well.

Asia & the U.S.

Young Chang, which opened a new factory in China last year, will be producing some 60,000 pianos there this year. Young Chang, incidentally, is continuing the redesign of its Korean-made grand piano line by piano engineer Joe Pramberger (formerly of Steinway & Sons). According to Pramberger: "The three areas I looked at were the structure – how the piano is put together; second, the area of how it functions; and third, how it performs and what kind of sound you get out of it." Pramberger's work involved undercutting the bridges, changing the rib crowning, repositioning bridges and changing the thickness and tapering of the soundboard. All this was done in an effort to make the soundboard more responsive and to improve the "transition areas" in the piano's scale. Pramberger also modified the inner rim, graduating the height of the inner rim and changing the angle of the top of the inner rim to provide a better fit with the soundboard. Pramberger also studied the Young Chang actions and spent time reworking their geometry. To this point Pramberger has completed work on three grand piano models, the 150, 185, and 213 (4'11", 6'1", and 7'), and three vertical models, the 102, 110, and 121. According to Pramberger, "response to the redesigned models has been very favorable."

Yamaha has also recently opened a piano factory in China; and is manufacturing pianos (under the Eterna name) there using Japanese-built Yamaha actions in instruments otherwise built from domestic materials, including Chinese-made spruce keyboards and laminated soundboards. LaRoy Edwards was careful to explain that although Yamaha has purchased a share of the Chinese Guangzhou piano company, the Eterna pianos are built by Yamaha-trained workers in a separate factory.

The Chinese pianos built by Young Chang and Yamaha both seem to be a cut above most of the entirely home-grown Chinese pianos, but I should add that a significant quality gap is now appearing across the Chinese piano market. I saw and played some Chinese pianos at the show which were quite respectable and others which were simply dreadful. The best of the Chinese pianos seem considerably better, for example, than the first Korean imports to hit North American shores a couple of decades ago; the worst of the Chinese pianos appear to be similar to, or slightly worse than, those first Korean imports.

Kawai introduced a new 7'6" grand at the NAMM show. The last piece in the RX grand piano line, the RX-7, features the same technologies found in the other RX series grands. According to Kawai's Don Mannino, RPT, "the Turbo model will be out next year." (That's a joke, you see, because Mazda used to make a hot sports car called the RX-7.) In addition, Kawai has once again revamped its console lines.

While leaving its grand piano line pretty much as is, Yamaha has redesigned its vertical line. The P22 will now be available in a different, sort of Euro-case style, with a polyester finish. Called the model T116, this instrument is made in Yamaha's Thomason, Ga., factory. The line of larger uprights has been redesigned for appearance and musical quality, according to LaRoy Edwards, RPT. Besides modifications to the cabinetry, the U1 has a redesigned bass bridge and a rescaled tenor break, and incorporates in general many of the features formerly found in the WX-1 (minus the X-back radial post construction). The 52" WX-7 has been replaced with the U5, also incorporating many of the WX features. All three "U-series" uprights also include the slow-fall key cover which I'm now seeing in many grand pianos across the industry.

Fandrich & Sons, operated by Darrell Fandrich, RPT, offers a line of pianos built in China by the Guangzhou Piano Co., with varying degrees of preparation and rebuild-

ing being done on the pianos by Fandrich and his associates in Seattle before the pianos are sold. Fandrich's line includes 7', 5'6", and 5'3" grands, as well as 51" and 46" verticals. The 7' grand and the 51" upright receive the most elaborate treatment, including new Abel hammers, rescaling and restringing, and modifications to the bridges and pedal systems. The 51" upright is available for $9,250 with the Fandrich Vertical Action, and both of the Fandrich & Sons verticals are equipped with Fandrich's new Power Poles™ —vertical members added to the back to increase the piano's power and sustain by placing the back under compression. (see photo)

Photo 1 — Back of Fandrich & Sons upright showing Power Poles™

The U.S. piano market consists now of six piano manufacturers, most of which make some of their piano lines in the U.S. and some in Asia. One U.S. manufacturer sometimes overlooked is Pennsylvania's Story & Clark, which now offers a modest line of American-made grands and verticals. The "Hampton," a 5'5" grand, carries a retail list price of about $20,000, and is unique among American grands in that its rim is constructed of four jointed pieces (the old European style), rather than a continuous bent rim. The line also includes consoles and studios made in the U.S., and a lower-priced line of consoles (Prelude) made in China. Story & Clark is owned by the old player-piano roll maker, QRS, and automated instruments are still very much a part of the QRS lineup. They not only still make players and rolls, but also produce the Nickelodeon orchestral players and a full line of digital and MIDI products, including Pianomation, the MIDI option available on most of their pianos, and the Playola rail, which sits over the keyboard of any piano and plays the keys. Story & Clark is also the only piano maker presently offering the new "Small Hands" 7/8-size keyboard option. For an additional $1200 (wholesale) you can have the 7/8 keyboard installed in a Story & Clark studio upright (see photo). More about the 7/8 keyboard later.

Photo 2 — Story & Clark studio upright with 7/8 keyboard.

European Pianos

Jim Reeder, RPT, the U.S. importer of Blüthner pianos, reports that Blüthner has made some "geometry" changes in their grands to make them more responsive. He calls Blüthner's new Haessler grand piano "a study in using the most modern and efficient construction techniques" in an "American-style" grand piano. According to Ingbert Blüthner, the firm's owner, the Haessler was designed by Knut Blüthner ("the engineer in the family") to compete in the American market with "pianos of lower price than ours." That meant, he continued, that "we had to find production methods that are a little bit more commercial, but that are approved in their quality. The American piano industry has been foremost in producing good instruments

Photo 3 — Haessler 6'1" grand by Blüthner.

in a very sophisticated way, in a way that can do things without spending too much time on it. This piano is made in our factory, but we 'looked over the fence' and tried to find what was good in the other ones." The 6'1" Haessler grand includes dowel-type plate supports, rather than having the plate rest directly on a wooden liner around the perimeter of the soundboard, as in Blüthner grands. Bridges are red beech, rather than maple, and the inner rim is bent in one piece. The piano uses a Renner action with Abel hammers and has a multilaminate pinblock. The 6'1" is the only grand in the line so far, and Haessler also makes two vertical pianos. "Haessler is also a family name," says Blüthner, "so I stand behind this instrument."

The Petrof grands continue to impress this writer with their beautiful tone. Although, like many pianos at the NAMM show, the Petrofs suffered from a lack of action prep, my feeling is that the Petrof line might just offer the best value for the dollar now available in the piano industry.

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1998 NAMM Show Review

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With a 6'4" grand selling at a "street price" of about $15,000 and a fully-agraffed studio upright at about $3,800, it's a piano line to be reckoned with. The U.S. Petrof importer, Geneva International Corporation, also sells soundboard blanks, pinblock material, and drill bits for tuning pins, as well as providing contract rebuilding services, according to Alan Vincent, RPT, Geneva's technical director.

According to Knut Grotrian, the Grotrian studio model 111 is now available in the U.S. for the first time. Carrying a list price of about $19,500, the 44" Grotrian 111 is more expensive than many grands. Pricey, but for its size it's a surprising performer.

Other new names from European makers were the Italian Schulze & Pohlman, and the Schirmer & Son, made by Estonia.

The High End

Paolo Fazioli was again on hand with a sample of his fabulous line of grand pianos. For 1998, the Fazioli model 278 (9'2") concert grand has received some noticeable improvements. According to Fazioli, the soundboard press and rib dimensions have been altered to give the piano a more projected and singing treble tone. The piano's tenor duplex scale has also been redesigned, and the touchweight specs have been changed to give the action a lighter feel.

Building on recent forays into the specialty-case market, Steinway displayed a spectacular new one-of-a-kind art-case grand at winter NAMM. A joint production between Steinway and Pollaro Custom Furniture of east Orange, N.J., the model B required some 600 hours of custom cabinet work, and carries a price of $165,000, according to cabinetmaker Frank Pollaro. Pollaro, who specializes in the reproduction of French art-deco furniture, designed the art-deco case and went to the Steinway factory to veneer the rim in a factory rim press. The case went to Pollaro's shop for the elaborate casework, featuring a lid with 105 matched pieces of veneer on the lid to complement the 38 matched veneers on the outside of the rim. Dressed in Amboyna Burl (lid and trim) and Macassar ebony (rim, legs, and lyre) from Sri Lanka, the piano also received numerous hand-cut ivory inlays (Relax! The ivory was obtained from an estate sale) and a custom-designed art-deco logo for the fallboard, also inlaid in ivory. The case is finished in conversion varnish. Following the work in Pollaro's shop, the case was returned to the Steinway factory for completion of the resonating unit and action installation (see photo).

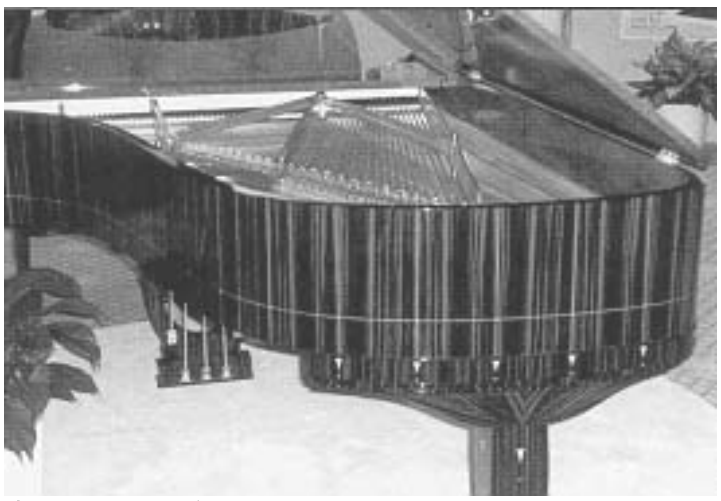


Photo 4 — Art-case Steinway B designed by Frank Pollaro.

Photo 5 — Specialty-case Schimmel grand.

Speaking of specialty cases, Schimmel displayed one of the most unusual piano cases I've ever seen. Perhaps the style could be called "early playroom." (see photo)

Other Things of Interest

While walking from one piano area to another, I noticed the Sensaphonics display. These are the folks who make hearing protection for rock musicians and others. They make everything from in-the-ear monitors like you see James Taylor wearing in performances, to custom-molded musicians' ear plugs, to inexpensive, one-size-fits-all high-fidelity ear plugs. It was these last that caught my eye, and I bought a pair. I think most of us are aware by now that the best way to go when protecting our ears while tuning is the custom-molded ear plugs you can get through audiologists and hearing aid specialists. But at $150 and up per pair, the cost can be daunting. I suggest that these inexpensive hi-fi plugs (model ER-20) are a

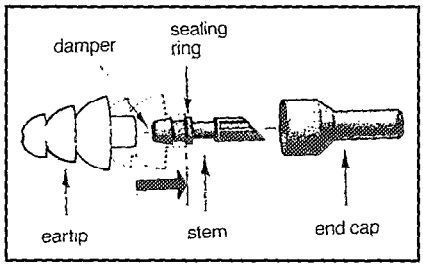
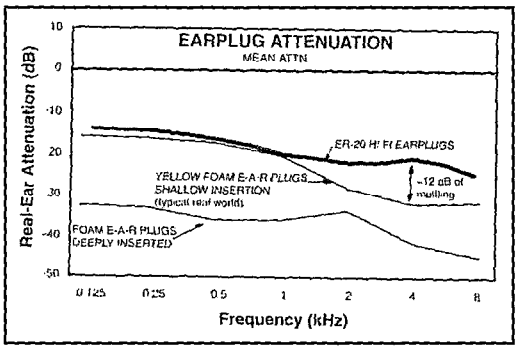


Figure 1



good second-best option, selling for only $15. (See Figure 1).

