PIANO TECHNICIANS Journal

May 1992

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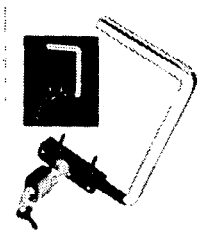
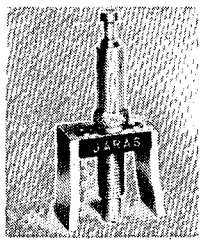
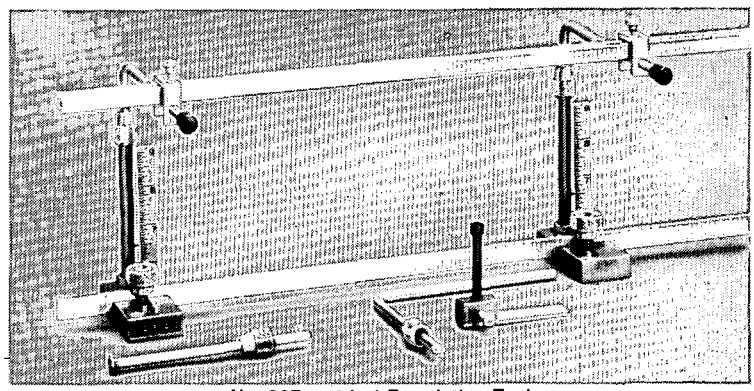


No. 893 — Fallboard Clamp



No. 40 — Sharp leveler

No. 909 — Electric Key Bushing Cloth Remover



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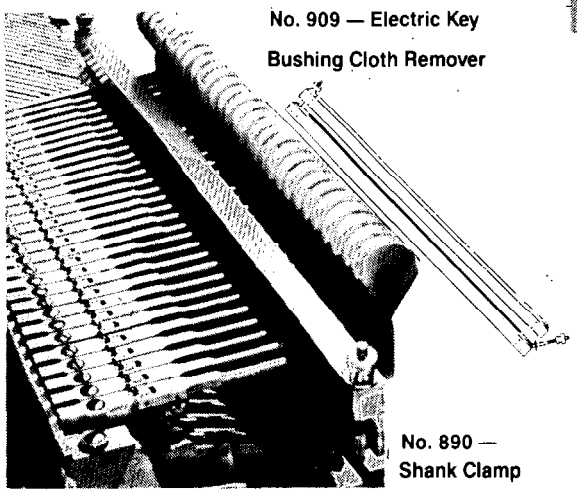
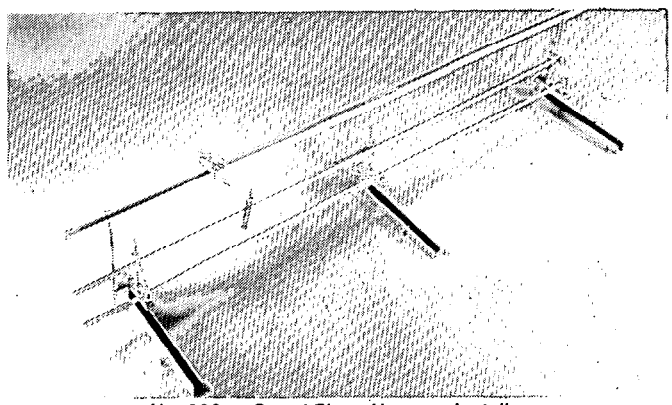


No. 890 — Shank Clamp



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PIANO TECHNICIANS Journal

JIM HARVEY, RTT
Editor
205 Parker Avenue
Greenwood, SC 29649-2629
(803) 223-2889

LAROY EDWARDS, RTT
Journal On Tape Reader

HOME OFFICE

3930 Washington
Kansas City, MO 64111-2963
(816) 753-7747

LARRY GOLDSMITH
Publisher/Executive Director

JAMI HENRY
Director of Communications

SANDY ESSARY
Subscriptions

MARY KINMAN
Director of Membership

CATHERINE WILANE
Director of Finance

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PIANO TECHNICIANS JOURNAL

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MAY 1992 • VOLUME 35 • NUMBER 5

ABOUT THE COVER

Yamaha's custom Disklavier Grand Piano. See the Forum, page 10, for details.

President's Message

Will the New Committee Members Please Stand UP?!!

I have two thoughts in mind at this time of the PTG year and they are committees and conventions. They certainly tie into each other as each year at the PTG Convention new committees, new committee members or new committee structures are voted on and are ratified by the Board.

This year for July '92, we have restructured one group of committees directed at services to chapters and have eliminated a couple of other committees. The new incoming president will have new or revised charges to the committees and we hope and look for much success in the coming year through the committee work.

But, we do need something! And that something is you! Every year a plea goes out to the membership for those who have the desire to please come forth and offer your services to committee work. For the last two years I have made attempts at personal contact to ascertain good activity on committees and this has worked very well with much increased interest in committee output, but I am sure there are many who have had a flash cross their mind saying "DO COMMITTEE WORK" but have just failed to make their wish known to Board members. At this time all PTG Board members are on the lookout for names to suggest for committee work. How about turning in your name to your RVP if you feel you would like to give a bit of your time and talent? It doesn't really hurt much!

Now about conventions: I presented a proposal to the PTG Board this past January at the mid year meeting for the PTG Convention to be in Kansas City at the Hyatt EVERY YEAR. The Board received the proposal and has directed Larry Goldsmith to do a feasibility study on this. It would be good if you have feeling pro or con to drop Larry a line and tell us how you feel about this.

Just a quick figure on expenses show that we might be about to save as much as $20,000 per year if we were in KC every year. This might be even more if we would figure in all the possible related costs. Shipping alone for the boxes of convention material from Kansas City to Philly last year cost us nearly $4,000.

Some examples would be: Considerably less staff travel expense; no cross country air fare for anyone; would not be necessary to have a convention planning meeting in September or October as the facility is well known and adequate and the necessary planning would be done at Mid Year Board Meeting; much less expense in shipping convention materials from home office; close proximity of home office with regular suppliers and vendors to convention; Kansas City in the middle of the country has always been a good draw for attendance at conventions; vacations with family tied in to conventions have not seemed a high priority in convention questionnaire, we constantly seem to be beating our heads against concrete to fit a convention into a facility which should not have been chosen; sometimes we have gone to an area because of a request such as from a chapter and it proved not to be in the best interest of PTG (a good example is my chapter, New Orleans, which should have been an attraction and it was the lowest attended convention ever); most importantly, we could work a fantastic deal with the hotel if we would assure them of coming back for "X" number of years.

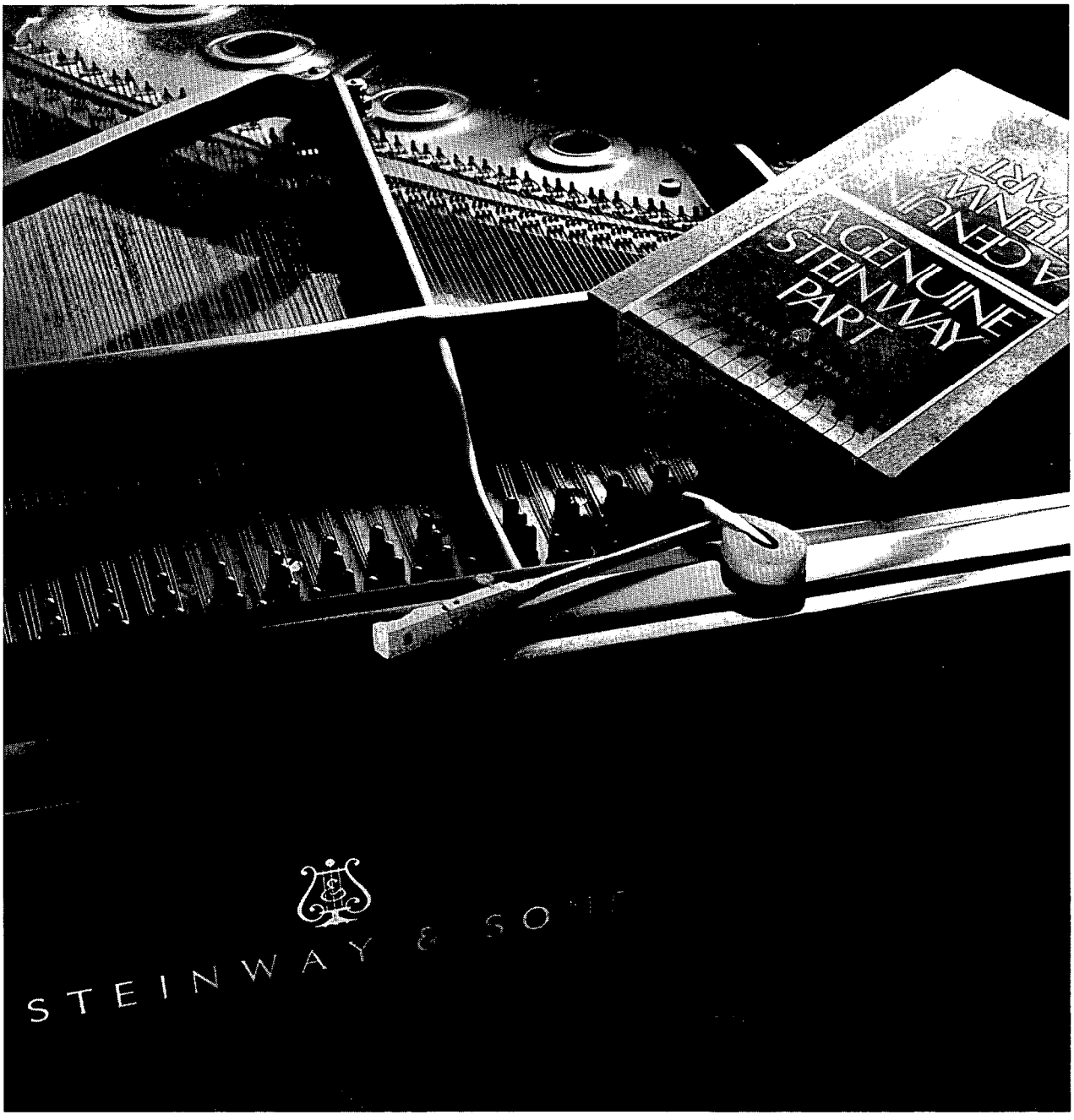
There are two hotels tied together by a covered walkway which could individually handle our convention without using the facilities of the other.

There has also been the proposal suggested that maybe we come to Kansas City every other year, ie KC, West Coast, KC, East Coast, KC, West Coast, etc. Maybe not as good a deal, but I think that the Hyatt in KC would still like to deal with this.

Give this some thought and drop a line to Larry so that we might give some consideration to this at the board meeting in July.

Nolan P. Zeringue, RTT
President

STEINWAY



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Institute Update

PTG CONVENTION
A "Class-y" Place...

Ben McKlveen
1992 Institute Director

Another month has slipped by and it is time for me to remind all of you again about the national convention and institute in Sacramento.

I have written several articles outlining the classes to be presented for you. This month I will continue with classes that fall under the general titles of Shops and Equipment and another very important group called Allied Arts.

"House Calls: Be Equipped" by Isaac Sadigursky will show you how one technician organizes his tools and supplies in a van (sort of a shop on wheels) so that he is prepared to do complex and unusual jobs in the home successfully and professionally. Some of the class will be illustrated with slides, but this year, we are planning to have his van on hand so that you can see for yourself how he does it. Jim Harvey will return to teaching this year to give his long-awaited class called "Shop Procedures for Fun and Profit." Jim takes it off the road and into the shop, and as always, with a plentiful array of tools and gadgets to help you succeed and in record time. Cliff and Tony Geers will also return to our faculty this year to present a class on "Pinblock Replacement and Soundboard Restoration," with slides and live demonstrations to help you with these important rebuilding skills.

The "Allied Arts" section this year features some classes that are new and exceptional and several that bear repeating because of the value of their content.

Charlie Huether will offer his class called "An Illustrated History of Piano Building in America." Charlie will draw on his interest in history and his vast resources for pictures and stories to bring you an integrated impression of piano building during the nineteenth and twentieth centuries in the United States and Canada. David Stanwood will step away from his class on touchweight long enough to present his exciting and informative class on wool, which is the first step to understanding felt. Bob Russell will repeat his popular class "Practical Appraisal and Evaluation," a hands-on appraising workshop covering piano evaluation as well as appraisals for customers, buying, selling and insurance purposes. Bob will attempt to show you what to do, and as importantly, what not to do!

Several new classes will debut this year. Joe Garrett and his hearing specialist, Jay Thurman, will present a joint class called "The Stigma of Hearing Loss." This unique "doctor-patient" presentation will explore the causes of hearing loss, and suggest remedies and safety precautions to prevent hearing loss.

Another new class called "Time is Money" is being offered by Colette Collier. This class is aimed at those of us who are "sole proprietors" and it will explore methods of structuring a business to get the maximum use of working time. Also, it will touch on budgeting, saving and spending time, time saving products, vacation time, education time and if there's time, your spare time. Colette will be working on the premise that the service you provide must generate enough income to pay its most valuable employee, YOU!

Bill Garlick will bring us his class called "A Retrospective of Steinway Patents." Well over one hundred patents have been granted to Steinway and Sons, many of which are of major importance in the development of the modern piano. In the time available, Bill will review as many as possible of the most significant patents, and with colored slides, show how they have elevated the Steinway piano to its present pre-eminent position.

There are still a few surprises to talk about and next month we will have the complete schedule for you so you can be planning ahead.

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The Way Things Were

Carolynn Fowler & Dwyer Fox

As we left off in March, the gold rush brought glamour and excitement to Sacramento, but the rush also had a dark side. The early days of Sacramento portrayed a gloomy scene of hundreds lying sick, wrapped in filthy blankets, without wife or children or friends to nurse them when sick or bury them when dead. With the Sierra snows, hundreds of miners came down from the hills, only to find a swampy morass with thousands already in distress for want of food, shelter and medical care as well as squatters' fighting with property owners over property rights. Here we find a town where sanitation was accomplished by pouring strong disinfectants into pools of stagnant water. Waste disposal was a matter of digging and covering up holes. Water treatment at first wasn't necessary but, as hydraulic mining became popular, tons of sediment washed from the mountains down to the valley floor. The brownish tan river water resembled whiskey and became known jokingly as "Sacramento Straight."

When folks finally tired of lawlessness, they would appoint their own twelve man jury, conduct an "on the spot" trial, then proceed to a large oak tree where hundreds of spectators would gather for the hanging. Although lynching was an effective crime prevention measure, it was banned by the State Legislature in 1858.