The average attenuation with the ER-20 plugs is 20 dB, as opposed to the 15 dB attenuation with the custom-fit plugs. Relative to regular foam earplugs, the ER-20 plugs are a real improvement in terms of letting us hear what we need to hear while tuning (especially in the high treble), and yet still protecting our hearing (see chart). Sensaphonics Hearing Conservation may be reached at 312-432-1714, or at www.sensaphonics.com on the Internet.

The 7/8-size piano keyboard mentioned as an option on Story & Clark model 4400 studio uprights is the product of a unique partnership between American

Photo 6 — David Steinbuhler, left, and Christopher Donison holding 7/8 keyboard.

manufacturer David Steinbuhler and Canadian pianist Christopher Donison. Seen in photo 6 with their keyboard, Donison and Steinbuhler hope to see the 7/8 keyboard become a standard size available to people with smaller hands, like Donison's. Their feeling is that most people's hands are actually too small for the standard four-foot keyboard. In creating the "D.S. Standard" keyboard, the team encountered and solved a number of problems caused by the extreme key flare necessary to connect the narrower key heads with standard-spaced strings. I hope to be able in the near future to run an article describing in detail how this new keyboard option came to be. Steinbuhler may be reached at (814) 827-0296, and Donison at (905) 468-3855.

Dampp-Chaser CEO Bob Mair and his team have been busy developing new tools to aid the technician in selling this all-important technology to piano owners. A new free video and a glossy, 12-page color brochure are now available to technicians for use with clients. The brochure includes quotes from six piano manufacturers about the importance of humidity control in general and the efficacy of the Dampp-Chaser System, followed by several pages explaining in words and pictures why this is so, and how the system works.

Mair also reports that the low-water warning light has been replaced by a new "light panel" with three lights. A green light indicates that there is power to the humidistat, a yellow light indicates that water in the humidifier tank is low, and a red light indicates (if the system is equipped with a "smart heater bar" that the pads have deteriorated and are no longer wicking water. Dampp-Chaser also offers an electronic thermometer-hygrometer (see figure 2) which Mair says is more accurate (+ or - 3 percent throughout its range) than competitors' products in the same price range ($32 for the Dampp-Chaser model).

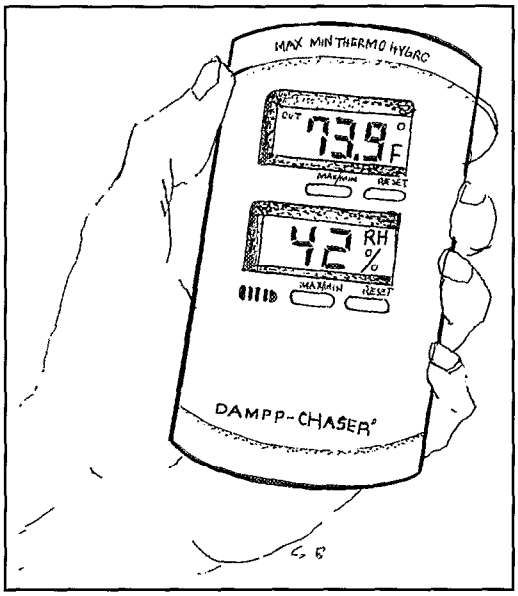


Figure 2

All in all, it was an exciting NAMM show. I came away feeling that the piano industry is still very much alive, and that creative minds are still turning their attention to the basic musical instrument.

The Pneumatic Bridge Press — Part III

Translator Cauls and Duckboards

By Clair Davies, RPT
Bluegrass, Kentucky Chapter

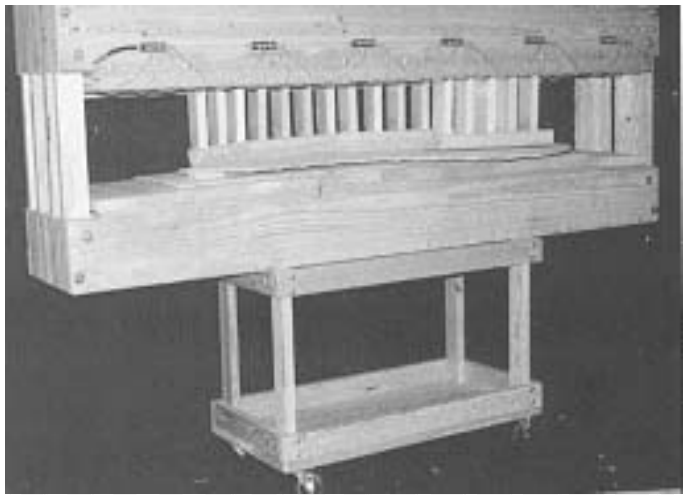


Photo 1 — Pneumatic bridge press loaded with soundboard and bridge, showing translator cauls.

LAST MONTH I SAID SOMETHING about the importance of being offered the right word at the right time, and the lasting effect one person can have on another. I'm aware that the right word for some is definitely the wrong word for others, and that many *Journal* subscribers aren't at all interested in reading about pneumatic presses. I'm also aware that here and there raging fires of enthusiasm are being ignited.

This is why the *Journal* works so well. It gets the word out and leaves the readers to decide whether it's the right word and the right time for them. The appropriateness of information exchange can be a very sticky issue between individuals. I missed the boat years ago when I tried to teach my father to tune. It was an example of the wrong word at the wrong time.

Pop's attention was wandering all over the place. A frown creased his brow and his lips were tight. While I talked he swore at the cobwebs inside our old upright and impatiently wiped at them with his hand. I had been trying to show him about the beats in a unison and how to change their speed with a nudge of the tuning hammer, but he just wasn't with me.

"Oh, that looks easy. I think I could do that," said a voice from behind us. It was my mother.

That was the end of it. I scolded Mom a little for chiming in like that, but it was too late. Musical stuff was Mom's bailiwick and Pop wasn't going to embarrass himself by trying to compete with her. Like a man escaping the hounds of hell, he hustled off to get the vacuum cleaner. I gave up and put my tools away. End of lesson.

Regretfully, I didn't offer to teach my mother to tune. She was the one who deserved the attention. Stupid me. She could've done it. She had the head, the hands and the chutzpah. That's long past, but the thing that interests me now is that she knew she could do it even before she tried. Why was that?

It was intuition talking. My mother had always worked with her hands. Such mundane endeavors as running a household, cooking, sewing and making her own clothes had given her a lifetime's experience of coping with what could be seen as purely mechanical challenges. Whereas Pop was into organization and order, Mom was an expert at making things fit together and work right. Intuitively, it was a small leap from installing a zipper to wiggling a tuning hammer. Dress mechanic to piano mechanic. Why not?

In just the same way, I went from making small tools and jigs in the shop to soundboard installation and pneumatic press building. None of it, from a tiny project to a large one, is any more than solving a string of simple mechanical problems, one at a time. As problem solving experience grows so does your intuition and self-confidence. You become a pretty good predictor of what you can do. You know when you're ready for bigger things.

These articles on pneumatic press building, as I've said, will seem impossibly esoteric to many, or perhaps most, of the readers of this magazine. To the few, however, who sense that they're

primed and ready for soundboard work, this information will be just what they've been waiting for.

Translator Cauls

The translator cauls are the key element in the bridge press. They are what make the thing work. The top piece of each caul contacts four square inches of hose, which, when inflated to 100 psi, loads the caul with a total four-hundred pounds of force. This pressure is transmitted down to the bottom surface of the caul, whose area is also four square inches. The bottom of the caul can be oriented parallel to the bridge, so the four-hundred pounds is distributed along it, approximately one-hundred pounds pushing down on each square inch.

Making both the top and the bottom of the caul the same area simplifies calculations, allowing whatever pressure is applied to the bridge to be measured and verified by means of the compressor gauge.

Note: The drawing of the translator caul indicates that the middle piece is eight-inches in height. This is true only of the middle two pairs of cauls. Because of the curve of the press bed (see photo), every two pairs of cauls progressing outward from the center must add one-eighth inch in height. The cauls on each end consequently will have middle pieces that are eight and three-quarters inches tall. Four extra cauls are made for the bass bridge and are shorter by an inch than the caul in the drawing. The bass cauls must be shimmed according to the contours of the specific bridge (see photo).

Photo 2 — Showing crown in lower deck.

Duckboards

To give support to the soundboard, "duckboards" must be placed between the ribs. They should be as thick as, or thicker than, the thickest rib and about 3-1/2" wide. The crown of the soundboard is so slight over this short span that it's not necessary to contour the duckboards in any way. A good many should be kept on hand, of many different lengths, so that the space between ribs can be well filled up. Custom fitting a duckboard over a soundboard button is done with a one-inch Forstner bit.

The duckboards are put in place with the soundboard out of the press upside down. A piece of quarter-inch plywood is then nailed to the duckboards to keep them in place when loading the soundboard into the press. The duckboard unit is turned over and put in first (see photo), then the soundboard, right side up.

The purpose of the soundboard buttons and screws at the ends of the long bridge are for holding it in position while pressure is applied. For this reason, the bridge must be spread with glue and put on the soundboard with the buttons and screws before the whole thing can be put into the press.

In dealing with glue squeeze-out, I do the same as I do with the ribs. With wet paper towels I wipe the wet glue off just as soon as I get the pressure on. If this seems impossibly heretical, consider that plenty of moisture is already being put into the wood by the glue itself. A little more water from the paper towels does no harm, because once the pressure is put on the joint it immediately seizes and no amount of movement can possibly take place. Washing the excess glue off is obviously a lot easier than chipping it off later after it has dried, and it has no measurable effect on crown.

Photo 3 — Shimming and jigging the bass bridge.

Building the pneumatic bridge press is a great deal of work for one small gluing operation. Yet, once built, the press makes a quick and easy job of putting on a bridge, and, most important of all, leaves no doubt regarding the quality of the joint being made.

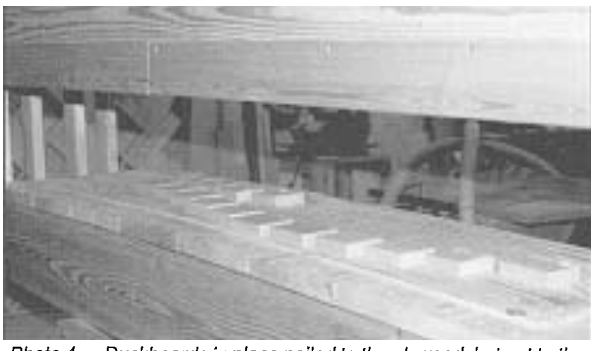


Photo 4 — Duckboards in place nailed to the plywood, but not to the deck.

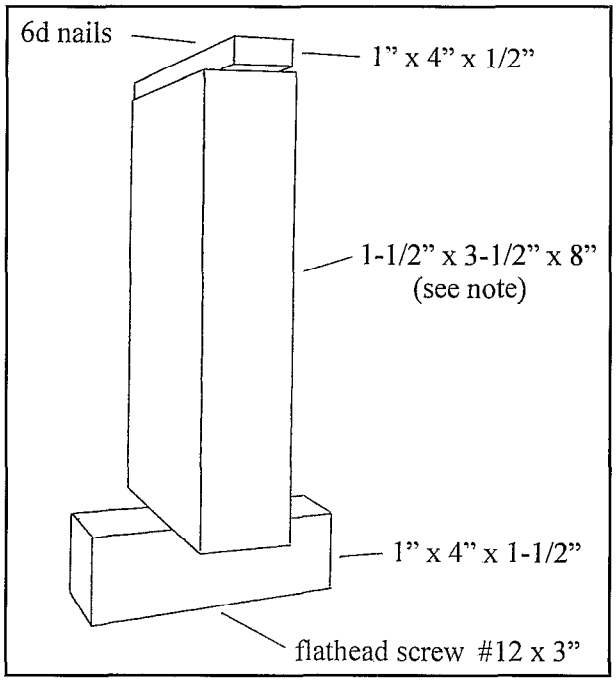


Figure 1 — Translator Caul

World-Class JUNK

How I Dealt With Two Brash Grands
(and other rough voicing procedures)

By Susan Kline, RPT
Feature Writer

These two terms are seldom found in the same sentence, or even on the same page:

- Voicing
- Piano-Shaped-Objects (PSO's)

Yet voicing is used to improve tone and make it even from note to note. Which pianos have the worst and most uneven tone? World Class Junk!

Grief Preventive

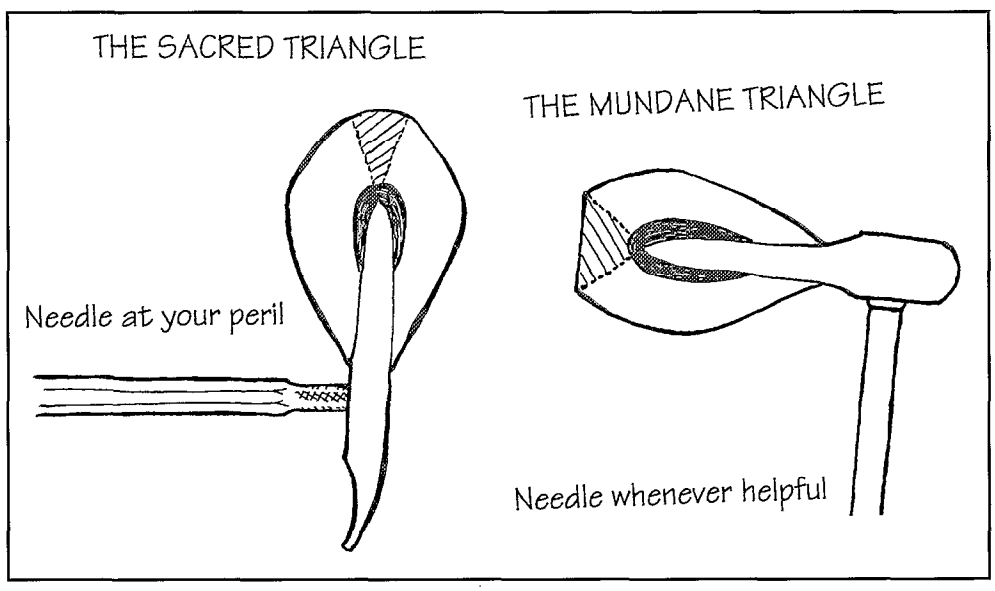
Before any changes of voicing are even described, a critical point must be discussed: pianos are played by people. We are paid by people, and the reason they pay us is that they think we will increase their enjoyment of their pianos. People have varied preferences, and sometimes their tastes in tonal color are unbelievably extreme. Your "horrid, nasty tin can!" may be their "fun, bright, cheerful." Your "muffled, dumb, dead" may be their "mellow, warm, calming." I can say, "talk to them," but what I should say is, "listen to them!" Find out who actually plays the piano. I mention voicing possibilities to them, and then try really hard to find out how they feel about piano tone. I start voicing procedures slowly, a little at a time, and have my customer or customers there beside me, listening and judging. If two people use the piano, and have vastly different tonal ideals, I don't even attempt voicing until they reach some kind of agreement.

Triangles

When I was first learning to work on pianos, voicing seemed a very laborious, time consuming, and often frustrating process. Back in those days, we were told about the "sacred triangle" of felt just under the strike point that must never be touched. We were told that we could turn a set of hammers to mush in no time at all if we got off the shoulders and up into that crucial area. If the chopstick voicing tool had been invented, it hadn't appeared in my universe; and steaming was something you did to vegetables. Sugar coating was found on breakfast cereals, the kind you weren't supposed to eat.

If "voicing" is a process done to fresh hammers on good grands to provide an even gradation of density in the felt, allowing for an even and dependable variety of tone at different dynamic levels, this article is not about "voicing." These are rough techniques, for pianos in rough shape.

I propose that miserable pianos which are emphatically loud, metallic, and percussive have a "mundane triangle" instead of a sacred one. A needle inserted several times, right into the string grooves, will change matters for the better in quick time. We are talking about worn hammers, packed in by decades of pounding, with strike "points" at least 1/2" long. Endless needling in the shoulders of hammers this worn out will make your life dull, tedious, and fatiguing, with little benefit. Therefore, on such



hammers, I needle only in the "mundane triangle" and avoid anywhere else, turning the customary "sacred triangle" advice inside out.

Where & Why to Start

The small efforts matter. Improving pianos is largely a process of piling one detail on top of another. Individually, these steps may seem tiny, but they add up. So, picture someone without any voicing experience who wishes to learn voicing on their almost-daily dose of "humble" pianos. (Purely hypothetical: of course we all know how to voice.)

How to start? (Hypothetical instructions:) Start small. Check for evenness near the break. On short pianos this is usually bad. Pick the very loudest and most glaringly obnoxious note, possibly the first wound string or the first bass string. If none are that much worse than the others, wait for your next small piano. You'll find some really bad notes before long.

When you've found a note that is beyond a doubt aggressively horrid, use a needle in a voicing tool or pin vise (just one needle will do, with about 1/2" showing), and drive it right into one of the string grooves of the offending hammer, at whatever angle you find comfortable. You don't have to bury it to the hilt, but put it a good long way in. Support the hammer with your other hand, and press, don't jab. Miss your fingers, please. On this subject, Joel Rappaport, RPT, of Round Rock, Texas, just wrote me, "However, experienced voicers always carry a Band-Aid with them so when the inevitable happens, they can keep working and not get blood all over the action! Think of it as one of your voicing tools." If you place the needle on the hammer surface and then press, and stay aware of where your fingers are and where the needle may emerge, the inevitable won't happen too often.

Play the note and its neighbors again. You'll hear the difference. If it is still fairly bad, try needling a second groove, and listen again. Stop before the note is quite as soft as its neighbors.

Time elapsed was probably about 30 seconds, and a note like a sore thumb, left untouched by several decades of piano tuners (on a piano like this that would be three or four of them) is now a mannerly good citizen (as far as any of the notes are.) If one limits oneself to just the worst few notes on particularly offensive pianos, and tries only to even things up, not to change the tone of whole sections, one probably won't incur the wrath of the player. Some people may like bright pianos and some may like mellow pianos, but I don't recall meeting anyone who liked uneven notes in pianos.

Refinements

On most of the pianos which feel at home in this column, one needle in one groove will work all right. However, if you find yourself trying this on a piano which actually has some clarity of tone, you may find that the imbalance between the voicing of one string and the other(s) may give you some strange sounds. In this case, try needling a little shallower, in all the string grooves. Use two pricks at the front and back of the grooves if the string marks are very long. If you enjoy refinements, you can mute off the strings so that you hear them one at a time, and voice the loudest one more than the others.

After getting the habit of doing this to your true junk, you may find yourself bothered by uneven notes in your medium-good pianos. You can use the same approach, but don't go as far into the hammer, and try to go straight in so the felt isn't shredded if the hammer gets needled several times over the years.

For modestly worn uprights, filing the hammers to return to a proper oval contour is in order. Then there are the basket cases, with hammers worn flat over a third of the way to the molding. If they are filed, the weight will be so reduced that the filing may well do more harm than good. In the high treble, any filing will remove the last felt, leaving the bare wooden molding to hit the string. By the time hammers are this worn, any available money and time is probably better spent fixing things, rough voicing, repinning wobbly hammers, quieting noises, etc., rather than filing hammers back to an oval. If you feel that the long strike area simply must be reduced, it is possible to file the corners of the hammer, reducing the strike area while removing as little felt as possible.

High Jinks

On some pianos this worn out, some high treble notes may have no tone at all, just a dull knock. As the hammer gets worn, the felt at the strike area, never very thick, wears

Continued on Next Page

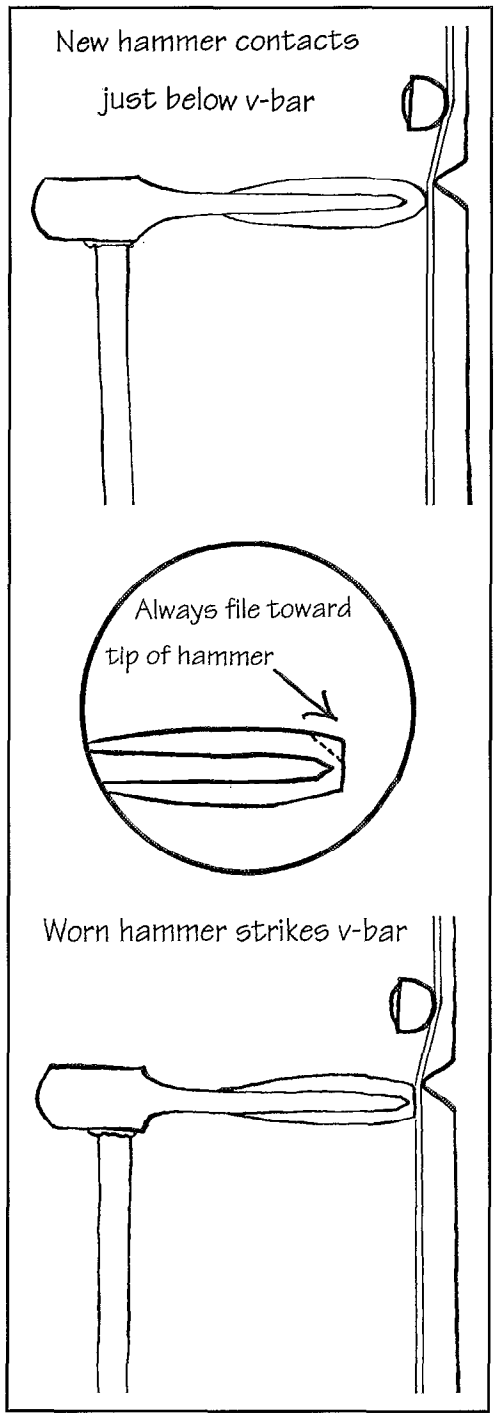


Figure 2 — New treble hammer with string and v-bar; old treble hammer with string and v-bar; close-up of hammer tip.