There was one other MAJOR problem, not just in Sacramento, but in all of California! Women were more scarce than Piano Tuners! Unfortunately, traffic in young women (not pianos) grew into a BIG business; they were brought in by the hundreds from Mexico, and transferred to bidders with whom the girls shared their earnings. Beauties from South America were eagerly sought for dancing saloons. French women were favored in gambling establishments and ships brought in kidnapped girls from the Pacific Islands, and as far away as China. An organized system was arranged for supplying native Indian women to the mining camps. Viewing all this with alarm, the Home Missionary of San Francisco charged that half the women of California were of "the looser element." After two years of observing life in California mining towns, William Perkins concisely summed up his opinion of the situation: "If a woman is to stay pure in the licentious life of California, her virtue must indeed be very firm."

Now by 1857, only nine years after the first discovery of gold, Sacramento had become a flourishing city, conquering not only its difficult "early days" but a series of disasters reminiscent of Biblical scourges. What were these "scourges?" Being located on low land at the confluence of the Sacramento and American Rivers, you can be sure flooding was a major problem! On January 8, 1850, a "finger" of the American River called "Sutter's slough" flooded. Flood water poured into the city, washing away everything in its wake. Boats were used to rescue people from their homes or businesses, and resident Dr. Morse recorded that those who were not engaged in rescue operations, defied the elements with hysterical merrymaking. "The city seemed almost mad with boisterous frolic, with the most irresistible disposition to revel in all the joking, talking, swearing, dancing and shouting." As the waters receded, people began rebuilding, one citizen named Hardin Bigelow urged the city council to build a levee for flood protection. His early entreaties were ignored. Most people simply refused to believe that such a disaster would ever happen again. When in March, the rivers started rising again, it was this same man who recruited a handful of men to build up the river banks. Every low point was built up and reinforced with mud, and the riverbanks held! Bigelow saved the town from another severe inundation, gained support to build permanent levees and found himself elected mayor! Severe flooding of December, 1861 and January, 1862, which broke through the levees caused the favorite mode of transportation to again be by boat. These subsequent floods caused the most drastic and permanent measures to be taken to deal with this annoying problem. The city dug new channels for the American River. One was to straighten it out and the other to relieve pressure at the mouth of the American by bringing it into the Sacramento River about a quarter of a mile north of the original juncture. The most remarkable feat of all, though, was yet to come! The streets, sidewalks and buildings of the entire downtown district were raised and set on new foundations, including twelve blocks of I, J, and K Streets, to a height of 12 to 15 feet above their original level. In one instance, the owners of the Union and Orleans Hotel had not been able to raise their buildings because of rain. During that years' legislative session, lawmakers staying at these hotels reached the entry ways to their hotels by going through a hatch in the sidewalk and down a wooden ladder.

The next plaque was Cholera, one of the most feared and dreaded of all contagious diseases of the time. The river steamer "New World" had arrived with the good news of California's admission into the Union in October, 1850. The day after, one of its passengers was found lying on the

levee in the last convulsive stages of cholera. In that day, cholera was feared because of its sudden onset, accompanied with diarrhea, vomiting, chills, fever and according to Dr. Morse "the malignant and hopeless rapidity with which it hurried its victims into eternity." As the disease spread quickly, people left town in every direction. Reducing the population to one fifth of its former number. The death toll of this twenty day epidemic was in the hundreds.

The last scourge was FIRE. In the days of candles and kerosene lanterns (not to mention wood and canvas structures), fires were common. Citizens had organized Volunteer Fire Departments, but disaster struck shortly after 11 pm on November 1, 1852. Despite heroic efforts, the entire business district was demolished and hundreds of resident left homeless. Two years later, over 200 frame houses were destroyed. Now the Volunteer Fire Department, was more than just a "fire department." It served also as a men's social club—including friendly competitions. On one occasion, Confidence Engine Company #1 and Knickerbocker Engine Company #5, raced each other to a schoolhouse fire. Enroute, they collided at the crossing of a narrow bridge, knocking one engine into the slough, at which point the "volunteers" engaged in fist fights while the school house burned to the ground! It wasn't too long before volunteers were replaced with a paid Fire Department.

Sacramento, which started out as merely the inland transfer point for goods and supplies, quickly became a city of importance. But this was not surprising for the optimistic and tenacious people who overcame such lofty challenges as the raising of much of their entire city!

Speaking of tenacious people, one such man was Captain Thomas Dwyer, my great great grandfather. How does a young immigrant from County Wexford, Ireland, become a Captain? Well, not quite like John Sutter, Sr. did! After working in the shasta mines for a time, Thomas had saved enough money to buy some timber land along the Sacramento River in Colusa County. He cut 2,500 cords of wood, bought a barge and with a partner, floated their wares toward a fuel needy Sacramento, picking up fruits and vegetables to sell along the way. From such humble beginnings began the Sacramento Wood Co. In time, and after acquiring many barges, Thomas and company bought their own steamship and thus became the Sacramento Transportation Co.,which eventually had 10 steamships and 23 barges. Now, he could truly be addressed as "Captain"!

In those days, before the railroads, the water ways were one of the primary means of transportation

story continues—page 35

Technical Forum

Jim Harvey, RTT
Editor

NAMM '92 REVIEW

While working for Los Angeles City Schools, I was situationally required to tune pianos in less than ideal environments. After several such situations, I opted to buy an electronic tuning device. I figured that with the selective listening capabilities of the tuner, the machine would be able to "hear" when I could not. Feeling I was then ready for anything, my first acid test was when I attempted to complete a work order and tune a studio piano in a gymnasium, *while* the girls' basketball team was practicing. With that many screaming, shouting voices, the instrument was unable to display any usable information!

A similar phenomenon occurs when trying to evaluate acoustic pianos at a NAMM show, or for that matter, talking with someone *about* acoustic pianos. It is the worst possible environment for objective evaluations, while all the other instruments known to mankind are vying to be heard—concurrently. Suffice to say that if all the sound from this three-day event could be "canned" or otherwise captured (it's already concentrated), we wouldn't have to worry about sources of energy for a while.

Having forgotten about the noise factor, and not being a fast writer, I elected to use a micro-cassette recorder to capture my conversations with various manufacturers. Later, while trying to transcribe that information, it was extremely difficult to separate the lowly human voices from all the peripheral junk that was on the tapes. This is in spite of having *most* of the acoustic piano manufacturers separated in one area of the show. And, even with my efforts at protecting the tapes, the airline's luggage-shredder somehow managed to mangle them. As I write this, I have one chance at hearing a particular tape, since it's being sliced down the middle as I listen to it! Oh well, on with the show.

My exposure to NAMM shows covers approximately ten years. In that time, the shows have grown progressively larger. Until now there have been two shows—a summer show that was held (usually) in Chicago, with alternative sites sometimes in Atlanta or New Orleans; and a winter show held in Anaheim, California. Times, preferences, and likely economic dictates have caused the "standard" location to now be the January event in Anaheim.

The earlier NAMM shows could be likened to a carnival atmosphere. If that's an accurate observation on my part, then the current show is more akin to a zoo—specifically, feeding time! It's difficult (and sometimes impossible) to identify the vendors from the "participants," a word deliberately selected instead of "buyers." Attire for the event seems to range from optional to tuxedos. I counted seven people who were *not* wearing a fanny-pack, assumed these were required equipment, and thus felt improperly dressed throughout the show. Tennis shoes or anything with crepe soles are the footwear of choice for those who can get by with them, in order to combat the hours of standing and walking on concrete.

The method for documenting the NAMM show followed those of previous editors/reporters. The plan was: (a) to *not* interfere with the manufacturer's primary mission, that of selling pianos and interfacing with their dealers; (b) a tendency to favor those who have a technical representative; (c) as many return visits to a booth as time/circumstance permitted, in order to talk to *anyone* not otherwise occupied; (d) coverage of *only* what's new in each manufacturer's respective product offerings.

This year there were forty-one listings in the NAMM program directory under the piano heading. Since some of these listings represent multi-product companies, an accurate count of pianos by *brand names* from this listing is not possible. It is therefore optimistic at best to assume that all manufacturers/models will be covered. So any lack of coverage is due to one of the conditions mentioned, or simply running out of time before the show closed.

Since Larry Goldsmith and I had just enjoyed breakfast together in the same hotel as the **Yamaha** "camp," I dragged him in there with me. We were greeted by Ray Reuter and LaRoy Edwards, and Ray had a "care package" of model specifications already prepared for me. For new products, Yamaha has four vertical models which, although "new" four months ago and are already being shipped, was their first appearance at NAMM. The U1E has become the U1F, the U3E is now the U3F; WX1 is now WX1F (there is no longer a WX3), and the WX7 is now WX7F. Whew! The biggest differences on all four models are scale changes. And on the 'U' series, they went from a straight bass bridge to a curved one, which of course required a change in the bass

scale. The WX series has incorporated a lot of smaller improvements throughout the piano. Ray *told* me all this, but suggested that I read the specification sheets. I did. Zzzzz. Thanks for the experience, Ray!

Yamaha's grand piano series seems to have more or less stabilized, which (at least to me) must be a comforting thought for any manufacturer. This was evident by no new grand products, and just a few notes about the CF model. The plate change on the CFIII-S concert grand is probably the most noticeable difference. While there will likely be some additional modifications on the CF3III-S at some point in the future (probably in the choice of materials in certain areas, and/or action and hammer areas), these changes are of no particular concern to us at present.

The MX88 studio has joined the ranks of instruments fitted out with the Disclavier. This piano is acoustically (and otherwise) the same as the P22 studio model. Heretofore, on vertical pianos, the Diskclavier was only available on consoles, and on the U1 upright.

There is usually at least one unusual piano at NAMM that we are not likely to see in our day-to-day routines. While this show provided several, the model on the cover this month is one such instrument. Actually, I was shooting black and white film, wanted a color photo for the cover, and Yamaha was kind enough to provide one for the purpose.

This piano was the culmination of the wishes of a young, prominent Japanese rock & roll artist, who hired someone to design the piano. He then contracted Yamaha to build the hand-carved birch and acrylic, Diskclavier-equipped, custom grand. Retail figures being tossed around the show indicate around a quarter of a million dollars for this model. However, since there are only four of these instruments in existence, don't hold your breath until you get a chance to service one.

Ray Chandler of **Kawai** was also prepared with information on their products. A sampling of new products and/or changes includes a synthetic ebony (sharp) keycover. This composite material has an ebony-like surface texture and appearance, and supposedly absorbs perspiration from the fingers. (I was able to verify the first two, but didn't manage to work up a sweat while doing it)! It is also capable of reducing contact noise (from fingernails), is harder than ebony, and is resistant to most chemicals. These keycovers are currently on the GS-60 (6'9") and GS-70 (7'5") models.

While on new materials, the music racks on the GS-40 and 60 models have a finish which is impervious to scratching, whether sheet music, fingernails, or whatever. (You can take a coin and scratch around on the music rack: nothing happens). Although it was not revealed what the finish is, it is *not* polyester.

Kawai is apparently satisfied with the long track records on their KG series grands, and seem to now be concentrating on the GS models. For example, the backposts (beams) on the GS-60 and 70s have been repositioned to further enhance bass amplification. This means that the posts now come together at one common point (the bass/tenor break) instead of being adjacent to each other as they rest against the bulkhead. Also, a cantilevered bass bridge has been added (again GS-60 and 70) to reinforce the sound and projection of the lower register. This change also permits increasing bass string lengths (2" on the 60 and 1.2" on the 70, respectively). The bass hammers have also changed on GS models, having been widened (at the top) by about .5mm. The press release indicates that this "improves bass sonority and increases dynamic range, yielding greater artistic expression." I prefer to think it has to do with the bridge and/or other changes, and making the hammers accommodate these changes. Likewise, a special bass string process that double-winds the copper wrap very slowly. While I could not get a lot of detail on this, the object is likely to be that of reducing stiffness in the bass strings. Apparently they are using different dimensions of copper as well, the first wrap being with very thin wire.

On a slightly more global basis, a slow-fall fallboard will now be found on all Kawai grands over 5'4" (which would include the KG, GS, and R grand series). This slow-closing fallboard eliminates the possibility of the fallboard dropping down on the fingers. While I did check out my camera's ability to stop action with this feature, I admit to not looking at how the system was attached, or on what principal it works (hydraulic, air, etc.). Perhaps it's because I've never had a problem with smashed fingers due to "accelerated" fallboards.

A wider leg base on KG and GS models, and casters on the KG, GS and R models "growing" approximately 1/4" wider than on previous models round out the smaller changes.

There were several new Kawai models at the show. The first was the RO (6'1") grand. This instrument evolved from the existing RXA (6'5") Professional model, and according to the detail sheet, weighs 7,201 pounds (I think not). It features synthetic ivory and the new ebony covers, as well as the slow-fallboard and hard-finish music rack.

The second model was a baby grand, the GM-1 (4'9"), which features a solid spruce board, and three pedals (including a full sostenuto).

The third and fourth models were verticals. Of these, the 902 console is a furniture designed cabinet, wrapped around a UST8 (institutional-style) back, with a little longer key than a UST8. This piano looks shorter than its namesake, and I never did figure out why. And last was the 502S console, which utilizes a 502 back and action with a studio "look."

I want to have more conversations with Peter Duetz, since I have the feeling he may have some information that I want to know. Meanwhile, the electr(ic)(onic) piano adjacent to us only exacerbated his German accent, and my Southern one. We *were* able to put the brakes on the

piano player long enough for me to get a feel for **Seiler**'s re-designed 50 1/2" upright. With a new scale design and soundboard, it also incorporates a different fulcrum point on the keys for improved action response. But as Peter indicated, these are rather liberal statements, since one cannot casually change anything on a piano without causing a subsequent change elsewhere. Considering piano placement and ambient noise, this upright was particularly impressive.

John Omiatek, the technical services director **Classic Player Piano Corporation**, showed me the **Story & Clark**. That's right! Story & Clark is now a division of Classic Player. The Model 44 (what S & C called their 44 scale) is their first offering in a non-player, 45" piano, since they only recently acquired rights to the Story & Clark name. They also feature the 33 scale in their 42" consoles. Their players are, since 1976, being built up from Baldwin 743 backs.

I was delighted to meet and have a long talk with Michael Avis, a Canadian who is serving as the technical representative and consultant for the Russian-built **Nordheimer** (vertical) and **Estonia** (grand) pianos. The concert Estonia grand did not represent what we might expect in terms of power versus size, or in the amount of finishing detail that some people demand. However, one rarely hears of such a low retail price on a concert grand either. As an aside, I found Michael's story about Russia's newfound position in a competitive world marketplace (as applies to pianos) taking precedence over my perusal of the pianos. If you are aware of the compromised position that the Russian Winter Olympians were placed, just think what it must be like trying to manufacture pianos there! Unfortunately, I don't feel I have the word skills required to do justice to the story, and I *know* that this is not the right area to present such a story. But I do have plans of presenting the information to you somehow. I just need to work out the details.

The Mason & Hamlin Companies booth was presenting both **Mason & Hamlin** and **Falcone** grands. And if you want to hear some piano stories, spend a week one day with fellow Guildsman Paul Monachino! Actually, Paul has a lot to share, but doesn't take a long time getting it out. Either that, or I listen too slowly. Whatever the case, I'm looking forward to the experience again in the future.

Mason & Hamlin's computerized plate drilling

Bosendorfer's limited edition model

For example, I've always had a soft spot for the Mason "A." But I was not aware that, over time, there were at least eight different scales (that could be documented) for this model. For determining the best scale for current production, each of those former scales was assessed, and the company believes they have arrived at the best choice of the various possibilities. This one uses bichords starting at note #22, to provide a smoother transition while crossing the scale break.

All of their Kelly-made plates are now manufactured using a computer-aided drilling system. The plates are not only finished beautifully, but with this system, all the holes, (tuning pins/hitch pins/whatever) are drilled where the master program dictates. This results in a high level of consistency, and eliminates any jockeying of the action to make it "fit" a particular plate and back assembly.

The Boston-based company is making their own actions, similar to Steinway with the brass rail and wooden dowel setup, and using the "butterfly" type wippen and other action parts from Renner; but the parts will only fit the Mason & Hamlin rails and brackets. The keyboard is from Kluge, with pine keysticks.

All their pianos (both the Mason and the Falcone) looked and sounded good, and played well. But

One of Baldwin's booth props

A real "Kawai Baby"

neither the Mason or the Falcone represented the power that I remember from either of these brand name/size instruments since the last time I tried them. I will allow (again) a wide margin of error in this judgement, based on their temporary home.

Charlie **Walter** was on hand at the show, but one whos products is *known* to have been left out of this report. The most I was able to do was to nod at him during several passes, and he was so busy each time, I'm not sure he's even aware of that.

Houston-based Performance Pianos is another multi-product distributor, featuring **August Foerster, Zimmerman,** and just re-introduced at this show, the **Tadashi**. The Tadashi "Mozart" grand, 169cm (5'7") was the one being predominantly featured. This brand was around, then disappeared, sometime during the 80's. It was originally built by the Atlas Company in Japan. But its resurrection appears to be a "community" endeavor, involving the combined efforts of folks from the United States, Japan, Germany, and Korea. The list of components that comprise the piano also reads like a who's who from around the world. Overall, a lot of "salable" features have been packed into this grand.

Baldwin introduced the 'C' (for Classic) series, a more economical grand piano than is currently available in the 'M', 'R', 'F', and SF/SD series. This 5'7" piano incorporates a laminated spruce soundboard (thick inner/two dress veneers, but all spruce). The scaling is a modified 'R' scale, those modifications being done to accommodate the scale tension and slightly different loading on the laminated board. It uses the same action stack and keys (although the keys are a different length to accommodate the case and scale) as the 'M' 'R', and 'L' series.

In the verticals, the model 2980 has been changed to the 2990. These changes reflect a somewhat simpler cabinetry, laminated poplar backposts replacing oak, and an increased soundboard area due to adding hexagonal-shaped boards to replace the former rectangular ones. According to Kent Webb, my tour guide, (who was responsible for both the Baldwin and **Wurlitzer** booths), other changes were mostly to vertical pianos, and reflect either case styling, and/or the incorporation of the hexagonal-shaped soundboard.

Hans Hollein, a world-reknowned architect, was contracted to design another of the unusual pianos at the show: the black, red, and *real* 24-karat gold leaf 7'4" (225 series back/scale) **Bösendorfer** limited-production model features solid brass legs, a "sturdy" lyre assembly (the designer hates flimsy trapwork), and no topboard prop. Through the use of a built-in hydraulic system, the topboard is raised and lowered at the touch of a button. In spite of a retail price of $150,000, Bösendorfer is confident that the customer base is there for this instrument. Limited production in this case means about 150 units total, and of the first production run of twenty-four units, eighteen or so have already been sold.

Although **Kimball** was present and had a "La Petite" with a PianoDisc working practically non-stop, Roger Weisensteiner didn't mention any changes in the line.

I was under the impression that the Boston piano was to be shown *only once* on Thursday afternoon prior to the show's opening on Friday morning, and not at the NAMM show site, rather in a nearby hotel. I was aware that "nearby" in Los Angeles is a relative term, reserved for those with automobiles. Being locked into my airline schedule, this meant that I "de-planed" and hit the ground running. Larry Goldsmith, who was gracious enough to wait around for me at the airport, (and who was dressed appropriately) and I, (who was not) rushed to the address at speeds up to seven miles per hour, thanks to rush-hour traffic. We then *saw* the hotel from three different angles, before finally figuring out how to get *to* it! All of this effort, only to unknowingly crash a private reception being hosted by the Boston company. *Then* we found out that the pianos would be shown for the remainder of the show. My apologies to Bob Dove, Gary Green, and any others who may have wit-

nessed this breach of protocol!

So what about the pianos, you say? First, I'll try to clear the rumor mill, while hopefully not adding to it. The rationale behind this new product is to provide existing **Steinway** dealers with pianos that, from a retail cost standpoint, is more in line (and thus more competitive) with other "offshore" instruments of similar size(s). Yes, this means *all* other offshore products, including Kawai. If I understand correctly, the **Boston** is actually another company, and is (or will be) managed as such. However, the parent company's name is not exactly confidential information, and will likely be used (and abused) repeatedly.

You might think of it this way: the Boston is the product of Steinway engineering. All elements of the product are controlled by Steinway, from case and scale design to what hammers to use and in what "flavors" the pianos will be available. They then contracted with Kawai for manufacture, relying upon Kawai's history of accomplishing high-volume production while maintaining consistent quality.

Checking out the Boston Grand

Sauter lithograph series

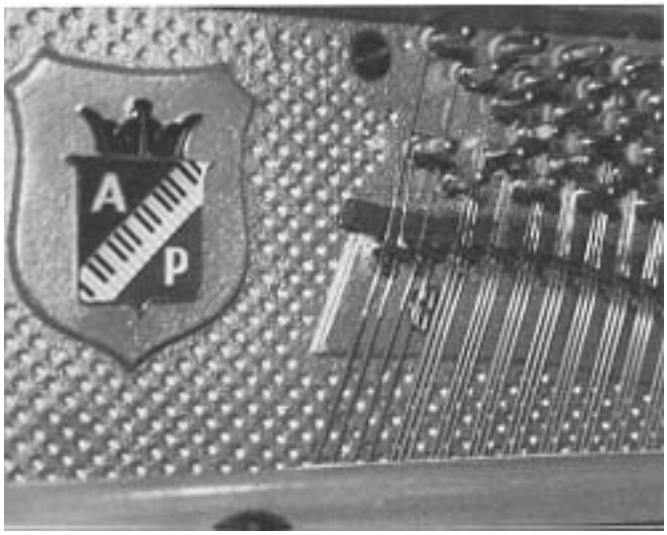
When you look at the piano, it's paradoxical. One area looks like a Kawai, the next definitely does not. Here's where the confusion begins. For example, I noticed that the tail of the rim is noticeably wider than (any) Kawai, "netting about six percent more soundboard area," according to one spokesman. But six percent more than *what*? Again, "the hammers are new, with reinforced shoulders." Since the product is just now being introduced, *newer* than what? Steinway? Kawai? Apparently I'm not the only one who's having an identity crisis.

I do think this issue can be easily resolved, and propose that we, as technicians, not add to the confusion with the following attitude: Is it a Steinway? No. Is it a Kawai? No. Does it sound or play like either? No. Nor was it meant to—it's a Boston!

I will also suggest that each of you make your own judgements about the Boston piano(s). You will have to anyway, since they are already being shipped to your neighborhood. Meanwhile, to give you *something* to think about: the grands feature duplex scales (both front and rear), the action features wooden parts mounted on aluminum rails, and the rim is of two-piece construction (inner/outer).

While finishing up a conversation with a dealer, Don Mannino of **Young Chang** pointed to the company's model G-208 (6'10") grand. A sign on the piano read "Prototype Grand Action." While it is not my custom to take show pianos apart, I will sometimes give one a test drive, and did so while waiting for Don to return. Although there seems to be a tendency today to make actions feel smoother and smoother, (almost like they have power steering), this action represented more of a "feel of the road" characteristic. Whether this was a result of the regulation of this piano or a by-product of design is not known. This in no way affected its playability, however. This instrument, being inside an "almost" room, was the only piano I could check in a closer-to-traditional setting. It sounded good and well-balanced.

On Don's return, he mentioned that the purpose of the prototype action is to provide a little easier escapement, not quite as much resistance, and thereby more control in pianissimo playing. The was accomplished by changing the jack angle; by moving the jack center pin toward the wippen center pin between 1.5 to 2mm. This causes the jack angle to no longer be in line with the knuckle core, rather about 4 degrees off. It is still regulated the same way, but the position to the core is now off. And with the jack now positioned closer to the jack (repetition) spring, that portion of the spring is of necessity shorter. This causes more spring tension, faster jack, and faster repetition. Don repeated that these are prototype ideas, not production models, and that the piano was placed



Petrof press-fit agraffes

there to solicit reactions. I don't know whether mine counts or not!

He added that this model also incorporates a (replaceable) hard brass bearing rod located under the capo bar, cut into a vee in the plate; the goal being for the piano to tune nicely, as well as to offset any possible plate inconsistencies in this area.

Other items in production are that the hammer rake has been changed on new Young Changs to 91 degrees; old Young Changs (I didn't say that) were 92 degrees; the soundboard crowning method is changing from a flat press to a belly press method, and a higher magnesium and carbon content in their tuning pins (resulting in a stronger pin, and less twisting/flexing characteristics).

Russ Kassman pointed out a new twist from **Sauter**; a vertical piano that features not only a built-in hygrometer, inside on the treble side panel, but also a built-in miniature commissioned lithograph in a special brass-framed area on the upper panel. Although the miniature lithograph could be changed, the piano is also sold with a full-size framed version of the same image. There are several lithographs available, to coincide with a potential owner's hobby or preferences, whether hunting, golf, polo or several others.

A few displays were difficult to find at the show, in spite of (or maybe because of) maps of the complex. In fact, there were a couple I never *did* find before the lights went out. One group discovered late on Sunday afternoon was the Geneva International group. **Petrof** pianos is a part of this Czechoslovakian co-op, along with what are otherwise predominantly band and orchestra-related instruments. They were stuck right in the middle of the electric guitars, drums, and other volume-intensive instruments. By this time, the booth employees could barely talk, having been required to tax their voices for the entire three days. If that wasn't bad enough, Lucian Hut was excited about my trying out a small, pretty Petrof grand. I went through the motions, could *see* the keys go down and the hammers come up, but that was about all.

Samick introduced the SU-110, an institutional-style piano. Also, the SU-243 is being dropped, to be replaced by the SU-343. And according to Richard Elrod, this model will be assembled in the United States, using cases provided by Kimball, and the backs, actions, and hardware components being shipped from Korea. Richard mentioned several other minor product changes, but my tape machine chose this moment to die!

I managed to say "howdy" to Steve Smith of **Dampp-Chaser**, who had come up with a new point-of-purchase marketing aid that should help both dealers and technicians. **Gulbransen**'s main focus is that of MIDI retrofits for *any* piano. Although I did not get to talk with Reid Baer, their national sales manager, there are plans to review this product and/or the installation thereof in a future issue of the *Journal*. And **PianoDisc** was showing a recording feature that augments their (until now) playback only retrofit, but I could not get a

The Boston Action

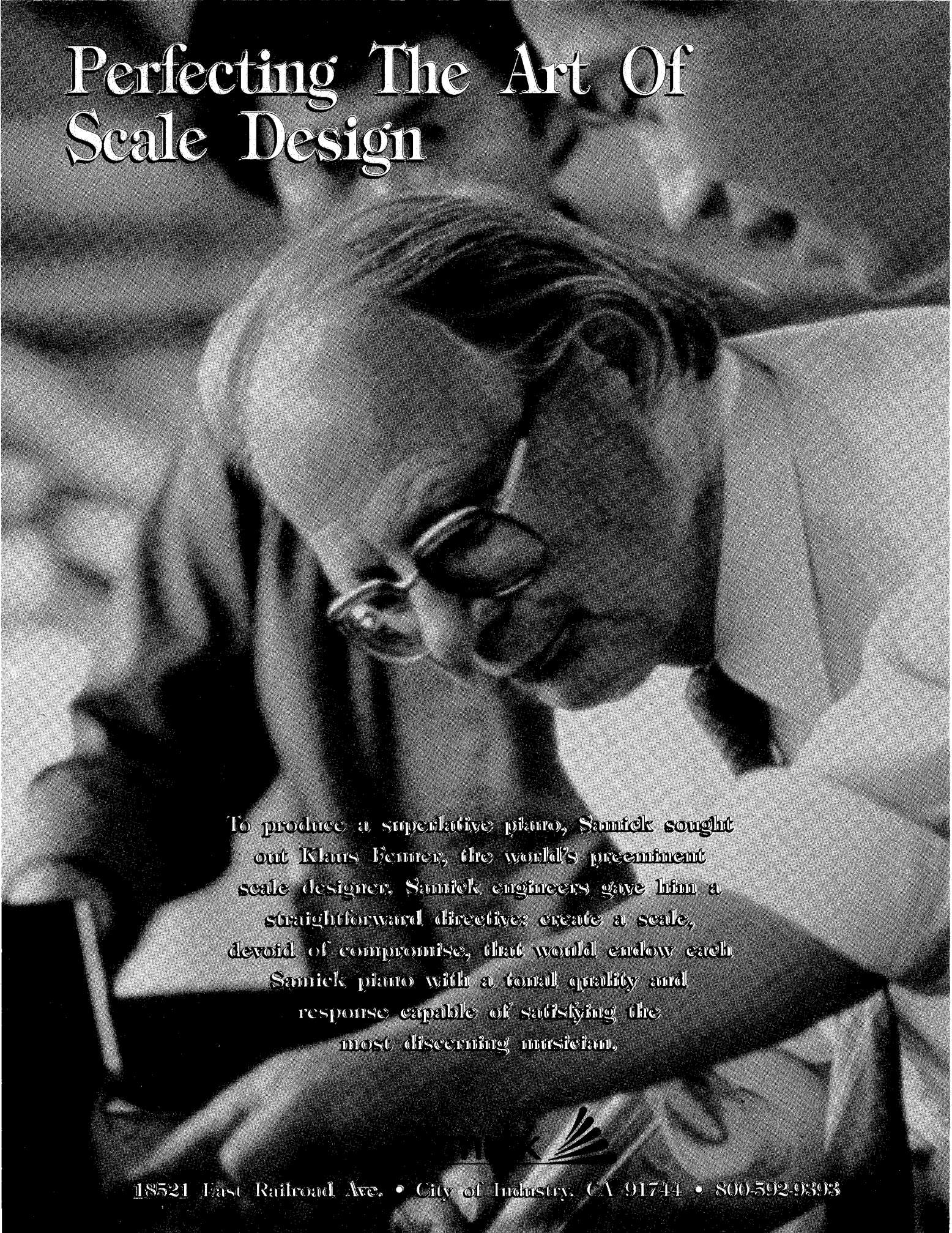
All dressed up AND a place to go!

definitive answer as to when this option will hit the streets.