World-Class Junk

Continued from Previous Page

back towards the molding. Since the hammer hits the string extremely close to the v-bar, the shoulder of the shortened hammer hits the v-bar instead of the string. It is sometimes possible, by filing off a small wedge of felt on the upper edge, to allow the middle of the hammer to contact the string again, and some tone returns. (see illustration) I don't promise that it will be good tone, mind you.

■ ■ ■

When asked to make a piano less loud, harsh, or bangy, one can take several approaches, depending on the amount of change desired.

Sugar Coat Them

Use a needle right on each string mark of every note, but only go about 1/4" into the hammer. This is fast because no evaluation is needed. Just do them all. Then recheck and do a little more on the loudest notes. The pianist should be informed that this treatment is superficial, and usually will need repeating before too long. On the other hand, it is not too likely to ruin hammers, since only the top layers of felt are touched.

The chopstick voicing tool I mentioned earlier is a sugar-coating device, since the needle is very short. (Officially, it's the Hart Voicing Tool, available from Pianotek.) It is used on grand hammers, but only for selected notes. I wouldn't use it for every note, since it would be easier to pull the action and use the ordinary voicing tool. The whole point of the chopstick tool is that one can voice just a few notes on a grand without removing the action, by going right in between the strings. As such, it is more for use right before concerts than on tiny "junk" grands, but it does work both places. It will even up the voicing on the lesser breeds as well as on the nine-foot beauties.

Steam Them

Use steam when you really want to make a piano a lot softer fast! Be sure you (and your customer!) want it very much softer, because it is harder to reverse than sugar-coating. Steaming is good for hard, highly lacquered, very bright sounding hammers on Asian pianos. It will not be as effective on pianos where the hammers are fairly soft already.

One uses an electric kettle, with a wide enough spout for the hammer to be surrounded by steam. It is a quick process, and has to be. With some water (not a lot) boiling away in the kettle, swing the hammer head in and out, without letting it sit in the steam at all. Doing a whole action should only take about 15 minutes. The hammers dry very quickly, but the hammer felt at the strike point will need a quick filing to even it up again, since the felt swells a little unevenly.

I really like this method. Some people use Downy™ fabric softener to do the same thing, but steam adds nothing to the hammer. The moist heat reconditions the

Grommets Revisited

In the January, 1998, *Journal* I talked about how to remove square grommets from a drop action with a wrench socket and an Allen key with a handle. I solicited other methods, especially using power tools.

The words were hardly out of my mouth when I got a call from Alan Hoeckelman, RPT, of St. Charles, Mo. We had a fine chat, and he had several good suggestions. First of all, my socket was too short to reach all the way down to the grommet in some cases, while still using the Allen key to drive it. If one goes to a store like Sears, one can buy "deep sockets" which will be amply long.

Secondly, if one chooses a 1/4" drive socket where the "business end" (the hex end) has an outside diameter of less than 3/8", one can put it in a cordless drill (preferably reversible and variable speed) and use power.

Thirdly, he devised a system using the deep socket 1/4" driver, with a piece of Allen key epoxied into the "hex" end. The protruding Allen key will fit the power drill three-sided chuck perfectly. I welcomed such good ideas.

Then a few days later, I got a letter from Steve Lehr, of Bellevue, Neb. It was dated Dec. 30, 1997, one day earlier than the phone call. I would say that for promptness Steve and Alan scored a tie.

Steve pointed out that in the Schaff tool catalog, page 11, one can find a perfectly good tool designed to deal with square grommets. It is No. 60, "Kimball Lost Motion Regulator — A specialty tool regulating the special button on Kimball drop actions. 6" long, chrome plated." He also grabbed a cordless drill to hold the tool. The black rubber shattered into a zillion pieces, and the nuts spun off in seconds, though they tended to get stuck in the tool. They were easily removed with the pointed end of a regulating tool. Putting on the new grommets, he started them by hand, a section at a time, then spun them on with the drill very quickly. He found that by adjusting one for proper lost motion and spinning the others down till the back checks lined up with the sample, he could get them into rough adjustment very easily, so they only needed a turn or so for regulation later.

Kimball lost motion tool.

Then, at the opposite end of the timing spectrum, I just today got an e-mail from Guy Nichols, RPT, of Las Cruces, N.M. He has yet another approach using a power drill and a tool most of us already own:

"On the subject of removing the silly grommets, I use the hammer shank reducer-cleaner thingy that has three teeth, threaded on the outside, with a nut to change the inside dimension. I remove the nut, and spread the teeth a little, and chuck it up in my trusty Makita. I reach through from underneath with the needle-nose, and ... zip! They're off. It can chew 'em up a little, but ... hey, they're goners anyway, right?"

So, thanks to all of you. I will never turn off old grommets by hand again.

wool and puts resilience back into it, so there is more air in between the fibers. It can be done over and over without tearing or gumming up or filing away the felt. This would probably only be needed on practice pianos in heavy use.

Squeeze Them

For this process, one squeezes the shoulders of hard hammers with small pliers, from the sides, at the widest place. For this plier voicing, I'm quoting Bill Simon, of Phoenix, Ariz. You see, I've never tried it, but other people have had very good results, and described them on the pianotech e-mail list, from which this quote comes.

Bill Simon's post: "In my humble opinion, two minutes of plier voicing, which uses gas burner pliers or small Vise-Grips™ pliers to squeeze the shoulder areas of hammers that is normally needled in voicing, can make a huge improvement in tone, especially to Jesse French spinets, Winter spinets, and 1910 big old uprights with rock hard hammers. I use the technique on perhaps four or five pianos a year and never charge for it because an entire set of hammers can be treated in less than three minutes. I am not suggesting that one go tone-regulate a Steinway concert grand this way – but ***why not?*** – It is/was a technique very heavily used decades ago, but has become unfashionable now. I would love to hear technical reasons for its demise!

"I ***know*** that one is supposed to sell a new set of imported hammers and a $200 voicing job on these PSO's, but that is unrealistic. By the way, the plier voicing holds for about six months to a year."

So, if the will is there, one can use many methods to improve the sound of bad pianos, ranging from a 30-second needling to a full transformation with steam or pliers. After gaining a little experience, it becomes second nature to reach for the needle when one hears several notes in the low tenor sticking out like sore thumbs. What no voicing method can accomplish is to produce tone that was never there in the first place. Don't promise what you can't deliver. Keep expectations low, and sometimes, but by no means always, people may be pleasantly surprised.

Coda

But, you say, I haven't talked about the two brash grands in the title? These were very short American grands, about 50 years old. Both customers complained about the loud and nasty tone. The trick is, I didn't voice them at all. On the first one, I tried needling a note or two, and discovered that the hammers were soft to begin with, even though the piano sounded tinny, and very loud. The needling had made no change in the tone at all.

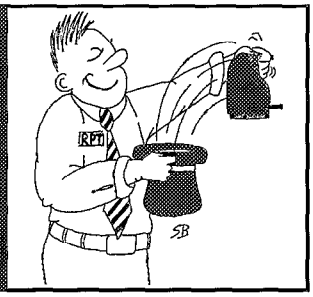
I started to think. The woolen string covers on several of my customers' good grands take the bright edge off of the tone in addition to keeping the strings clean and protected from rust. I asked my customer if she had a shawl or light blanket made of pure wool, and warned her that synthetic fabrics would hold moisture against the strings. She had a shawl. We spread it over the string area, all the way from the tuning pins to the rim. (It wasn't very far!) I also warned her to check underneath it once in a while: I have once found that a mouse enjoyed lurking under a string cover. The second piano was identical, except that the owner had a light woolen blanket instead of a shawl.

I love the cost of this technique: $0.00. I love how long it takes: 30 seconds. I also love how instantly reversible it is.

The nasty tin-can sounds disappeared instantly, to the great satisfaction of both owners.

Grand Illusions ...

The Page for Serious Cases



Snap to It!

By Doug McKay

I've noticed that lately we've hardly sold any wooden replacement spinet elbows because even the finest craftsmen are using the snap-on kind. Well, I know a trend when I see one, so Valley Hi is now the first company to offer a complete line of snap-on hammer heads, shanks, flanges, keytops, backchecks and key bushings.

Ultimately, we hope that Stencil & Sons will come out with a complete snap-on piano. Then you can show up at the service call with hardly any tools at all.

■ ■ ■

I'm getting very tired of hearing piano salesmen dump on plastic parts. Those old plastic parts – ones that crumbled or turned into a gummy mess – have nothing to compare with today's hi-tech polymers. For example, the next time you see Joe Mehaffey, take a look at his head. I defy anyone to tell where the fake hairs ends and the real hair begins.

■ ■ ■

We've started a line of piano accessories that attach discreetly to the bottom of the keyboard. We've got ashtrays, cupholders, a little electronic fan, coin holders, solid room refresheners and cordless phones in a wide range of colors. ✓

Valley Hi – where Quality isn't just a Motto – It's a Slogan

The Space Hammer

Why use an ordinary tuning hammer when you can use the Mehaffey Space Hammer? NASA scientists spent millions of tax dollars developing a hammer that works at any angle in zero gravity. (They scrapped the project when they realized that you can't play the piano while wearing a space suit.) NASA was billing $11,000 for these, but we're offering they for *only $175!* So use the hammer that the astronauts would use, if they only knew how! ✓

TOONERTRONICS.

A DIVISION OF THE STENCIL GROUP.

We're a Lot Smarter than You Are

Oops!

In Rochester, New York, this past April, one of our pianos exploded and burned a house down.

That's one piano. Out of over 500,000 we've sold, only one has burned down a house. That's a 99.9 percent success rate, and we're darn proud of it.

Still, we think we owe you an explanation.

Our workers get sleepy in the late afternoon; they're only human. If you look across the factory floor, you can see their heads bobbing up and down over their work.

Phil, our shank bender, gets especially sleepy. Occasionally he sets an action on fire. We thought that we had put out all the fires. Apparently, one was still smoldering.

We're pretty sure this won't happen again. Just to be safe, though, we're recalling all pianos made after 3 p.m. How do you know when your piano was made? First, put on a welding mask. Then, s-l-o-w-l-y open the lid. If you smell smoke, don't take any chances. Call our toll-free number and we'll send our boys over right away.