In an attempt to get an overall feel for the show to share with you, my original impression (first day) was that the acoustic piano area seemed lighter (traffic-wise), than in previous years. Does this have to do with the general state of the economy, or does it deal with the overall situation concerning acoustic pianos. The second day seemed better, the last day off again. Manufacturer's representatives must intrinsically have a positive attitude in their responses, and polling various individuals about *their* opinions provided equally confusing results, so I finally gave up the pursuit of answers, and relied on instinct:

- a feeling at times that I was review ing station wagons instead of pianos, due to the incorporation of new materials, hydraulics, push-buttons, and other "convenience" options. But this simply means that manufacturers are trying very hard to "hang in there," and provide potential piano owners with what they want, or what they *think* they might like;
- the observation that floor space for acoustic pianos was being displaced even more than before by their electronic or digital counterparts (or hybrids thereof);
- the personal perception (and hope) that in spite of electronics, acoustic pianos will ultimately, albeit slowly, win out. Keyboard musicians are now testing other avenues of artistic expression, but many of them miss the acoustic piano, and eventually find their way back to them. *How ever*, MIDI-interfaced acoustic pianos are not only here to stay, they may actually *cause* a resurgence of the acoustic piano. But don't let this information intimidate you. At the appropriate time, the knowledge you need to service these devices will be available to you, a lot of it through articles herein.

In conclusion, we *do* have an option as to whether NAMM coverage is provided in these pages. We have not *always* had such articles, and I'm curious as to whether: (1) the information is being read, and (2) there is any knowledge or enlightenment being obtained from the report. Opinions anyone?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Practically Speaking

Soundboard Crack Repair

Part 1

Bill Spurlock, RTT
Sacramento Valley Chapter

Soundboard cracks, by themselves, do not necessarily constitute a problem requiring repair. Many older soundboards have some cracks, and most of us have probably heard pianos with badly cracked boards that sounded remarkably good. Thus it is seldom appropriate to tear down an older piano solely for the purpose of repairing a soundboard crack. On the other hand, these cracks are a symptom of climate stress upon the piano, as well as being a cosmetic defect, and so should always be repaired along with other damage whenever a piano is undergoing major work such as restringing.

Knowing that cracks are only one symptom of excessive humidity fluctuations, we should first determine what other deterioration has taken place before deciding that the old soundboard is worth fixing. Here I would look at two aspects of the soundboard: tone and structure. If the piano no longer produces a singing tone (as determined by plucking individual strings in various parts of the scale and listening to the sustain time of the tone), then we have no guarantee that our repairs will restore a satisfactory tone. The subject of evaluating soundboard condition was covered very well in the following Journal issues: October '83, pg. 16, by Chris Robinson; November '88, pg. 19 by Nick Gravagne. I will not repeat that material here, but will just mention that where the sustain time is very low you will often notice that the board has very little crown, or has reverse-crown in some areas.

The structural condition of the soundboard also has to be good enough to warrant repair. If a board has been through enough stress to cause 20 or 30 cracks, then we can assume that the entire board, and not just the cracked areas, has been damaged and may not hold up in the future. Likewise, if each rib is loose from the soundboard in spots, we can assume that the remaining intact glue joints are very weak and ready to fail. In this case repairing only the visible problems will not make a reliable long term repair.

Of course, not all pianos are worth the expense of a new soundboard, and factors such as piano size and quality and the owner's needs and desires must be taken into account when deciding whether it is worth doing major work at all on a piano with a questionable soundboard.

Goals of Soundboard Repair

Given a soundboard that is worth saving, we should seek to restore the bridge/soundboard/rib/rim assembly to a sound structural unit to make it as much like new as possible. All glue joints between these components should be secure. In repairing cracks we should install shims tightly so that they will be under compression along with the rest of the board, thus preserving or even enhancing the soundboard's crown. As in any good glue joint, the shims should fit the soundboard perfectly and without voids to ensure long term reliability. The cosmetics of crack repair are also important, especially in grands.

Carving out cracks to accept shims is made difficult because cracks are never perfectly straight. Instead they wander, sometimes jumping over to the next grain, branching out, and leaning one way or the other. In addition, multiple cracks are often found close together, requiring that a very wide shim of new wood be installed. This makes the usual process of hand-carving using a shimming tool very difficult and time consuming, often leaving a less-than-perfect shim fit. In addition, the hand shimming tool tends to crush wood along the sides of its groove; the result frequently is new cracks appearing alongside the repair in a short time.

By using a router, curved or branched cracks of any width can be turned into perfectly machined grooves, ready to accept an accurate-fitting shim. With this method the repair is faster, the quality better, and the structural integrity of the repair is optimum. The routing can be done using either a small electric offset-base laminate trimmer or a small base fitted with an air die grinder or a Foredom tool. The following is a step-by-step procedure for router repair of soundboard cracks.

Drying the Board

(Note: All repairs should be completed with the old finish still on the board, since this will make glue squeeze-out simple to remove and help to protect the wood from dents and scratches while working. After all repairs are completed, the board can be scraped, sanded and finished.)
Prior to doing any repairs the soundboard should be dried down to reveal the full extent of the cracking and loose glue joints. This way any hard-to-see cracks or weak areas that are likely to crack in the future can be repaired while you have the chance. However, by over-drying the board it is possible to shrink the wood so much that you create needless further damage. A safe rule of thumb is to reduce the moisture content in the board just slightly lower than that which caused the present damage. You know you have reached this point when the existing cracks become slightly longer and wider than they were before you started drying the board. Use a magnifying glass to look at the ends of the cracks; if you see clean white wood, this indicates new

cracking and proves that the board is drier than it has been before. You can also mark the ends of the cracks with a pencil before drying, then watch for them to become longer. Depending upon shop humidity, drying will usually take one to three days.

When drying the board, be careful of fire hazard! Electric heaters and heat lamps will build up extreme heat in the enclosed space under the piano and can cause a fire. A very safe and simple method is to fasten about four 25 watt Dampp-Chaser rods under the piano with the spring mounting clips provided. Drape the piano with blankets covering the top of the board and hanging down to the floor to contain the heat but still allow moisture to escape. The top surface of the board should feel noticeably warm, but not hot, during drying. The spruce board to be used for shim stock should also be dried at the same time by laying it on top of the soundboard and under the blankets.

Remember that you are only trying to identify the extent of all current weakness and not to create more cracks to repair. Even a perfect soundboard can be made to come apart if dried excessively.

Repairing Loose Glue Joints

After drying the board, inspect it thoroughly for any loose glue joints. An artist's thin palette knife is useful for probing between ribs and board, and around the edges of the board along the rim and belly rail. To help re-establish the original shape and structure of the board, the crown should be forced up with wedges prior to any glue joint repairs. Use wooden wedges between the beams and ribs, padding all surfaces with old backrail cloth to prevent scarring. Here again, discretion is needed. Like the bottom of an oil can, the board will deflect a small amount easily and then become very resistant. Stop before you drive the board loose from the rim or break a rib.

I prefer to repair these joints with hide glue, since in most cases that is the glue that was used originally; since we cannot open up the joints to clean out the old glue residue, I feel it is better to use a glue which is compatible with, and will re-activate, any remaining old glue in the joint. Regular hot hide glue will not have an adequate working time here, so you will need to slow down its gel-time by adding urea (a fertilizer, found at gardening stores and also available at pharmacies) in the proportions of 2 teaspoons urea per tablespoon of dry glue granules or more as needed. Alternatively, you can use cold liquid hide glue; just make sure that it is fresh - it should be very liquid in the bottle and should set up strong and hard on test scraps.

Loose soundboard-to-rim joints can be clamped using bar clamps between the lower edge of the rim and wood blocks extending above the rim on top. My favorite method of clamping loose ribs during re-gluing is with the tuning pin clamp block shown in ***figure 1***. This clamp is a simplified variation of a common design, and was suggested to me by Marcia Davis of the Modesto, CA chapter. It consists of a 1 1/4" x 1 1/4" x 2" hardwood block fitted with a single tuning pin. The pin should be snug but much looser than a pin block fit. A piece of #13 piano wire is run from the becket hole down through a tiny hole in the board (or through a soundboard crack which is often present), around the rib, up through the board and into the becket hole from the other side (#13 wire is small enough to fit double into a becket hole). The ribs must be padded as shown with thick leather to prevent the wire from cutting into the wood. With the wire in place, the pin simply has to be tightened moderately to pull the joint together.

It is easiest to re-glue loose ribs when the piano is on its side on a moving board; this gives good access to both top and bottom of the board and eliminates glue dripping on your face! Before applying the glue, have your clamp parts at hand and ready to install. With your palette knife, work glue into the joint; then quickly install and tighten the clamp and wipe off any squeeze-out. When all loose ribs are clamped, stand the piano back up and continue drying with slightly reduced heat, or proceed directly to crack repair if the clamp blocks are not in your way.

Routing Systems

At this point I would like to insert the disclaimer that the purpose of this article is not to push my own products, but rather to share some methods which I believe will benefit

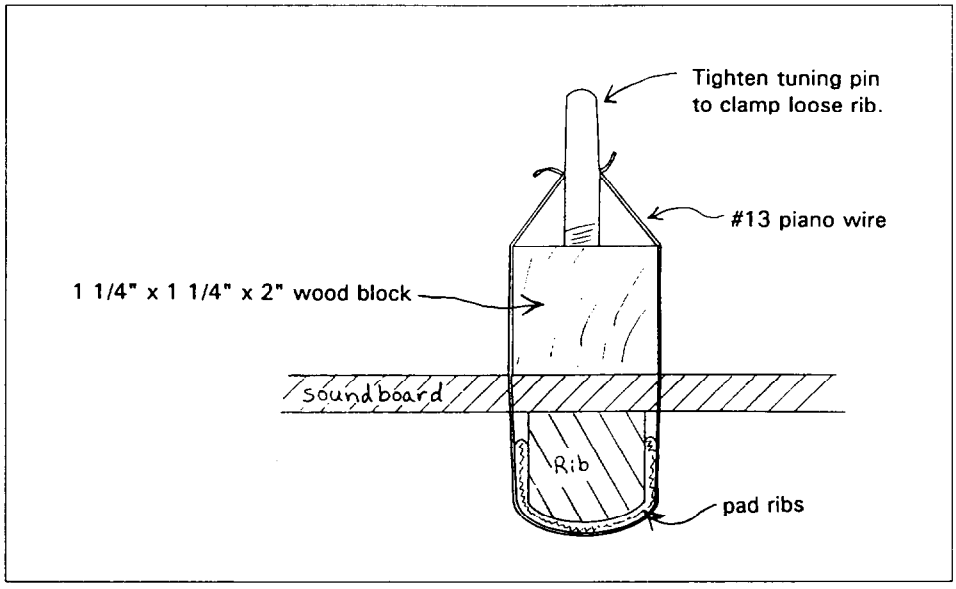


Figure 1

anyone doing soundboard repairs. The problem in presenting these methods is that some of the tools required are simply not available off-the-shelf from most sources. I will point out alternate sources where available, and encourage anyone who prefers to make their own tools to copy or modify the system presented here for their own use.

My preference in routing soundboard cracks is to use a tapered bit rather than a straight one. With a tapered groove and matching shim, the shim can be installed under compression and the glue joint clamped tightly, whereas with a straight-sided groove the shim must be fitted with a slight clearance to the groove in order to be inserted. Also, normal wood glues (which contain water) will cause the shim (or groove) to swell slightly, complicating assembly.

Another advantage of a tapered shim is that it will adjust to accommodate variations in the width of the routed groove by simply seating deeper in wider areas. If the shim is cut from 1/2" or thicker lumber, a single size of shim will fit a range of groove widths, rather than having to be custom-cut for each groove. This makes fitting a shim to the groove a simple matter.

I prefer to use shims with an angle of around 10° per side. This is a slight enough taper that the shim can be inserted tightly, but is not so straight that there is any danger of driving the shim in too far and crushing wood. Unfortunately, router bits with an appropriate taper and cutter design for this job are not a stock item. For several years I used a couple of bits from Sears which worked adequately but were later discontinued. As a result I now have bits custom made for the trade to my specifications. The only other off-the-shelf tapered bit that I am aware of is a tapered end mill from Production Tool Supply (a machine tool supply company, 800-366-3600). It has a taper of 7° per side and sells for $42.75. The part number is: Series CN59, #C7B2. It comes 3" long, and would have to be shortened about 1" for this use. Some router bit manufacturers can make individual custom bits for you, but the cost is quite high and they usually require five to six weeks to fill an order.

A small router is needed to reach up close to the rim and into tight spots around bridges. One option is a small offset-base electric laminate trimmer, preferably the Makita. (Most other brands do not have any way to adjust depth of cut, other than to pull the bit farther out of the chuck.) Offset-base routers have a belt driven chuck that is offset to one edge of their base and can reach to within about an inch of the rim or a bridge. Since the soundboard surface may be somewhat uneven, you should attach three small feet to the trimmer base so it cannot rock during cutting. Soundboard buttons will work fine, attached with screws through existing holes in the base.

Another option currently being developed by Bill Sadler of the Twin Cities Chapter is a special base made to hold the hand piece of a Foredom tool. Contact him for information.