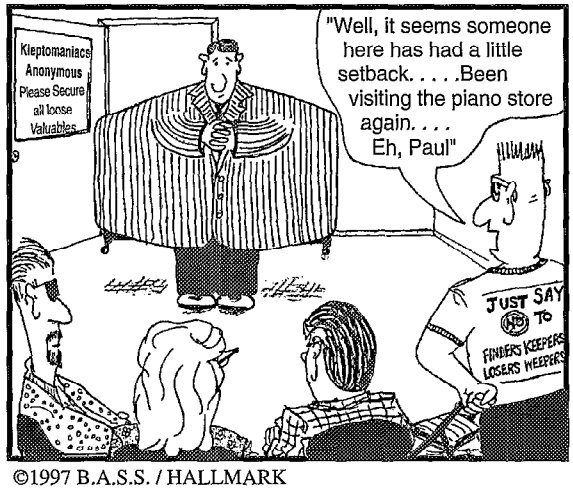
Quality and service. To us, it means not burning your house down.

— The Stencil Group ✓

Doug McKay may be reached c/o Mark Stivers, RPT, Sacramento Valley, CA Chapter

PIANOMAN Adventures

by Alan Hallmark



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

Friday's Super Seven

By Evelyn Smith
Institute Director

On Friday at the Providence Institute, we're offering a new format of classes to give you what you asked for – longer classes to explore some topics in more depth. We'll feature a group of five classes, each lasting all afternoon on Friday, taught by some of the best instructors in our profession.

In addition, there'll be two other classes: a 4-hour class by CPA and tax specialist Murray Bradford, *Tax Strategies for the Piano Technician.* Also, professor Bruce Hoadley will present *Understanding Wood,* an introduction to wood technology, 1:30-3 p.m., and repeated 3:30-5 p.m. (See descriptions for both of these classes in the March *Journal*)

Check out the wide range of other topics you can choose from in the lineup of "Super Seven" classes:

- ***Steve Brady and Judith Cohen, Between Artist and Technician –*** Taught by the husband/wife team of Steve and concert pianist Judith, this class deals with the communication between the piano technician and the pianist. The first half of the class includes a live demonstration, and the second half will feature a panel of pianists and concert piano technicians.
- ***Jim Coleman, Sr., Advanced Tuning –*** In this class designed to enlighten any experienced tuner, Jim will cover such diverse topics as bass tuning options, the pure fifths temperament tuning, the difference between melodic and harmonic octaves, stretch variation controls, and the "all-purpose temperament."
- ***Del Fandrich, Piano Anatomy –*** "Piano Anatomy," a new class designed by Del specifically for the Providence Institute, will consider the construction of the piano from start to finish. Del will cover every aspect of piano building from a design and performance standpoint, including what factors make the piano sound the way it does.
- ***Chris Robinson, The Belly of the Beast –*** This new class from Chris covers the inter-relatedness of the rim, frame, pinblock assembly, and soundboard and bridge, and how they all work together to produce tone. He will examine both the theoretical and practical angles of how one part of the assembly affects another, and why it is a mistake to isolate individual parts of the whole structure.
- ***Isaac Sadigursky, Everyday Piano Service –*** A one-day seminar discussion will be presented in only three hours – 400 slides showing repair equipment and parts well-organized in a traveling shop on wheels. Isaac promises to cover unusual repairs, tricks, tools, shop supplies, organization, and even a few Russian jokes.

All of the Friday afternoon "Super Seven" are included in the cost of registration, except for Murray Bradford's 4-hour tax class ($70 additional fee). ◇

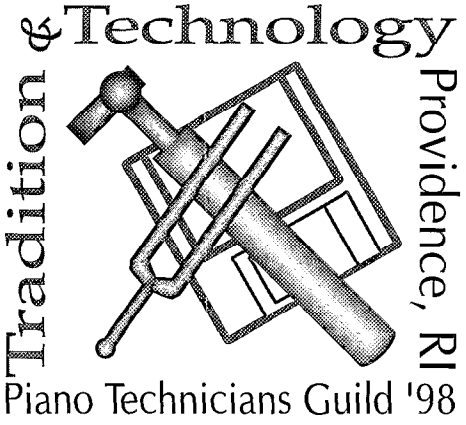
CONVENTION
PROVIDENCE, R.I.

Temperament Festival in Providence

Sunday morning will be a special treat at the 1998 Providence PTG Convention. For the first time, Skip Becker and his troupe of musical tuners will present the "Temperament Festival."

A presentation of historical temperaments will kick off the event, followed by a brief history of tuning, and some nifty demonstrations including aural musical temperament construction (Karen Hudson-Brown), and the overtone series. Next, an innovative demonstration of the principles of harmony *á la* Larry Crabb and a barbershop quartet. Paul Bailey and Bill Bremmer will each be presenting temperaments of their own devise. We'll also be listening to extant recordings of ensembles with historical tunings on the piano (there's always that question of whether it goes with other instruments?), and David Lamoreaux will share his studio experiences.

We're also having a competition, in which the audience will be able to vote their temperamental preferences. All in all, we're planning on using five pianos (that is to say five temperaments). Owen Jorgensen will discuss what to listen for, and during the course of the sessions we'll have two preliminary heats of three pianos each, followed by the big "temp-off" finale (heat winners).



Of course, this is an overly ambitious project – but then condensing the World of Musical Tuning into two 1.5 hour sessions is impossible to begin with. That particular ten gallons of milk just won't fit into two quarts. But rest assured, we'll be presenting nothing but the cream.

Warning: This presentation will contain pure musical intervals which may be habit-forming. ◇

Professional Hearing Tests, Ear Plugs Available in Providence

Laura Kunsky, RPT
Assistant Institute Director

Dr. Jay Singer, Chairman of the Department of Communicative Disorders, University of Rhode Island and his department, will be providing interested technicians with hearing tests and the opportunity to order custom ear plugs at our Annual Institute in Providence. Dr. Singer is interested in doing a study of piano technicians if a reasonable number of technicians participate.

Hearing tests will be given at the Convention Center as well as at an off-site location (three short blocks, less than five minutes) from the Convention Center at a URI facility. Only tests given at the URI facility will be candidates for any clinical study, as the testing must be highly controlled. Testing at URI will cost $25 and will include an intake history, air conduction and bone conduction tests, tympanometry and other acoustic reflexes (these provide information about how the middle ear functions), as well as two or more tests in speech audiometry, i.e., speech reception threshold and speech recognition. After the tests are concluded you will talk to a counselor who will explain the results, the implications of the results and recommendations based on your results. This procedure should take about half an hour.

A variety of ear plugs (that should last virtually forever) will be available for $45. Payment will be taken, molds of your ears will be made and the finished ear plugs will be mailed to your home. This is an amazing deal! I paid over $300 for testing and earplugs in my home town, and the tests weren't nearly as thorough. It's nice to know that our auditory health is important to the scientific community as well as to us!

On site, at the Convention Center, testing will be offered on Thursday only. This testing will cost $8 and will include a tympanogram (examines the health of the ear drum and middle ear) and air conduction (determines the amount of hearing loss that already exists). This on-site location will need no reservations. The hours and room number will be announced in Providence.

Payment for these services will be made to the URI employees at the time of the testing. Appointments for the off site tests can be made at the PTG Registration Desk and maps to the URI facility will be available. Please plan to take advantage of this opportunity. We all need to take steps to protect our hearing as well as be informed about its present condition. ◇

Connecticut – Before or After Convention

By Vivian Brooks, RPT

Take time to connect in Connecticut! Before or after attending the Piano Technicians Guild 41st Annual Technical Institute and Convention, allow some time to explore the third smallest state – albeit three times as large as Rhode Island. Within 45 minutes of Providence you can immerse yourself in the history of whaling and shipping industries with a visit to Mystic Seaport, a living, working museum. See the newest, largest gambling casinos in the world tucked into the woods in rural Ledyard and nearby Uncasville.

Southeastern Connecticut has many charms. Among them is Stonington, a tranquil village next door to Mystic. It offers great antique shopping and the last commercial fishing fleet in the state. Nearby Groton is home to the U.S. Submarine Base on the Thames River. They offer tours of the world's first nuclear submarine.

Sights to delight include:

Coast Guard Academy, New London, CT, 860-444-8611 – free admission; The Eagle, the academy's principal attraction, is a full-rigged sailing vessel and can be boarded on a limited basis – call first.

Foxwoods, 860-885-3000. Built in 1992, Foxwoods is nothing-less-than astonishing. The Mashantucket Pequot tribe expanded virtually overnight the tribal bingo parlor into a full-fledged casino and hotel. Offering classy – glitz but not quite with all the plastic and sequins of Las Vegas, there is far more than just the games here. Offering shopping, theaters – live and IMAX-style, and Cinetropolis a creation of wonder to occupy underage kids, and more.

Mohegan Sun Casino, Uncasville, CT, 888-226-7711 The smaller and newest of the two casinos, owned by the Mohegan Indians, offers games, nightclub entertaining and a wide selection of restaurants.

Mystic Marinelife Aquarium, 860-572-5955 (Admission $10.50 adults, $9.50 seniors, $7 children) Dolphin and whale shows are shown regularly – 15 minutes in duration – they hold the attention of even the most impatient. The exhibits in "natural-like" settings are most enjoyable and include a host of mammals along with sea lions and a flock of African black-footed penguins. A delight for children of all ages.

Mystic Seaport, 860-572-0711 (Admission $16 adults, $8 children (6-15)). This evocative museum village encompasses an entire waterfront settlement with more than 60 buildings on a 17-acre peninsula that juts into the Mystic River.

Olde Mystick Village, 860-536-4941. Shopping housed in buildings that resemble a colonial village; featuring more than 60 shops and restaurants.

Submarine Force Museum, Groton, CT, 800-343-0079 – fee admission.

So, be your fancy beaches, fishing, sailing, shopping, museums, or gambling, come to Connecticut! ◇

"Something For Everyone"

By Beverly Kim, RPT
Special To The Institute Committee

Each year, we move from simply being piano technicians to suddenly becoming ambassadors for our chapters and geographic regions. It is the common interest in pianos that brings hundreds of people from around the world together, yet it is each person's individuality that allows these interactions to *enrich our lives.*

At each Annual Convention, a commitment is made to provide a positive learning experience for all attendees. This year our convention is a creative mix of classes which will appeal to the broadest cross section of piano technicians. The innovative scheduling of educational and social events will create an environment in which everyone who attends will feel welcome and engaged at some level. There will also be numerous opportunities to meet people from backgrounds much different than our own. And from these situations we will have the chance to hear some new voices and to learn about how other people manage some of the challenges that we share.

Although we may not be Olympic athletes, we are truly "citizens of the world." What does that mean? What responsibilities and benefits do we share? Through the exchange of different experiences and perspectives, we can compare, contrast and ultimately build a context for our own experiences. Perhaps we re-evaluate the way we've done things in the past and maybe we ultimately change our attitudes, behaviors and skills. So, come along and treat yourself to some new learning opportunities that will be both stimulating and enjoyable. ◇

Industry News

Young Chang & Kurzweil Moving HQ

Young Chang America, Inc., owner of the Young Chang and Kurzweil brands, is moving their corporate headquarters from Cerritos, California to Lakewood, Washington. "The move will commence in late February (shortly after NAMM 1998) and is expected to be completed by early March," announced James Kwon, YCA President. "There will be very little interruption in day-to-day business and dealer services. This has been planned for some time as part of our reorganization and growth program. We look forward to a smooth transition with little business interruption. This move will not affect YCRDI in Massachusetts or our Tacoma Guitar operations."

Tom Miller, VP of Young Acoustic and Kurzweil Digital Pianos, adds that "We will have parts, service, credit, shipping, customer support and all other Kurzweil & Young Chang departments up and running almost immediately."

The new address will be: 9501 Lakewood Dr. S.W., Lakewood, Washington. The mailing address will be P.O. Box 99995, Lakewood, Washington 98499-0995, phone (253)589-3200.

Helen Small Named Executive Director of APA

Helen Huff Small, who has a long and distinguished career in arts administration and development, has been named the Executive Director of the American Pianists Association (APA). She succeeds Janet Rost, who has retired after heading the organization for 10 years.

In announcing the appointment, Christel DeHaan, President of APA's Board of Directors, said, "We are absolutely delighted to have Helen come on board, and are confident that her strengths and expertise in the not-for-profit sector will benefit the APA tremendously and will propel the organization to even greater achievements."

Small has worked for 16 years in creating, planning, and organizing projects in the not-for-profit sector. Most recently, she was director of development for the Indiana Literacy Foundation; in that capacity, she fostered creative funding and public relations partnerships for the statewide organization.

She has served in similar development roles, and in the areas of business administration, project management, and/or public relations and marketing, with the Indiana Repertory Theatre; the MacAllister Awards and Festival Opera Theatre; and Cathedral Arts Inc. and the International Violin Competition, all based in Indianapolis.

The American Pianists Association, a national, not-for-profit organization headquartered in Indianapolis, was founded as the Beethoven Foundation

Continued on Next Page

Minding The Mentor

By Lee Santo, RPT
Economic Affairs Committee

Economic News & Views

I remember the first time I met Jim Swayze. He was a short man with large hands, a direct clipped manner of speech, and a mind with the diagnostic ability of a computer. After he had tuned my piano I knew exactly its capabilities, and what could be done to improve it, should I so desire.

Like most piano owners, I thought I had more of an instrument than I actually had, but this man kindly enlightened me to reality. And, I might add, since then I've known many clients believing that like diamonds, pianos are forever.

To get back to Jim, being raised on a farm, his early savvy of putting things together with bailing wire, and later on the sophistication of a formal technical school, worked in harmony with his earlier practical skills. I was so impressed with his obvious wisdom and skill and his enthusiasm for what he did, I was ready to learn more about the instrument I had always loved. Right away he said if I were serious I would go to a school "to do it right" – which I did a year later.

After departing from school, and knowing all the nomenclature but little else, I visited Jim at his workshop. I was amazed to see someone pitch raise a piano in 30 minutes or so; I would spend 45 minutes on the temperament alone. He advised me to go work for a dealer.

We all feel that we want to learn, but sometimes we relish on our confidence and make no effort to speak or listen to someone else, especially if he or she is successful. That is the important point – mingle or make a concerted effort to talk to successful people in the field. Emulate some of their techniques, ask them specific questions about some problem area in your tuning or repairing. How do they do it?

Once, when I had just begun tuning in the field, George Defebaugh came to our Nebraska Chapter and at the end of his lecture I asked him how he ever tuned spinets in the bass notes. He told me to use thirds and by gosh, I could hear the beats. Then Jim told me to hit the high treble note unisons fast and repeatedly to hear the tones. It worked also.

Another time I read in the PTG *Journal* that an RPT had trouble adjusting the drop screws, even after he had regulated the action. They were all the way up, and hit the pinblock when the action was installed. Some suggested remedies for his condition were: leave it alone, change the action cloth/leather on the balancier under the drop screws, install a new set of hammers, and even the most time consuming remedy was to rebore the hammers.

Jim Swayze's diagnosis and remedy was to bolster the knuckles. How accurate and simple indeed.

Also Jim always told me to leave the plate bolts and screws alone, just as in the October issue of the *Journal,* Del Fandrich essentially said the same thing. Another *"don't"* I learned from Jim was to not tighten the damper flange screws on an upright when you regulate it and remove the action, because if you do – let me tell you it might become a nightmare.

Well now, you can't really learn everything about pianos on your own. There are too many variables out there. Be selective to whom you listen, especially in major repairing and regulating. Hopefully, you will one day find a mentor as wise and helpful as my Jim Swayze. ◇

Industry News

Continued from Previous Page

in New York City in 1979 by Victor Borge, Carnegie Hall Manager Julius Bloom, and Anthony Habig, of Indiana-based Kimball International. The organization moved to Indianapolis in 1983, and was later renamed the American Pianists Association.

Samick Breaks The Price Barrier

Samick, the world's largest producer of grand pianos, has introduced two new grand piano models to be produced in their huge Indonesian piano factory.

After the initial shipments of vertical pianos in 1997, it was inevitable that grand pianos would follow. The cost of producing grand pianos in the United States, Europe, Japan and even Korea has risen sharply over the last decade. Samick's new 140 cm and 150 cm grand pianos will in essence roll back the price to levels seen 10 years ago. These pianos are made on exactly the same tooling as used to make the same size pianos in their main grand factory in Korea. Kyo H. Chu, president of Samick Music Corp., states, "These pianos will be high quality, high value and low priced, proving that Samick is still the pacesetter of the world's piano business."

According to piano industry veteran and executive vice president of Samick, Bob Jones, "We have created the greatest profit making line of pianos in the world. With our International series vertical pianos and now grand pianos from our Indonesian facility, coupled with the world class instruments from Korea, we give our dealers the best chance to make the sale to the retail customer."

Sacrament Retailer Hosts Training

Sacramento, CA — Last fall Music Exchange of Sacramento, CA hosted a special Yamaha Disklavier® piano training session for roughly 30 piano technicians from the area. Coordinated by Paul Funston of Music Exchange and Steve Pearson of Yamaha Corporation of America Tech Services, the event featured a catered dinner buffet followed by Pearson's expert instruction on the special maintenance techniques of the digital/acoustic Disklavier.

The Sacramento site is the newest store location for the Music Exchange, which has numerous stores in northern California. ◇

North Carolina Conference Draws Techs from 22 States

By Alan Hallmark, RPT

The North Carolina Regional Conference in Greenville, South Carolina this past October drew dedicated technicians from 40 PTG Chapters in 22 states. The accommodations at the Embassy Suites Hotel provided a beautiful backdrop to the rigorous class schedule which included topics ranging from the basics to advanced technical skills – including an all-day class on building your own soundboard press.

National and regional instructors and major manufacturers and suppliers provided the finest instruction that PTG has to offer. The conference evaluation forms included remarks such as "the best one yet" and "I'll be back" (without the Schwarzenegger accent), when commenting about the 1997 North Carolina Regional Conference.

The 1998 NCRC will be Oct. 22-25, 1998, at the Holiday Inn Select Conference Center in Richmond, Va. Another great line-up of instructors, exhibitors and manufacturers will be on hand to enhance your continuing education as a professional piano technician. Supplemental activities include an All-Day Refinishing Class by Webb Phillips and for the adventurous, a delightful tour of Richmond is planned which will include a luncheon on the riverboat Annabelle Lee. Put October 22-25, 1998 on your calendar schedule and continue your professional education for fun and profit! ◇

Southeast Regional Vice President Michael Travis, RPT, meets with RPT Tom Burge at the PTG booth during the North Carolina Regional Conference this past October.

A Tuning For George

Fund raising is in progress for George Baker, 41, of Belgrade, Montana. He was diagnosed with kidney cancer in August 1997 and had surgery to remove a five-pound tumor. After recovery and a check-up in January, he is now faced with metastasis. The most effective treatment and cure for this type of cancer, High Dose Interleukin-2 therapy, costs in excess of $100,000 and is only available at a few hospitals.

This is a very urgent situation. His best chance for success is with early treatment. Without it, average life expectancy is only about a year. UCLA Medical Center has had the best success, but since George is uninsured, they are requiring most of the money up-front.

George is a PTG member and has worked as a technician and rebuilder for 20 years. He has been married for 22 years and has four children ages 3 to 18: daughter Elizabeth, 18, PTG member and Randy Potter graduate, tunes in the piano store as well as for customers; son Matt, 15, helps move pianos; son Adam, 12, is learning piano and has even sold one; son Joel, 3, is very bright and good with his hands. George is a Scoutmaster, Navy veteran, and active in his church. Many other sources for funds are being explored, but time is critical.

If each PTG member donates the price of a tuning, we would be able to provide George with the life-saving treatment. Please make your contribution payable to: "George Baker Medical Fund." It can be sent to:

Valley Bank, Attn.: Heidi
P.O. Box 106
Belgrade, MT 59714

or

George Baker
30 Reinig Street
Belgrade, MT 59714

If this amount is difficult for you, please send whatever you can. We thank you for sending it as soon as possible.

On behalf of George's family, thank you for your help! ◇

PTG the Foundation Beneficiary

Oh, how glad I am that all this newfangled stuff had not been invented when I was president of PTG. I had just gotten used to dialing the telephone when they came up with push buttons. Now most all communication is done with computers; I'm so confused with hard drive, soft drive, Internet, on-line, in-line, and a myriad of other hard-to-understand phrases and numbers ending with ".com." I did buy an AccuTuner™ a few years ago and can now set up my own tuning program – and sometimes on the first try.

So this message to the *Journal* concerning the Foundation is sent the old fashioned way, typed by my wife and hand delivered by the trusty postman.

Look in Webster's *New Collegiate Dictionary* and you will find that "Foundation" will have several meanings, all the way from "a base on which something stands" to "a preparation for applying Mam'selle's makeup." In the case for PTG, I think that the one that best applies to PTG is "an organization or institution established by endowment with provisions for future maintenance." Our Foundation was first thought of in the early 1980s with a gift of $750 from the disbanded Piano Travelers organization. The idea was then and still is, an entity with the sole purpose of support for PTG. Our funds were to come from our members and friends and anyone else interested in music.

The Foundation has received several gifts from individuals and from manufacturers and suppliers of pianos and parts. Believe me, these gifts are greatly appreciated. The Foundation Press has been most helpful. Those authors and suppliers will long be remembered for their talents and their willingness to give.

Let's face it, brother and sister piano tuners. Are we supporting the Foundation as we should? Some time ago Shorty Wagner died and one of his children called me and wanted to know about memorial gifts for Shorty. I suggested the Foundation. Many people showed their love of Shorty by financial contributions to the Foundation. That is a practice we could and should follow.

Now you really don't have to wait for someone to die to make a contribution. You could make a gift in honor of a living person, or you could just send $100 and become a patron, or a greater amount and become more than a patron.

Let's face it, brother and sister piano tuners. PTG is really the beneficiary of the Foundation.

Loosen Up.