I now manufacture the router base shown in *figure 2*; it uses either a Foredom tool or a compact air die grinder as the power source. For those with a 1 1/2 hp or larger air compressor, the air die grinder is the least expensive way to go. These tools are widely available for under $30.00, and are a very handy tool to have around the shop for other jobs as well. Used free-hand with a rotary file they make quick work of fitting pin blocks to plate flanges, for example. Check hardware or tool stores that carry air tools, or discount tool catalogs. Sample source: Air die grinder, item number 00282-3PKF, $19.99,

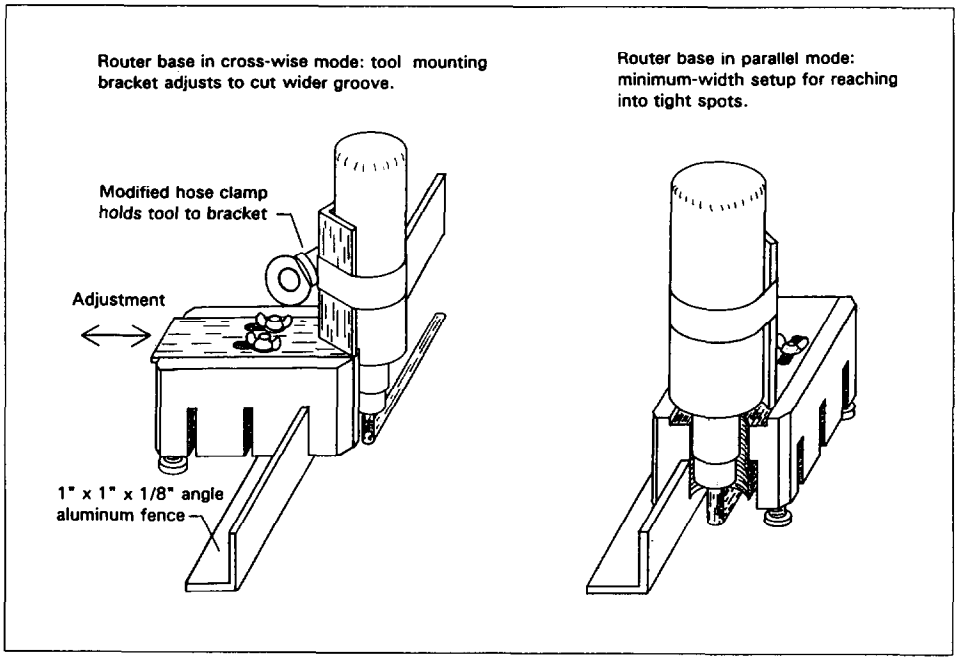


Figure 2

from Harbor Freight Tools (800-423-2567).

The air router can be used in two modes: cross-wise to the fence or parallel to the fence, as shown. The cross-wise mode is the most useful because it allows you to widen your initial cut up to 5/8" to clean up wandering or multiple cracks without remounting the fence. Since you don't have to move the fence to widen the cut, you can attach it to the board with double-stick foam tape, which is more secure and simpler than using clamps. When running in this mode, the router can cut a continuous slot from within about 3/4" of the rim all the way off the belly of the piano.

This router also has slots running lengthwise through its base, allowing it to ride parallel to the fence. In this mode the path occupied by the router and fence is only 2 5/8" wide, allowing routing between a bass bridge and the rim or between bass and tenor bridges in many pianos. Some width adjustment is still possible in this mode by shimming between the grinder body and bracket. Continuous rim-to-rim cuts are not possible without stopping to turn the router around at one end of the cut, however.

SETTING UP A ROUTER GUIDE FENCE

Any router ***must*** be guided by a fence to ensure a straight cut. For the electric router, this can be a straight piece of wood or angle metal clamped to the soundboard. However, you must be sure to always use the correct feed direction so that the bit rotation holds the router against the fence, rather than pushing it away from the fence. The air router uses 1" x 1" x 1/8" angle aluminum as fence material (available from most hardware stores); slots in the router base engage the angle metal so the router rides along like a monorail, supported by the fence and by nylon screw "feet". This system provides a positive guide system for the router, eliminating any chance for the bit to veer off its path.

Fastening a fence to the soundboard has always been one of the most time consuming parts of this job. If one end of the fence extends close to the rim it can be held down with a wood block slightly taller than the rim, and a bar clamp down to the lower edge of the case. At the belly (damper guide rail area), you can C-clamp the fence to the belly rail, or to a block of wood that has been temporarily screwed to the belly. However, longer fences or fences ending in central areas of the board are harder to deal with. A router puts a strong side force on the fence as it cuts, so a long fence should be secured every foot or so along its length. Two methods commonly used are go-bars placed at intervals along the fence, or small brads driven through the fence and into the soundboard.

Recently I was introduced to a superior method of fence mounting by John Foy of the Winston-Salem Chapter: 1" wide foam mounting tape. This is a double-stick tape made of 1/16" thick foam material, and commonly sold in stationary and hardware stores for mounting pictures to frames, etc. I use 3" long pieces of tape centered every 10" along the fence. The tape is faster and easier to use than clamps, and holds the fence very securely. The only disadvantage of tape mounting is that when using the electric laminate trimmer which slides alongside the fence, you cannot shift the fence sideways to cut a wider groove without pulling it off, fitting new tape, and re-mounting it in a new location. Instead you would have to attach a shim to the side of the trimmer base or fence in order to space the router over and make successive passes to widen the groove. As mentioned above, the router base with an adjustable bracket eliminates this problem.

To mount the fence, wipe any dust from the surface of the board and mark the correct location of the fence in relation to the crack. Apply your tape pieces to the bottom of the fence and press it firmly into place. The mounting tape is strong enough to easily hold the angle aluminum fence down to a normally crowned soundboard. However, sometimes there is an exaggerated crown close to the rim, requiring that one clamp be used there. In any case it is best to remove any wedges from underneath the board so crowning is minimal

story continued—next page

during routing; the crown can then be wedged back up prior to gluing in the shims.

After routing, the fence can be removed from the board using a small pry bar; the tape will lift some of the old varnish off with it, so new pieces will have to be used next time.

ROUTING OUT THE CRACKS

Determine the length to rout - Prior to routing, you should inspect the board closely and mark where the cracks appear to end. Sometimes the board will be under considerable tension from drying so that right after routing, the crack will suddenly spread beyond where your routing stopped. To avoid this, it is wise to always stop your routing at a point over the center of a rib. The rib will then hold the board together until the new shim is installed.

Check for free movement of router - always "dry run" the tool over its path before actually cutting, making sure there are no obstacles and planning your cut. Make sure that the router slides freely against the fence, since any roughness or binding can cause chattering or an uneven cut.

Always lubricate the old varnish surface of the soundboard with a cake of bee's wax or a bar of soap where the router feet ride, otherwise varnish will transfer to the router base and cause sticking. If using the air router with the aluminum guide, make sure that the tilt of the base is adjusted using the screw feet so that the slot lines up vertically with the aluminum and cannot bind. If using the center fence slot, install screw feet in both ends of the base, so that the router is supported by the screws and not by the fence - this will prevent rocking. If using the rear slot, again use two front screws; the rear of the base can just ride on the fence.

Use proper feed direction - always feed the router in the proper direction, taking into account the direction of rotation of the bit and the forces it will place on the router. For example, when the electric router is slid alongside the fence, it must be fed such that the rotation of the bit pushes the router against the fence, rather than away from it.

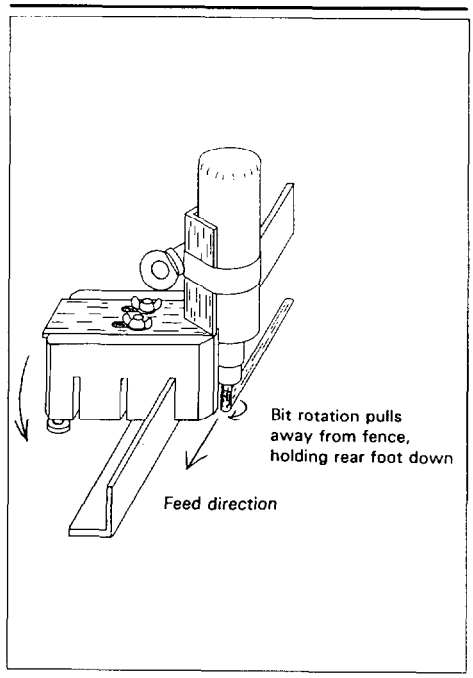


Figure 3

When using the air router riding cross-wise on the aluminum fence, it should be fed such that the bit is trying to pull away from the rail, thus holding the rear foot securely in contact with the board as shown in ***figure 3***.

When the air router is riding parallel to the fence, feed can be in either direction since the slot in the router base prevents the router from wandering.

Make one continuous cut - When making a cut, always move the router from one end of the crack to the other in the same direction and without stopping if possible. This will ensure that the groove is uniform along its length. Once you are at the end of the cut, you can slide the router back in the reverse direction just to clean up the groove as long as you hold it down firmly against the board and fence.

Make your cut in several passes of increasing depth - The smoothest cut will result if done in 3 or 4 stages. Also, since most soundboards vary in thickness, you will want to sneak up on the bottom of the board, rather than to cut to full depth only to find that the bit cut into a rib in a thinner area of the board. Where board thickness does vary, I normally compromise by allowing the bit to cut into the ribs by 1/32" in the thin areas and leaving the groove not quite through the board in thicker areas; the groove can be completed with a knife where necessary.

Widen the groove as necessary - Once your cut has reached full depth, look to make sure that all of the old crack has been removed. In the case of a wandering crack or several cracks close together, you may have to make extra passes to widen the groove. For the electric router running alongside the fence, leave the bit at full depth and move the fence over about 1/16" at a time (or shim between router and fence), making successive cuts to shave one side of the groove until all of the crack is gone. Here your feed direction should be such that the bit rotates against the oncoming wood. If you do move the fence you must be careful to keep it parallel to its original setting. For the air router in cross-wise mode, you need only adjust the mounting bracket slightly between cuts. When in parallel mode, you can insert a thin shim between the grinder body and one side of the bracket to widen the groove.

Sometimes a long crack will be cleaned up over most of its length by a narrow groove, but will have some of the crack remaining at one end only. In this case you may wish to glue a narrow shim into most of the groove, let it dry, and then widen only that part of the groove that has the remaining crack. When routing the remaining groove wider, you can rout into the end of the first shim, as shown in ***figure 4***. I like to locate this end-to-end shim joint at a rib location.

Install a wide strip of new wood if necessary - In cases where you wish to replace a strip of board more than

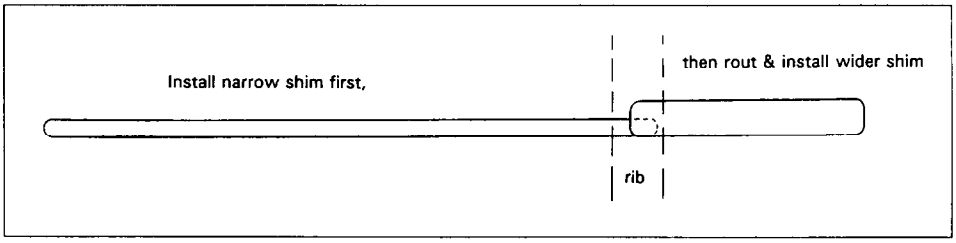


Figure 4

about 1/2" wide, just make two individual grooves the required distance apart, complete the cuts to the rim using a chisel, etc., and pry the bad strip of soundboard loose from the ribs. (If necessary you can rout the piece loose at the rib locations using a 1/4" straight bit, plunging it into the board and cutting down to rib level). Using the air router, make your initial groove, then switch the router base to its center or rear fence slot to make a second cut up to 2 3/8" away from the first. Since both cuts are made from one fence location, they will be exactly parallel and fitting a new section is greatly simplified.

Cracks that run into bridges - To get as close as possible to a bridge, you can extend the bit in the router chuck so that the chuck will just clear the top of the bridge at full cutting depth. This way you can cut right up until the 1/4" shank of the bit contacts the bridge. This is a simple matter with the air router. For an electric trimmer, you will have to make tall dowel feet to attach to the router base. With the bit extended from the chuck you will have to rout carefully with more shallow cuts than usual.

Correcting mistakes - Sometimes you will have a perfect groove except for one bad spot where the wood chipped or the router bumped into something and caused the bit to gouge in one spot. Instead of making the entire groove wider just to clean up a small area, it may be better to go ahead and shim the groove, then come back and repair the bad spot with a separate short shim.

Next month I'll conclude with instructions for making soundboard shims, fitting them to the grooves we've cut in the board, gluing, trimming, and refinishing the board.

Good Vibrations

Locating the Plate

Over the years a few simple methods have been used to locate the plate and pinblock relative to the case. These have included positioning wooden wedges between the plate and case and marking same with pencil or awl, or simply measuring from the case to marks in the plate. A popular technique today requires drilling through-holes located in a couple of places on the plate perimeter, followed by smaller holes in the rim (where the soundboard is glued) which will receive tuning pins. The plate can then be unscrewed and removed and replaced on these pins, with the assurance that it will always go back to its original position. Whatever the method, the goal is to return the plate to that original position, since string lengths and side-to-side string bearing are a function of plate location. For the purposes of this article we will assume that the plate was correctly located either at the factory or by a previous rebuilder.

Being of prime importance, the location of the plate is thought by many rebuilders to deserve more attention than the fit of the pinblock to the case; that is, not only the fit at the bass and treble ends, but at the stretcher as well. Thus the blocks, although properly fitted to the plate flange, are purposely cut undersize relative to the case so as to allow the necessary fudge factor for jockeying the plate, with attached pinblock, into position. The ideal, however, would be to achieve at once the proper plate location, along with a pinblock which is tight to case ends and stretcher—what is called a full-fit pinblock.

A few months back Susan Graham and Wally Brooks collaborated on a fine series of articles on pinblock work. They stressed the importance of a tight fitting block both to case and flange. In brief, in order to attain a fit to the case, a couple of small holes were drilled through the plate (in the tuning pin area) and into the old block. These drilled holes then served as not only measuring guideposts, but also as registration holes which later would tally with the new pinblock. Done carefully, an accurately replaced pinblock will not only be tight to the case, but will automatically position the plate to its original position fore-and-aft and side-to-side as well. Backup measurements are usually taken, but they rarely will be necessary as overrides.

I know that many rebuilders have their own ways of accomplishing a full-fit pinblock. But I also know that many think such a fit unnecessary both structurally and, as they believe, in terms of the extra required shop time.

As to structural integrity, a tight, glued fit to the case ends and stretcher deserves a hearing. First of all, this is the way Steinway and Yamaha (to name only two) build their pianos. Those rebuilders who strive to reproduce the builder's intent will follow suit. Some insist that a tight block enhances tone, or at least provides the best basis for quality tone. Others wonder if better tuning stability is an attractive by-product. At the very least, a well-fitted block unifies the case as a whole, while providing a solid foundation for tone production. Besides, if nothing else, the flexible stretcher requires some means of securing it to prevent it from "flapping in the wind".

As to extra shop time, rebuilders consistently report that a well laid out pinblock job is faster and easier to do over an approach that requires the fudge factor mentioned above, or one that relies on excessive plate hoisting, or perhaps one that demands a last minute (and usually creative) never-done-the-same-way-twice sort of mentality.