— Ernie Preuitt, RPT
Past PTG President ◇

The Future & the Past in Foundation's Sites

How privileged we are to have had leaders in the past with foresight to start a foundation with the worthy mission of supporting scholarships, grants and the care of PTG history. As the foundation board became more accustomed to how and what our foundation could accomplish for the good of PTG, the ideas began flowing and they are limitless. It takes time to work out the ideas, make assurance that they conform to the bylaws, accept them and put them into practice.

The purpose of the articles you have read in the *Journal* is to make all members aware of the presence of the Foundation and to solicit your support. One of the most difficult tasks facing the Foundation Board is fundraising to support the grants and scholarships that are presently in place. The desire is to expand our projects and create new ones. The problem is the lack of funds and that is where you members enter the picture.

Wouldn't it be great to have additional funds available for those Associate members who want to upgrade to RPT, but do not have the funds to do so. Not only the cost of the exam, but the cost of transportation for those members remote of any test center.

As the Auxiliary representative to the Foundation Board, I find a similarity to the function of both organizations and that is to support the PTG. Obviously the tasks are different, but the goals are the same. Spouses of RPT members, as a rule, help out in the business of their spouse. In like manner, the Foundation can be of great assistance, not only in recording and keeping the history of PTG alive, but in the development of future leaders.

Some of you out there are not aware that a former PTG Board member, the President of the Foundation and member of the Institute Committee, started her walk up the ladder by receiving a grant to upgrade to the RPT status. Wouldn't it be great to have ten people do the same thing each year? With your help we can.

How exciting it is to be aware of and have knowledge of how each individual member of PTG and PTGA can be a part of enriching and advancing the goals of *our* PTG Foundation. I'm excited and I hope you are too.

— Christine Monroe
2nd Vice President ◇

Piano Technicians Guild Foundation

Mission Statement

"The Piano Technicians Guild Foundation is formed to support the goals of PTG by preserving and displaying historical materials and providing scholarships and grants for piano performance, study and research."

Passages

Thomas A. Hames
December 11, 1921—January 12, 1998

Time spent with many of our friends and colleagues is brief, and quite often, far too short. The special moments become photographs in our memory – chapter meetings, chapter picnics, Christmas dinners and seminars.

A few moments before, during or after any of these events – they're all snapshots in time. The amount of information exchange, camaraderie and bonding that can occur during these moments is either of value, or is simply passing time.

My snapshots with Tom Hames, while not numerous, are all memorable. He pursued any topic with equal fervor, and never withheld hard-earned experiences and knowledge. People only die if you forget them. I'll not forget Tom Hames.

—Jim Harvey

Tom was born in Atlanta, Georgia, and was involved with music making and musical instruments all of his life. He was instrumental in forming the Memphis chapter of the Piano Technicians Guild.

It is believed that Tom was the first piano technician grandfather to pin a grandson when Thomas A. Hames, III, became a Registered Piano Technician at the 1996 North Carolina Regional Conference.

The Chapter extends heartfelt sympathy to the family in our loss.

—Garland O. Goodwin

In Memory . . .

Arthur Harryman
Yakima, WA

James West
Warsaw, NC

Calendar of Events

April 23-26, 1998
PACIFIC NW REGIONAL
Banff Centre, Banff, Alberta Canada
Contact: Chris Gregg (403)226-1019
or Fax (403)226-2430
11444 Coventry Blvd., Calgary AB T3K 4B1 Canada

May 1-3, 1998
FLORIDA STATE SEMINAR
Mariott Hotel, W. Palm Beach, FL
Contact: Tom Servinsky, (561)221-1011
5271 SE Nassau Terr., Stuart, FL 34997

May 9, 1998
BALTIMORE CHAPTER 1-DAY SEMINAR
David Hughes Piano Rebuilding Shop, Reisterstown, MD
Contact: Rob Bangert (410)255-2550
186 Lowes Way, Pasadena, MD 21122

May 16, 1998
NEW MEXICO SPRING SEMINAR
Piano Store (Vintage Piano Workshop) Albuquerque, NM
Contact: Les Conover (505)255-0658
4805 Central, NE, Albuquerque, NM 87108

July 8-12, 1998
PTG ANNUAL CONVENTION & INSTITUTE
Westin Hotel, Providence, RI
Contact: PTG Home Office (816)753-7747
3930 Washington, Kansas City, MO 64111

October 17, 1998
NYSCON
Holiday Inn, Plainview, NY
Contact: Michael Slavin (516)781-8888
2409 Wood Ave., Bellmore, NY 11710

October 22-25, 1998
NORTH CAROLINA REGIONAL CONFERENCE
Holiday Inn Select, Richmond, VA
Contact: Alan Hallmark, (804)346-8068
email: pianomanadventures@erols.com
Or Contact: Lewis Spivey (919)937-4777
15 Rachel Dr., Nashville, NC 27856

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.

Congratulations Associates Pass The Test

Region 2

231 Richmond, VA

Raymond A. Breakall
11500 Ivywood Road
Chester VA 23831

Kevin C. Shipe
P. O. Box 158
Spotsylvania VA 22553

381 Memphis, TN

Thomas E. Malone
122 Stonewall
Memphis TN 38104

New Members in February

Region 1

021 Boston, MA

Dorothy A. Bell
17 Morton Street
Newton Centre MA 02159

Ruth M. Van Dine
1608 River Street, Apt. 212
Hyde Park MA 02136

054 Vermont

Nicole L. Johnson
79-2b Elm Street
Montpelier VT 05602

058 Manitoba

Jeffrey N. Klassen
Box 1748
Altona MB R0G 0B0 Canada

139 Southern Tier, NY

Fred Wagner
640 Pierce Hill Road
Vestal NY 13850

Region 2

212 Baltimore, MD

Allen E. Ford
P. O. Box 6369
Balto MD 21230

Joseph Macaluso Jr.
204 Oakwood Lane
Stevensville MD 21666

Marshall L. Robertson III
19 South Main Street
Camden DE 19934

282 Charlotte, NC

Fred G. Archuleta
166 McAlway Road
Charlotte NC 28211

Wendell C. Oliver
207 9th Street
Belmont NC 28012

292 Palmetto, SC

David E. Letts
6103 Poplar Ridge Road
Columbia SC 29206

Region 3

752 Dallas, TX

Jimmy T. Bardin
1401 E. Timberview Lane
Arlington TX 76014

Region 4

532 Milwaukee, WI

Laura M. Surges
3851 N. 76th Street
Milwaukee WI 53222

601 Chicago, IL

Craig A. Deets
1891 E. Water Road
Byron IL 61010

Region 5

551 Minnesota-North Iowa, MN

Todd J. Piltingsrud
700 Park Street
Decorah IA 52101

553 Twin Cities, MN

Mary A. Bailey
290 Dahlia Street
Mahtomedi MN 55115

Richard H. Bean
1052 Wedgewood Lane, S.
Eagan MN 55123

Terry A. Sheetz
1879-14th Street, NW
New Brighton MN 55112

Ken E. Zahler
Schmitt Music Center
2400 Freeway Blvd.
Brooklyn Center MN 55430

641 Kansas City, MO

William H. Prindle
5008 Walnut
Kansas City MO 64112

Stuart W. Snyder
6441B SW 23rd Street
Topeka KS 66614

683 Nebraska

Mick J. Johnson
2000 1/2 East 34th Street
Keraney NE 68847

801 Denver, Co

Ralph R. Root
12256 W. Texas Drive
Lakewood CO 80228

Region 6

553 Twin Cities, MN

Pamela A Guldan
409 11th Street
Hudson WI 54016

895 Reno, NV

Charles B. Heiser
897 Amador Circle
Carson City NV 89705

926 Orange County, CA

Steve J. Blasyak
16237 Shasta Street
Fountain Valley CA 92708

945 Golden Gate, CA

Joyce E. Pettipiece
P. O. Box 544
Sunol CA 94586

Region 7

981 Seattle, WA

Patrick K. Smith
11841 14th Avenue, S.
Seattle WA 98168

992 Inland Northwest, WA

Al G. Gratz
6121 S. Ranch Park Lane
Spokane WA 99206

Phyllis Tremper
PTGA President

AUXILIARY exchange

DEDICATED TO AUXILIARY NEWS AND INTERESTS

Hearing Loss & What to Do About It

By Charlotte K. Lyman, M.A., FAAA, CCC/A
Audiologist

Good hearing is obviously very crucial to a piano technician's livelihood. Even minor subtle losses of hearing can have an impact on tuning a piano or in listening for frequencies and octave changes.

The human ear has the capability to hear a wide range of frequencies (20 Hz up to 20,000 Hz). However, we actually only utilize a small portion of those frequencies for hearing and understanding speech and everyday noises. An audiologist uses a frequency range of 250 Hz to 8000 Hz when testing hearing in a clinical setting. This is the range most audible by the human ear. The frequencies which are most important for understanding speech, are 500 Hz to 2000 Hz. This is where most of the vowel sounds and consonant sounds are located.

There are different types of hearing loss that can occur: Conductive, Sensori-neural, and Mixed. A conductive hearing loss occurs when there is a problem in the outer ear (ear canal up to the eardrum) and/or the middle ear systems (eardrum and the space filled with the ear bones). This can be anything from ear wax build-up to a hole in the eardrum to fluid behind the eardrum. These types of conditions can typically be treated medically. The hearing loss associated with a conductive problem is generally mild to moderate, which can fluctuate, and if treated medically will resolve back to normal. A sensori-neural or "nerve-type" hearing loss occurs when there is a problem in the inner ear system. This is where the cochlea or nerve center, which is the main organ for hearing, is located. This is also where the balance center is located. A sensori-neural hearing loss occurs when hair cells in the cochlea deteriorate resulting in permanent loss of hearing. This cannot be treated medically or surgically with the exception of some profound nerve hearing losses that can use a Cochlear Implant. A mixed hearing loss is the combination of a conductive hearing loss and a sensori-neural hearing loss. This occurs when there is a medical condition with the ears as well as nerve deterioration. The medical condition most generally can be treated, but the nerve deterioration remains.

The typical hearing loss, which is seen as we get older, is the sensori-neural type. The nerve slowly deteriorates, which causes a gradual decrease in hearing. Most hearing losses are so gradual that at first it is not evident to the person with the loss. Generally family members and friends notice hearing loss symptoms before the person with the hearing loss does. Such symptoms might include needing the television or radio up louder, having to repeat information over, missing the telephone or doorbell ring and misinterpreting when listening in background noise. A typical sensori-neural hearing loss affects the higher frequency range first and then spreads to the mid- and low-frequencies. When a high frequency hearing loss is present it can be more difficult to hear female voices (no ladies, your husband is probably not ignoring you on purpose!), children's voices and high-pitched rings such as telephones. The mid- and low-frequencies are primarily responsible for vowels and most of the consonants. When a hearing loss occurs across all the frequencies it becomes more evident even to the person with the hearing loss. The primary complaint at this time seems to be difficulty understanding people when listening in crowds and group situations.