So, like Susan and Wally, I believe that a pinblock should be tightly fitted along all four edges: the plate flange, the two ends, and the stretcher. My method of accomplishing this goal relies on the use of a posterboard pattern, made to fit over the top of the original pinblock, and flush to the ends and stretcher.

PRE TEARDOWN

After the strings and tuning pins have been removed, three 1/8th inch holes must be drilled through the

Photo 1

Pinblock Using A Pattern

Nick Gravagne, RTT
New Mexico Chapter

plate and right through the pinblock. **Photo 1** shows such a hole being drilled with the aid of a guide block to assure a reasonably perpendicular entry. At least two other holes are drilled; one near the bass end and another about midway. Take care not to drill too far rearward or you will drill through the plate flange rather than the pinblock. Due to the large amount of carbon in cast iron (graphite in essence) plates are easy to drill. The drilled holes are inconspicuous, and they don't weaken the plate.

THE PATTERN

After the registration holes have been drilled, take a couple of case-to-plate backup measurements. Remove all screws and hoist the plate out.

A posterboard pattern must now be constructed. But first a note on posterboard. The most commonly available stuff which can be found at stationery and department stores measures about 15 to 20 thousandths of an inch thick. Thicker is OK, but not thinner. Posterboard, like wood, is hygroscopic, and will swell and shrink with humidity. So acclimatize some posterboard stock in your shop for a few days before making the pattern. Patterns can be made of other materials as well, such as very thin plywood (search hobby stores for it), or even rigid plastic sheets.

The pattern must be able to lie flat on top of the pinblock, but some old Steinways prevent this, due to the presence of an un-routed edge of wood rising up along the stretcher, as well as the bass and treble ends. Chip this off with a chisel and mallet.

The pattern is made of two or three pieces beginning at the treble end. Viewed from the top, and imagining the stretcher to be the base line, the treble edge of the pinblock is larger than 90 degrees. So how to make the posterboard conform? First lay a piece of posterboard down on the block and butted to the stretcher. Rough-cut it with a knife along the flange edge. Next, slide the piece up to the treble rim (it will only touch in the stretcher corner). Now, as in **photo 2**, butt a straightedge up against the rim and draw a line on the piece. Remove the piece, and cut on the line with a utility knife guided by a straightedge. Replace the piece and it will snugly fit both the stretcher and the rim. Tape the piece in place. Repeat this process at the bass end. If the treble and bass pieces do not overlap for joining, a third piece will have to be added in. Join the pieces with glue-stick glue and wide, clear tape. The completed pattern is shown in **photo 3**.

Before removing the pattern to a safe and ambient storage location, the three registration holes must be punched through. This is done from the underside of the pinblock with a punch, such as a nail. My punch for the purpose is a small screw starter which happens to have a shank slightly smaller in diameter than the 1/8 inch hole. Whatever you use, the holes are best punched from the underside through the top. As the punch will tend to lift the pattern, take care to keep the pattern flat on the block surface. When the hole has become evident, finish punching it from the top. **Photo 4** shows my screw starter punch piercing the pattern and inserted in the block. Notice the hole

Photo 2

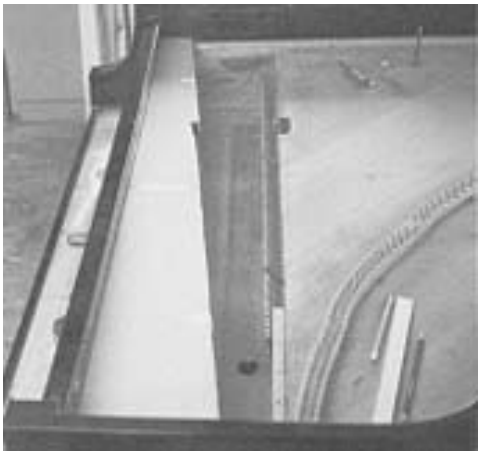


Photo 3

reinforcement (white square) glued to the pattern. Make these from scrap posterboard, or even wood. Drill 1/8th inch holes in them and glue them to the pattern at each hole using the punch or a drill bit to guide them exactly into place.

This pattern making process takes maybe 15 minutes, but saves untold guesswork, measuring work, and fudge work later on.

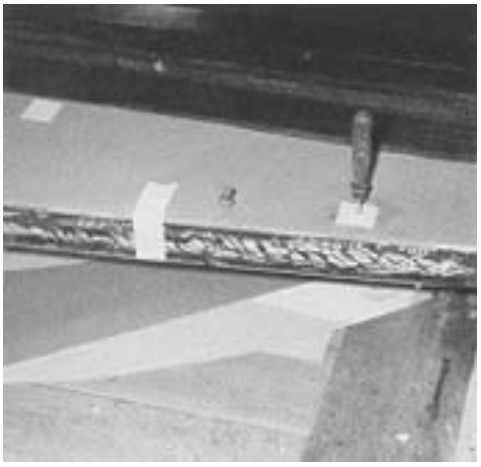


Photo 4

After making the pattern the next step would be removal of the old block. This is a subject unto itself and will be treated at another time. What follows here is an explanation of how the pattern is used in laying out and cutting out the new pinblock.

HOW TO USE THE PATTERN

When it comes time to cut out the new pinblock, allow for extra length at the ends, and allow for it to be too wide at the stretcher edge. Fit the block to the plate flange as usual. Drill all plate screw holes and install all screws. But *don't forget to drill the 1/8th inch registration holes into the new pinblock.* Remember, the holes are in the plate. Just follow them through into the new wood. Remove the plate screws and the pinblock. Place the block on your bench and install the pattern by pinning it in place with 1/8th inch drill bits, or nails, or dowels. (I use dowels). Now scribe a line with a sharp awl, outlining the pattern onto the new block. To make the line more evident follow it with a very sharp pencil. **Photo 5** shows the pattern pinned in place on the oversized new block. Selected plate screws have been installed to help steady the pattern for the scribing process. After scribing the line, unpin the pattern and remove it. Finally cut out the pinblock on the bandsaw.

In making these final cuts, keep a few things in mind. First, for safety and accuracy, it helps to have an assistant support the long pinblock. Note that woodworkers prefer to cut on scribed lines which have depth and uniform width, rather than pencil lines which don't. The idea for an "inside pattern, outside line" is to cut the scribed line away, but no more. If the line is still showing after the cut has been completed, the workpiece (in this case the pinblock) will be too long. You might want to consider making the end cuts at two or three degrees off 90 to make the fitting to case easier. I have never done so. The long stretcher cut will be impossible to cut perfectly straight on the bandsaw, and fencing is impractical. So make this cut as close and as straight as you can but let the line show just a bit. After the long cut has been made, use a hand-held electric planer or belt sander to true up the edge. This does not require a great deal of skill. Anyway, a perfect edge isn't necessary since the block will be glued to the stretcher with a thick application of gap glue. Don't worry if bandsaw marks show in some places while planed/sanded marks show elsewhere. What does matter is that the front-to-back dimension of the block conforms to the pattern, especially at the ends.

TRIAL FITS

After the cuts have been made, try fitting the block to the case. One popular technique is to set one end of the block on the rim shelf (usually the bass shelf), and lower the other end onto its shelf. Due to the thickness of the block this enjoys only partial success. But try it anyway. Surprising how many times the block will, with a few mallet taps, fall into place. You may want to rasp the bottom corner of the block for relief clearance if you did not make the end cuts a few degrees off 90. Another technique takes advantage (in some pianos) of the wider than 90 degree conditions of the rim-to-stretcher. This allows placing the block a couple inches rearward of the stretcher and tapping it toward the stretcher, snug into place. If it is snug-tight, fine. But if the block won't be tapped into place with reasonable ease, it is too tight at the ends. Remove the block and look for smudge marks on the ends. Rasp these away and try-fit again. To remove a snug fitting block, use a "Wonder Bar" (flat steel pry bar) to easily pry it away from the stretcher. During the trial fits it helps to pin the pattern in place and observe the overall fit according to the pattern

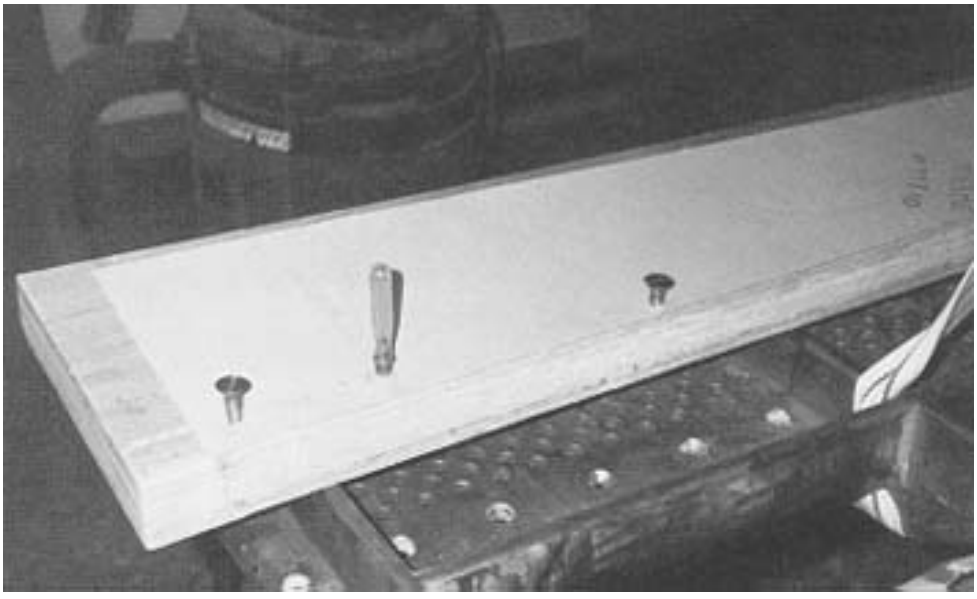


Photo 5

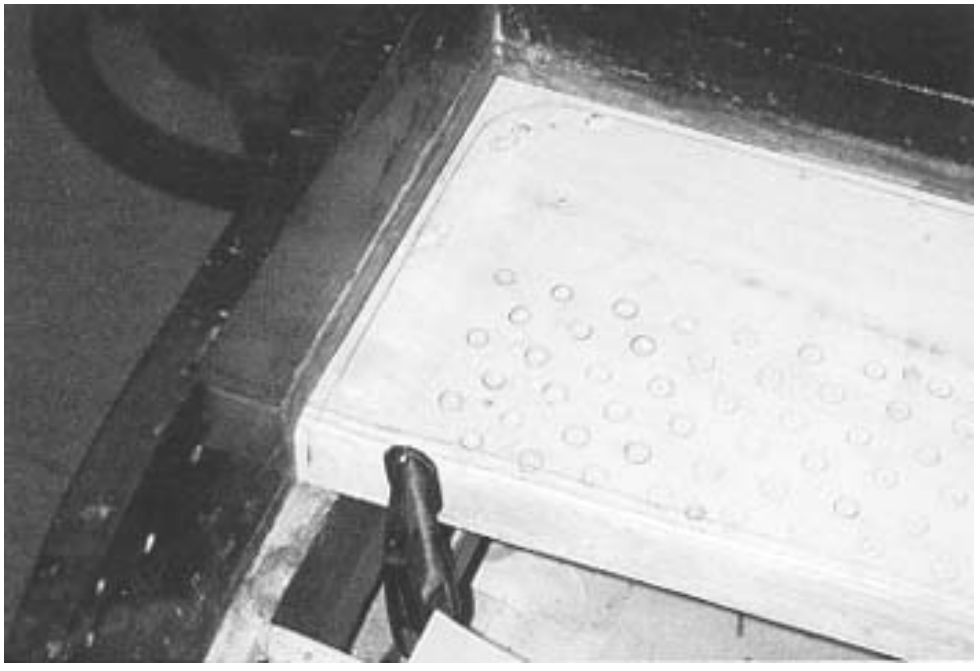


Photo 6

Photo 7

shape. When the fit is looking really close, apply clamps to pull the block up tight to the stretcher. If you made a mistake and removed too much wood at the stretcher edge, all is not lost by any means. But remember that your final location of the block must still be dictated by the pattern. (More on this in a future article). **Photos 6 and 7** show nice fits at the treble and bass ends and at the stretcher.

The last Steinway block I fitted fell right into place the first time. The end scribe lines per the pattern were cut away on the bandsaw, and the stretcher line was cut a shade wide, and trued with an electric planer. I pinned the pattern on, dropped in the block, tapped it into place, and clamped it to the stretcher. That was it. Time spent: twenty minutes.

So what about plate location? Since it is a function of pinblock position, accurately locating the block automatically positions the plate. While discussing plate location, have you ever noticed (in Steinways) the two small registration holes in the plate hitch pin areas, one in the high treble and one in the tenor, which are supposed to tally with holes in the soundboard? Ignoring that these plate-to-soundboard holes rarely line up, you can use this system as a check. Before pulling the plate for the first time, run a suitable drill through the existing plate hole, and right on through the soundboard. Don't worry if you make a new hole in the soundboard close to the factory hole. Now these new holes, since they do tally with the plate holes, will give you a quick reference on how successfully you relocated the plate after all the pinblock work is completed. Again, on my last pinblock job as explained above, the plate-to-soundboard tally holes lined up perfectly. The point I am making is that the final outcome was relatively easy to achieve.

OTHER DETAILS

Future articles will deal with pinblock removal, fitting to flange without the use of glass fillers, drilling holes, and final installation with dowels.

Tuning Corner

Ben McKlveen
Contributing Editor
Cincinnati Chapter

Once upon a time there was a great sage, a wise man skilled in the art of tuning, but also versed in the science of engineering and the black art of electronics and other venerable skills. And it came to pass that he did invent a device for measuring sound, and he did labor mightily in his laboratory until this device was the envy of all who saw it. So perfect and fine in operation was it, that one day he was struck with a profound thought. "Gad-zooks!" he said, "This instrument would be outrageously fine for the testing of neophytes, in order that they may pass their examinations to be masters!"

Whereupon he did set out on a quest, criss-crossing the kingdom and testing all who would grant him the time of day. He did record the tuning of many fine masters and others so that, one day, the material would be at hand for an excellent examination.

While on this quest, he did stop at a byway of this great land and there prevailed upon the local guru to grant him audience for the purpose of statistical gathering. When certain discrepancies did make themselves known in the guru's musical efforts thru the reading of the machine, our sage did attempt to point out and refine these readings. But, he was gently rebuffed by the local wizard, who said, "Forsooth, great sage, remand me not for mine efforts on your behalf. My errors are slight and quite the norm for the land in which I live and work. Greater accuracy falleth upon deaf ears, hereabouts."

The story is true; it has been disguised to protect everybody. The point of the story is to illustrate that, as tuners, we tend to establish our own individual standards of excellence and accuracy. This can include personal behavior, tuning, regulating, or any technique that you want to mention. These standards may be high or low or in between, but they seldom change for the better without some sort of outside influence. The formulation of our present testing program has become an influence that presses, as far as it is able, to establish nationwide standards of accuracy among members of the Piano Technicians Guild.

The use of a machine to establish these standards is "good news and bad news." The good news is that the machine is objective. It has no personal bias, is not bigoted and is non-sexist. Properly programmed, it "tells it like it is." The bad news is that the machine with the blinking lights can be intimidating to those who are inexperienced with its workings and fear can sometimes blunt aural skills that are quite good enough to pass an applicant, but thus intimidated, he or she will fail.

Some people fear that this machine is, somehow or another, more accurate, by light years, than the human ear coupled to the human brain. Nothing could be further from the truth. Let's examine the parameters of accuracy that are possible by aural means. In the 1930's, a musical psychologist by the name of Seashore devised a test to determine, as he put it, the raw attributes of musical talent. These include pitch discrimination - sounds that are higher or lower, sounds that are longer or shorter, sounds that are louder or softer - and the test also checked tonal memory and rhythm memory. By empirical methods, Seashore discovered that the human ear is capable of remarkable accuracy. Non-musicians (people without musical training) can hear pitch differences down to a tolerance of three acoustical cents; most musicians can hear down to a difference of one cent! (Our present Guild exam allows a tolerance of plus or minus one cent.) The Seashore pitch test was given as a comparison of two tones played one at a time, for an evaluation. One tone was played, then stopped, and the next tone was played and stopped, and then you made a judgement. This is the hard way to do it! We tuners are lucky enough to be able to make comparisons by sounding two tones together and thereby utilizing the beat that is present if they are not in tune. The beat phenomenon allows us the luxury of using coincidental harmonics, which work as a sort of aural micrometer in the tuning process.

If we ignore for a moment temperaments and tests, let us look at some minimum standards for accuracy in tuning. I will revert to a musical judgement, if I may, to determine the accuracy of unisons. A musical tempo marking of largo could show up on a metronome as "60 = quarter note". This means that a quarter note would last one second. If we had a whole note in a piece this slow, it would last four seconds. If I were judging a unison, I would not want to hear a beat in that whole note.

So, a minimum standard would be a unison with no more than one beat in four seconds. We seldom listen to notes for that period of time in the tuning process because we can hear a beat start in as little as two seconds, and we can adjust it without waiting for it to run full cycle. This is possible for about two thirds of the keyboard. In the higher range, accuracy suffers a little because the decay rate of strings is faster, until at the very top of the scale, decay is almost immediate. Yet, as aural tuners, we are able to tune rapidly and, in spite of decay, we can tune from a buzz to pure, or very nearly pure, with great consistency.

What do we look for in the accuracy of the temperament? We look for evenness of ascending speeds of thirds and sixths, with fourths and fifths having similar evenness though at much slower beat rates. In the bass, we look for a descending pattern in thirds and sixths, and later, tenths that have an even descending speed to them. We have access to several exotic tests that help us achieve accuracy in the very low bass - tests that are more accurate than most pianos will permit us to use. This same process is repeated in the treble except that we are dealing with evenly accelerating intervals in our tests. In the long run, good aural tuning is not a question of being able to hear. It is being trained to react to what you hear and having the manual skill to put pitches where you know they should go.

Last month, I promised you a discussion about ethics, professionalism, and some words about "Quick and Dirty". Some technicians are reluctant to deviate from their established patterns of tuning procedures and, as a result, seem to tune an endless chain of generic tunings. It is OK and "safe". One seldom gets into trouble with good generic tuning. Some tuners will refuse to tune at any pitch but A-440. I won't quarrel with the choice, but I will state that my own idea of being a professional is not quite so circumspect or conservative. I have always liked John Ford's dictum, which in his classes he states as, "Always render a service".

As a professional, I may not always like what a client is asking me to do. (I use the term "like" to mean "musically appreciate" the request that the client makes.) For example, I like a normal stretch pattern. I don't appreciate an exaggerated stretch pattern, but I will do it to the best of my ability because my clients have asked me to do it and the results please them. ("Well I don't want to do that and ruin my reputation," I hear some conservative voices saying. That's fine with me. If it troubles you, don't do it. I look at the big picture and if it doesn't look like a public disaster, I will proceed, and do the best possible job that I can do.)

This brings us around to "Quick and Dirty". I mentioned this term in my class in Columbus last fall

and a wag in the front row said in a stage whisper, "Aren't they all?" I forgave him his momentary cynicism because he was a friend who had spent many long years in the trenches (and practice rooms) of one of our major music schools and I knew that he was more than familiar with Q & D.

What is "Quick and Dirty"? I can tell you what it is not. It is not a way to conduct your everyday business, or do regular tunings. It is not a way of slopping through service work in a careless manner. It is not an advantage that comes with age or experience, to avoid having to work at getting a job done.

Quick and Dirty is like being a doctor in a M*A*S*H unit during a war. It is hard work! It is getting the most done in the shortest time, or whatever time is allowed. It is emergency work, among other things, and it requires thought and planning. This thought and planning has to be done before one is ever called to perform.

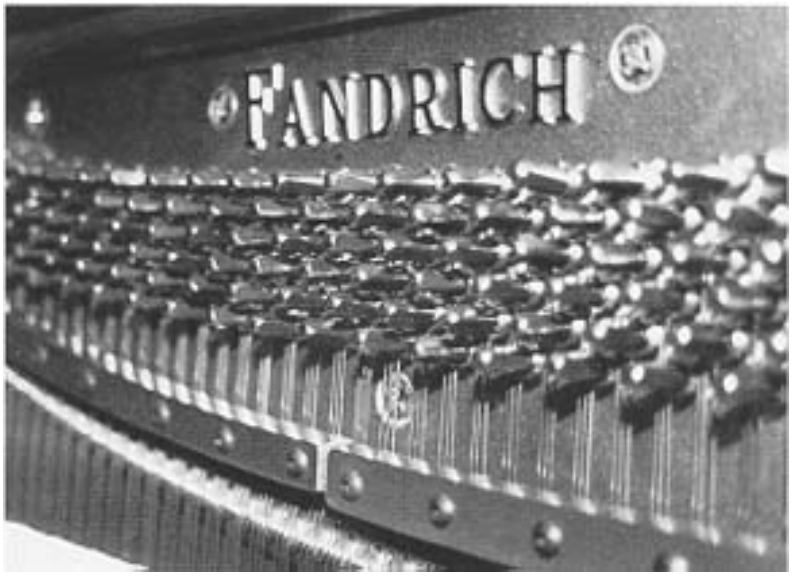
Example: I was called by the chairperson of a high school solo and ensemble contest being held at one of our local universities. Two of the six pianos that they had rented for this event had arrived "fresh out of the crate" and 100+ cents flat - a full half tone low! The students and parents were outraged! I arrived at the school and asked how much time I could have. I was told that if they bent the performance schedule, I could have twenty minutes per piano! It was at this point that I expressed a silent blessing for Steve Fairchild, who holds the world record for speed tuning. Steve had trained long and hard to learn to do this fast and well. My gratitude was in knowing that it could be done. I got the first piano up to A-440, with none of the niceties of regular tuning and only lip service to the top and bottom octaves. The second piano was tuned during the lunch break and I had forty-five whole minutes. It was a piece of cake, compared to the first instrument.

Now, let's examine the ramifications of all of this. Far from ruining my reputation, I was canonized for the day! (It was a Catholic university) I had gotten the accompaniment to match the solos. That was it! It was acceptable and far better than before. I had rendered a service that had required a great expenditure of energy, and I charged accordingly. They paid me willingly and gratefully. I was able to do it because I had a plan, and I had practiced quick tuning when I had the time and there was no pressure. I knew what could be accomplished.

Q & D does not confine itself to tuning. This summer, Bill Garlick will teach a class called, "Panic Regulation". He will address the issue of preparing a "not so great" piano for concert performance in a very limited amount of time. Success as a Q & D artist comes from knowing what to do, and what to leave out. Without prior thought and practice, success is unlikely if not impossible. It is a respected service of the professional tuner-technician, if the technician is prepared and practiced.

The term, Q & D, is a slang expression used in the confines of a peer group. It is a badge of dishonor if used in public to suggest sloppy work.

On The Record



NAMM '92

The Fandrich Piano

An exclusive interview with Del Fandrich

Jim Harvey
Editor

The intent of the following interview is not to show preferential treatment to a particular manufacturer, rather to present what I believe to be a radical departure from marketing-based manufacturing concepts. I have elected to present the interview as recorded, mostly out of self-defense, rather than attempt to explain some of these concepts. Finally, the interview is not all-encompassing. I made several attempts at finding a quiet time (when the booth was not busy), and finally managed to hit it right, in order to get a few moments with Fandrich (the person and the piano).

JH: I'm now in the Fandrich camp; a pretty small camp too, compared to some of the other manufacturers [grinning].

DF: Very small!

JH: Del, I'm just gonna let you run with this and tell me what you would tell someone else, or *preferably*, what you feel technicians would *want* to know!

DF: You know about the action?

JH: Yes.

DF: The action has been written about in the *Journal*. We're now building the action from parts we buy from Renner, and some we make ourselves. We make the jack; we make the spring rails; we do all the action assembly. The keys, by the way, come from Franklin Van Volkinburg in upstate New York. We do lots of little things like the brass damper barrel, which really helps our damping a lot; we can back off of the spring pressure quite a bit, and this gives us a little better action feel. The action is my brother's [Darrell Fandrich] design. We license the design from him and we have an exclusive on it. The piano is new.

JH: The piano is *your* design?

DF: The piano is my design. We're building the piano in the northwest—somewhere! Right now we're in Portland, [but] we're moving—we'll either be in Astoria, Oregon, or a little town called Hoquiam, Washington (the same location as Posey).

The full perimeter plate is our own design, with agraffes of our own design. We manufacture the agraffes, cast [the] pressure bars, or we buy from a brass foundry. No tenor/treble brace; 32-bass. What can I say about the scale? A brand-new scale design, naturally.

JH: This is your own plate, not a modified, existing casting?

DF: This is a brand new, clean computer screen. We used to say "clean sheet of paper", but, we don't say that anymore.

JH: This [piano] is reminiscent to me of the Knight [piano] with regards to the plate.

DF: That is the one, singular similarity between the Knight and our piano.

JH: Well obviously I won't get a chance to tune it, but the Knight's have always been my nemesis at the scale break for tuning. I never knew why, except that there was no strut there, and...

DF: It's partly because of the stringing scale. The scale has a lot to do with how easy it is to tune across braces. This piano is very easy to tune across the bass/tenor break.

JH: In spite of the lack of a strut?

DF: Yes. The inharmonicity falls into place—you don't know it's there.

JH: So there's not the "slow down", "reconsider", and that type of thing?

DF: Right. Now, the back is a very conventional design—as you can see [tongue in cheek].

JH: [laughing]. May I quote you?

DF: Yes! We start with a 50mm thick, laminated panel, and we cut away all the parts that don't look like a piano. The conventional vertical piano backs—vertical bracing—the problem with that is that there are no vertical stresses in the upright piano. All of the stresses in the piano are diagonal or torsional. So we put our bracing in the direction of the stress—in the

direction of the string angles.

JH: Okay, I guess it's important to note the type of stresses we're discussing.

DF: This is tension and compression. Right now [there are] thirty-nine plate bolts total. That's enough so that it locks the plate very securely to this back, and what we come up with is called the "torsion box". It's highly resistant to torsional stresses, which is what *really* is present in the upright back. So this back is very resistant to change. And it's relatively lightweight. We do [have] a full-perimeter plate, but mostly [the lack of weight] it's because of leaving out the tenor/treble break.

JH: All right, so this change converts to tuning stability?

DF: It does. It does enhance tuning stability quite a bit. The other thing it gives us is a very secure base for the soundboard. We support the soundboard only on three sides. It's solid on the treble side; it's solid on the bass and top; it free-floats on the bottom.

JH: It's not attached to the liner?

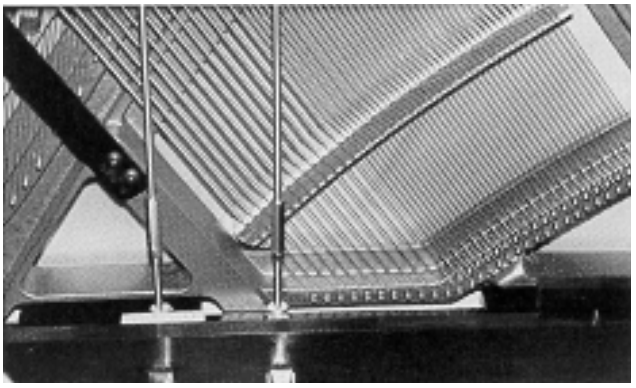
DF: Well, it's attached to the liner, but the liner is not attached to the back.

JH: Uh, okay.

DF: Feel right down there (at the bottom of the soundboard).

JH: [with feeling] Okay.

DF: All the way across...



The unusual pedal configuration for the Fandrich vertical piano.

JH: Now what is this doing for you, giving more freedom—more board flex, or what?

DF: Yes, much more, especially down in the bass and low tenor where you need freedom. Now in the treble, you'll notice we have a highly curved cut-off bar. It's more than just a cut-off bar. I called it an impedance bar, or a "Z-bar". It gives us very short ribs up in the treble section where you need short ribs; and a lot of elasticity. As we move up in the scale, the soundboard in the treble is much like a tweeter—you don't need a lot of movement.

JH: Right.

DF: In the bass—like a bass speaker—you need a lot of movement because you have to move a lot of air. So we tighten up the ribbing in the treble quite a bit to control the mechanical impedance from the string to the soundboard. It gives us cleaner, brighter sound with good sustain. There's no, what I call "hole" between the tenor and the treble, that area that's so difficult to voice: where you've got short, staccato, [and] very little sustain. It's present in all pianos to some degree or other, and we've managed to pretty much eliminate it in [this] scale. This bar, coming down here, which would normally be called the cut-off bar—you notice that the bottom end is not attached to anything.

JH: Yes, it seems to be floating, or suspended...

DF: It provides a transition in the impedance of the soundboard from the treble section to the tenor/bass section. When the piano is being played, you can feel the upper portion of this bar is quite still. As you reach down towards the bottom of the bar, you begin to feel it

move.

JH: Since you were making an analogy with speakers, this would then be your crossover network?