Any time a hearing loss begins to interfere with a person's social activities or livelihood it is time to take action. The first step is to have an audiological evaluation completed by an audiologist. If a medical condition is present, the audiologist will refer you to a physician for medical treatment. If the hearing loss is sensori-neural with no medical problem, amplificaton is then warranted. In the profession of piano technician it is essential that the hearing be as good as possible. Being able to hear all the frequencies will allow a piano tuner to hear the pitches and octaves better. There have been many advancements made in hearing aids, which allow for better fine-tuning of the auditory system. There are no perfect hearing aids that restore our hearing back to normal, but with the development of programmable and digital hearing aids the future of amplification looks bright.

Antoinette Tassoni

Antoinette Tassoni, beloved wife of Bruno Tassoni, born June 10, 1921, passes away on January 15, 1998. She had been a member of the Auxiliary since 1977, the year that she and Bruno were married.

Antoinette had been a dialysis patient for three years suffering from diabetes and other infirmities. Immediate cause of death was cardiac pulmonary arrest.

She loved her flower garden and Bruno called her his "Flower Girl." She often went with Bruno, who plays the drums, on his dance engagements for she enjoyed dancing. She was a member of the Pismo Beach Jazz Club.

She was a good homemaker, and a valued helper to Bruno in his work as a Piano Technician.

Antoinette Tassoni was a lovely lady who appreciated and enjoyed her friends in the Guild and Auxiliary.

Survivors include four daughters and six grandchildren.

— Kermit E. Williams

Auxiliary Officer Slate Announced

There was much difficulty in getting anyone to allow their name to be submitted for any office in the PTG Auxiliary for the coming year. All want to tell you what to do, but no one wants to assume the responsibilities of the various offices of the Auxiliary.

Diane Hennessy has agreed to run for either Vice President or Recording Secretary, but she probably will not be in attendance at the convention this year. The office of Recording Secretary will need someone who can assume the responsibilities of the office immediately while at the convention. Hopefully, a Recording Secretary can be elected from the floor of Council.

President – Phyllis Tremper
Vice President – Diane Hennessy
Recording Secretary – No candidate/no recommendation
Corresponding Secretary – Beva Jean Wisenbaker
Treasurer – Marilyn Raudenbush

Submitted by,

— Deanna B. Zeringue
Chairman – Nominating Committee

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

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NORTH BENNET STREET SCHOOL, Boston, MA— Introduction to Piano Technology, June 8-12, Monday-Friday, 8:30 AM - 4:30 PM. Debbie Cyr and Christine Lovgren, Instructors—This course will provide an overview of the range of topics for individuals considering entering the field as a profession as well as others seeking information about the piano and what piano technicians do. Students will have the opportunity for hands-on application of the points covered by lecture and demonstration. Full-time Piano Technology program is available also. Please contact Janet A. Collins, Director of Workshops, North Bennet Street School, 39 North Bennet Street, Boston, MA 02113,
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VIDEOS

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

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RPT Member Twenty-Seven years needs fine grands/consoles unrestored condition, top commissions, trades considered. Dante 516-588-6446.

WANTED: Square or Box Grand Piano - Circa 1860s-1870s. Call Mr. De Meyer at (219)277-4867, or write to 51834 Whitestable Ln., South Bend, IN 46637.

WANTED—Old Chickering grand action parts and/or case parts. PTG member, technician. Contact Michael W. Hart, PO Box 268, Corbin, KY 40702 (606)528-8760.

WANTED: ARTRIO ANGELUS REPRODUCING ROLLS AND CATALOGS. Also looking for a large (6'+) Hallet & Davis ex-player grand or complete Wilcox & White action Artrio Angelus in major label (i.e. Knabe, Mason & Hamlin) grand. David Krall, 4218 Torrence Ave., Hammond, IN 46327. (219)932-2322.

WANTED: Very old Chickering Grands to restore. PTG member, technician would appreciate your referals. Contact Michael W. Hart, P.O. Box 268, Corbin, KY 40702 (606) 528-8760.

WANTED: By PTG Member Technician—OLD ROSEWOOD VENEER. Any size or amount acceptable. Contact Michael W. Hart, P.O. Box 268, Corbin, KY 40702 (606) 528-8760.

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DISPLAY AD INDEX

PianoDiscussions™

April 1998

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

PianoDisc wows NAMM with new PianoLink™

PianoDisc got rave reviews when it previewed its new PianoLink™ system at Winter NAMM '98. Developed in conjunction with Finland's Xenex Ltd., PianoLink™ allows the simultaneous transmission of audio, video and MIDI computer signals.

Using PianoLink™, pianists as far away as Beijing and Oshkosh, Wisconsin can see and talk to each other through simultaneous video and audio transmission, while hearing each other play on MIDI-equipped pianos.

For its NAMM demonstration of the new system, PianoDisc linked two California locations: its booth at the LA Convention Center and its factory in Sacramento. Pianist Steve Merritt manned the Sacramento location, alternately playing a PianoDisc-equipped piano and talking with show attendees.

A highlight of the NAMM demonstration was the first ever master class conducted via PianoLink.™ PianoDisc Artist Series star Wladimir Jan Kochanski gave Merritt an impromptu lesson on playing works by Chopin.

Kochanski, a Baldwin classical artist, normally finds little time for master classes due to the demands of his concert career. "It's something I regret," Kochanski commented, "but now, PianoLink™ may be the answer!"

PianoDisc president Gary Burgett echoed Kochanski's enthusiasm: "PianoLink™ will have a number of exciting applications, but I doubt that any will have as much impact as those involving music education. PianoLink opens up so many incredible possibilities."

For more information about PianoLink™ contact a PianoDisc sales representative at 1-800-566-3472, or visit our web site at www.pianodisc.com.

Emerson, Clark join Mason & Hamlin Piano

The Mason & Hamlin Piano Company has announced the addition of music industry veterans Frank Emerson and Bruce Clark to its design and engineering team, says Kirk Burgett, president of the company.

A noted piano designer, Emerson will work in the areas of engineering for production, cost analysis and process documentation, Burgett explained.

Emerson comes to Mason & Hamlin after eight years with the Baldwin Piano & Organ Company. While there, he was involved in piano-scale analysis and design, prototype building and product start-up, as well as research supervision and management. Among the piano designs Emerson introduced were the Baldwin 248, Wurlitzer G500 and G550, and the Chickering 410 and 507 models.

Clark is a design engineer for the company and collaborates with Emerson and other design engineers on production matters.

A native of Hot Springs, South Dakota, Clark learned piano tuning at his father's piano shop in Wichita Falls, Texas. In 1977, he studied music at Berklee College of Music in Boston, after which he started building pianos with the Santi Falcone Piano Company. While with Falcone, Clark built the company's first grand pianos (models 61 and 90). Clark later worked for Aeolian American followed by a stint with the Sohmer Piano Company.

"We're fortunate to have Frank Emerson and Bruce Clark as part of the Mason & Hamlin team," concluded Burgett.

Wladimir Kochanski and Steve Merritt (on video monitor) conduct first master class using PianoLink technology.

Allen and Smith help PianoDisc celebrate its 10th

Legendary entertainers **Steve Allen** and **Paul Smith** made a special joint appearance for PianoDisc at Winter NAMM. The talented duo wowed the standing-room-only crowd with a two-hour plus concert and autograph session.

Both Allen and Smith have recorded for PianoDisc's Artist Series and Allen starred in its product video. They appeared to help celebrate PianoDisc's 10th Anniversary.

"What a thrill to have Steve Allen and Paul Smith join us at NAMM," commented PianoDisc president Gary Burgett. "It was an event we'll never forget."

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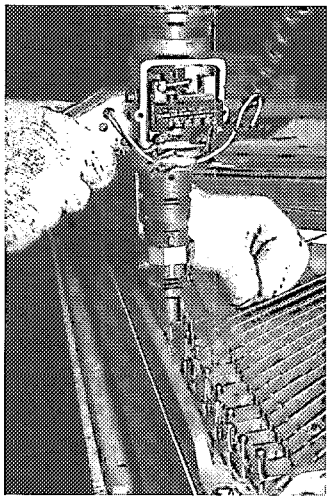
Tech Gazette

Yamaha Service April 1998

Last month, we discussed the method used by Yamaha to accurately drill the holes in the pinblock and insert the tuning pins.

This month, we will show you the method used to attach the strings to the back assembly. This article is a continuation of the unique processes developed by Yamaha, for Yamaha Music Manufacturing (YMM) in Thomaston, GA.

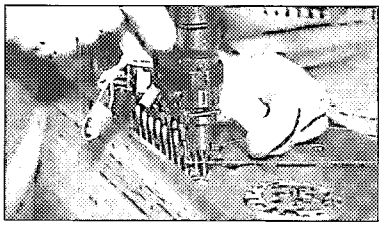
Stringing at YMM



The stringing process at YMM starts with the insertion of the tuning pins into the pinblock. Approximately 230 pins are set into the pinblock by a robotic machine that taps the pins into place to a precise height. This is done at the same 5 degree angle that the tuning pin holes were drilled.

When the backframe arrives at the stringing station, the stringer places the end of a gauged wire into the hole of the tuning pin. A Yamaha designed stringing tool is placed over the tuning pin. This machine will turn the tuning pin exactly 2 1/2 turns as the wire coils around the tuning pin. Utilizing this procedure ensures that all tuning pins have exactly the same number of coils and are set to the proper depth in the pinblock.

Next, the stringer takes the wire and working toward the bottom of the piano, weaves the wire through the bridge pins, bends the wire around the hitch pin, and returning toward the pinblock area, weaves the wire through the adjacent bridge pins on its way back to the next tuning pin. With the stringing tool set on the next pin, the string is pulled hand tight along the side of the head of the stringing machine and into the jaws of a wire cutter where it's cut to its precise length. The cut wire is now placed into the hole of the tuning pin and the pin turned 2-1/2 times by the stringing machine.

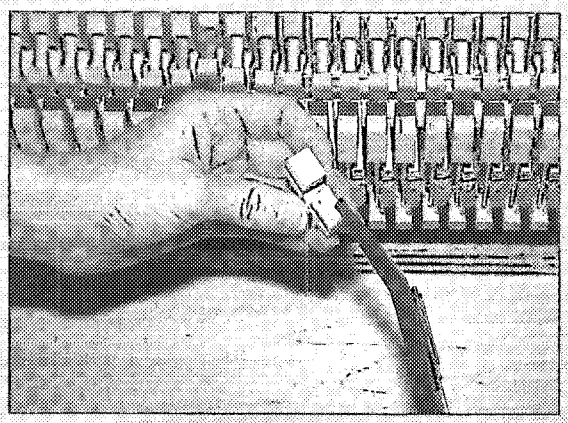


This entire procedure is repeated across the entire tuning pin field utilizing the correct sizes of wire.

In the next issue we will discuss the advantages of this approach to stringing, as well as how we string the bass section of the backframe

The YMM "Tip of the Month"

This tip can be used on grand dampers as well as the vertical dampers shown in the photo. Fashion a thin strip of metal, fasten it into a rheostat regulated heat pencil and you have a great shop tool for working with new damper felt.



Stay tuned for next month's information from Yamaha Music Manufacturing.