DF: Exactly. Good phrase. I wish I had thought of that. I'll use it!

JH: [laugh]... there's no copyright on the phrase.

DF: Good, good, good. Uh, continuous bridge—you can see the buttons in the back. Here's the bass bridge, which everybody tells me is curved in the wrong direction. I dispute that. Ours is curved in the correct direction, all the rest of them are wrong. [mutual laughter]. Then, as you get down towards the bass, the ribs do run almost all the way across the piano at an extreme radial dispersion. We also use a curved cut-off bar on the tenor side.

JH: I was about to mention that. This cut-off bar then effectively becomes a dead area, which you could just as well saw out [of the piano] if you wanted to.

DF: Well, we're not so sure about that yet, because, it might be just like a baffle in a speaker, where you don't want to just freely suspend a loudspeaker. You see, the acoustic waves couple around the back of it. I toyed with the idea, and someday I will...just...try it out. But I'm not sure what would happen. We might get a lot of coupling around that area.

JH: So, in terms of the back [assembly], we have a transducer...

DF: Yes. That's what the soundboard is—a transducer!

JH: I know that. There may be a test later, and I just wanted to see if you were paying attention!

DF: I see! These are both prototype pianos. The cabinets are about ninety percent of what production pianos are[1]. We still have a few moldings to finish cutting, and the front board is going to be changed somewhat. But this is our piano, 122cm tall. Translated into English, that means 48 inches. The piano is considerably narrower than most upright pianos.

JH: So that's not just a perceived notion on my part? I had noticed that during my "walk-by", but figured that it was just an optical illusion.

DF: No. Notice the bass string angles are much less than many pianos are. The tenor strings come down—note number 33 takes a 12-degree angle, rather than the normal fifteen to eighteen degrees, where [they] come way over [to] the side like this. By decreasing the angle of the strings, it lets us put the strings closer together. We use a much tighter string spacing in the bass section than is normal for a 48" piano. And yet our hammers have plenty of clearance, and we don't have to angle them nearly as much, which makes replacing them a lot easier. It makes a lot of things much easier. And if you will notice, we have plenty of clearance on either side, so that even field spacing is not as critical as it would normally be.

This is the only piano plate—the only upright piano plate that Kelly makes—that is "CNC" drilled and machined. They machine this plate....

JH: I keep hearing that word around here, and know that it must have something to do with a computer-fed tape or something, but what does "CNC" actually mean?

DF: Computer Numerical Control...

JH: Okay.

DF: ...machining.

JH: CNC, not C *and* C?

DF: CNC. It's one of those industry buzz-words that you have to know, otherwise...

JH: This is just a new one for me.

DF: Well, it's been around for a while now. They [Kelly] make all their grand piano plates this way; this is the only vertical plate they're processing this way—as of today.

[Aside on tape, but within earshot of Fandrich]. Uh, just as a note to you, Jim, this piano seems compact and yet somehow massive—overkill in certain areas.] Then, after getting a "look" from Fandrich...

JH: Well, that *was* complimentary!

DF: Yeah, well, it *is* overkill. I got to do what *I* wanted to do on this piano.

JH: For instance this pinblock—I don't know how many working plies, but...

DF: Twenty-one. We also make our own pinblocks. This is what we call our "Oct-a-Grip"

pinblock. Each layer crosses the previous layer at a forty-five degree angle.

JH: Not ninety.

DF: Not ninety. And we make it ourselves and use a cold glue process, with relatively low pressure, so the block itself is very resilient. It really is for *our* benefit as much as anything else, because it gives us a lot of leeway in drilling. It's a very easy block to drill.

JH: And behind the pinblock—what would normally be a filler area—is in fact more "beef"—it looks like four thousand-ply, uh, something or other...

DF: [laughing] It's maple and alder. We make them up ourselves. We buy two panels, which are one-inch thick, and then we laminate those together.

JH: Is this just to further enhance the structural integrity?

DF: That's it, and stability. We've eliminated all the glue joints in the back. There are no filler blocks; there are no vertical posts; no glue joints to come apart—the pinblock and the back become an integral structure. If you look at this construction, it's a lot like you would see if you cut a grand rim in half—laminated wood—stable, does not expand or contract with changes in humidity or temperature. It just sits there and does its job.

JH: Another interesting point is this massive pressure bar, compared to what we're accustomed to seeing. Could you explain the motivation behind that?

DF: Yes. Several really. I'm an advocate of extremely rigid string terminations. Any...

JH: Bravo!

DF: ...any flexibility you have in the string termination point is going to translate into two things: one is going to be falseness in the string; secondly, and to *me* more importantly, are energy losses. This one's [the pressure bar] as large as I could make it, and still get it to fit between the agraffe and tuning pin, and even then, we had to provide a little clearance for the tuner to get the tuning hammer in there. I want as strong—as rigid—a termination point as I can provide. We also provide a very hefty plate flange. The plate is very thick underneath, in a line extending from the bass side all the way over to the treble side—we have a very thick cross-section in our plates in that area, again to provide—mostly in the tenor and treble—a very rigid string termination [and] a very solid seat for that agraffe. There was something else I wanted to tell you...

JH: Okay, maybe you'll think of it. Meanwhile, another point in the overkill theme are the action base bolt blocks. Are these a necessary by-product of the *function* of the action, or...

DF: That's left over from our pinblock building.

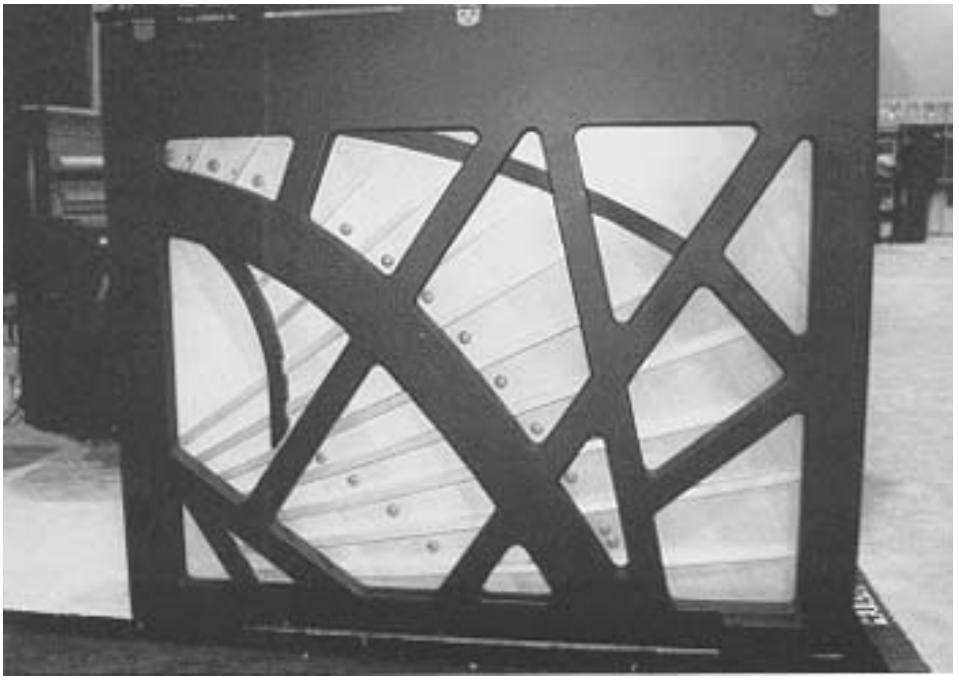
JH: So why not use it [the pinblock material], right?

DF: Yeah, why not use it? We want to provide as solid a base as we can for this structure. I was gonna tell 'ya, we *do* have duplex scaling, [and] we use a vertical hitch pin. It's a grooved hitch pin. You'll notice where the string terminates...

JH: Yes, I can see it now, [looking] from up top.

DF: It's the same grooved pin idea that I used in the Baldwin 'B' grand, and in the Walter—I don't know whether they're gonna use it or not—but the prototype Walter grands also have that. We plan to use this system. It's not an adjustable string termination in the sense that the Baldwin "Acu-just" is. It's adjustable in the factory; it's not intended to be field adjustable. We use a much different crowning system in our soundboards than is common, so, the normal rules of soundboard loading and soundboard bearing don't really apply. So this system

Fandrich back assembly



should never really need to be adjusted.

At this point, the Fandrich booth was again starting to become crowded, so in consideration of their primary purpose in being there, which was to sell pianos, we discontinued the interview. I'm sure that those of you who visit various conferences, and certainly the PTG's national convention, will likely see this piano for yourself. In addition, in spite of *our* convention's exhibit area being somewhat noisy, it is *nothing* compared to the ambiance of a NAMM show, so you should be able to *hear* the piano as well. The only subjective/objective judgements I made were that:

(1) I could not find the tenor/bass scale break without looking;
(2) that A0 *was* a note, not a thud;
(3) that for 48" pianos, these sounded much larger, even with the panels on;
(4) that the "action in a box" (vertical piano) was particularly responsive.

[1]*Translation and note: what the production models will be like. These units, numbers #1 and #2 respectively, were completed and made it to the show just in time.]*

...The Way Things Were *continued from page 9*

of good and people. Captain Dwyer dealt with his competition by buying up river land along both sides of the upper Sacramento River so his rivals couldn't land their crafts. Along with his shipping company, this "pioneer" started the Sacramento Brick Works, with a capacity of at least 200,000 bricks made per day. Bricks from these kilns were instrumental in building our State Capitol, The Cathedral of The Blessed Sacrament and many other buildings you see still today in Sacramento. Eventually, Captain Dwyer's legacy (led by his son, Wm. Patrick) teamed up with two other transportation companies, adding many other steamships to their "arsenal" including both the Delta Queen and the Delta King.

Just as this pioneer relative of mine came to this community, come join us in Sacramento in July. Learn from and mingle with our present day pioneers and entrepreneurs not *just* from California, but from all over the U.S. of A! Maybe even enjoy a meal on the Delta King Riverboat which is permanently moored to that same "embarcadero" in Old Sacramento. And, oh yes, here is the rest of the story...

Captain Thomas Dwyer, this "king" of transportation, was taking a train to attend his son's (Wm P. Dwyer, Sr) college graduation from Oakland, California. While in route, a yacht was crossing under a drawbridge in the San Francisco Bay. Thomas and another gentleman were seated in the first coach along with many women and children, most of whom became victims of human error. It is not known to this day, whether the danger signal was not noticed by the train engineer or the proper signal was not given by the drawbridge operator, but Captain Dwyer, was in the one and only coach that went over the Webster Street Bridge, into the San Francisco Bay.

Next month, Jim Bryant will explain how to navigate easily to points of interest in Sacramento, along with other details including what happened to John Augustus Sutter?

Finally in July, my husband Dale Fox, RTT, and I will look forward with other Sacramentans to welcome you to the National Convention, as you "Strike It Rich"!

Economic Affairs

Jack Wyatt, RTT
Chair, Economic Affairs Committee

Nothing Happens Until a Sale is Made

I think everyone should have a crusty old realistic individual lay a few words of wisdom on them. Hopefully, this would occur at a time when a young, idealistic person will hear and remember. It happened to me, and thank God I did remember, even though it was twenty years later, at the time I was just out of school and of course knew everything. He said to me, "Son, nothing happens until a sale is made." No, he was not a salesman or a merchant. He was a farmer, but he knew that he had to sell the crops he grew, so he could buy the things he and his family needed.

This initial transaction started an amazingly long chain of people selling something, such as: clothes his family needed; farm tools; seeds; feed for the cattle, horses and the pigs; a new roof for the barn, and wire for the fences. It also provided services he needed, like the doctor, the barber, the blacksmith, and on and on.

Each of the people who sold this farmer something had to buy it first, or buy material to make or build it. When all these people were paid by this farmer, they in turn use *their* earnings to buy groceries, clothes, cars, and other necessities. Through this simple formula the buy/sell chain of economics goes on indefinitely.

Sometimes we, for whatever reason, try to make things as complex as possible. I once reminded a young apprentice that selling started the minute you spoke to a potential client; that it was necessary to start creating credibility immediately. This is especially important for a young person who obviously cannot have the years of experience an older person may have. So selling is very important. There is a need to create credibility *before* arriving at the client's home. If this is done, it will be much easier for the customer to believe and have confidence in you. So, we sell our knowledge and our services, therefore we make something happen.

I thank God for this crusty old realist. For you see, he was my father.

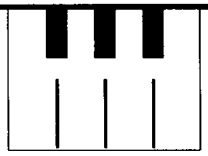
American Music Conference Reports

1991 Music Industry Export Value Up 5% Import Value Down 2%

CHICAGO -- Exports of U.S.-produced musical instruments, parts and accessories rose for the seventh consecutive year in 1991; the 5% increase brought total value of exports to $266,218,000, according to the American Music Conference's (AMC) annual interpretive analysis of U.S. Department of Commerce data.

Total acoustic piano exports were up 36% in units (to 9,900) and 23% in value (to nearly $10 million). Vertical pianos (which comprise 79% of the total units and value for this category) were up 49% in units and 39% in value. Exported grands were up 2% in units and down 16% in value. Canada was the largest importer of American pianos, receiving 42% of all units accounting for 53% of the Category's total value.

Acoustic pianos (the second largest import category in terms of total value) were reported at $113.7 million; an 11% decrease from the previous year. Unit shipments were down 17% to 55,145. Imported vertical pianos represented 56% of ototal acoustic piano units shipped in 1990 (the same percentage as the previous year), and 32% of total value (to $77.4 million). Japan and South Korea were the leading importers of all acoustic pianos in 1991. Shipments of verticals from these two countries accounted for 79% of all vertical units and 82% of the subcategory's total value. Japanese and South Korean grands, combined accounted for 95% of all grands shipped to the U.S. and 88% of the subcategory's total value.



International Relations

Korean Association of Piano Technicians

Ron Berry, RTT
Chair
International Relations Committee

In the past few months I have run the speeches that were given at the 7th IAPBT meeting in Seoul, Korea. Two years before that in 1989 was the 6th meeting in Kyoto, Japan. At that meeting was the first symposium on the "Present and Future of Piano Technicians." There were four speeches presented at that meeting and this month I am reprinting the first one by Bo Jung Lee of the Korean Association of Piano Technicians. I hope you have found these speeches interesting. I think they give us a view of each countries situation in the piano industry. If any of you have information or articles for this column, please contact me. Ron Berry, 6520 Parker Lane, Indianapolis, IN 46220-2259, Phone/Fax, 317-255-8213.

ABOUT THE SPEAKER

Name:	Bo Jung Lee
Title:	Advisor
Institution:	Korean Association of Piano Technicians Vice President of IAPBT
Address:	#63-4, 203 Song Adm. Bldg. Mo Ack Dong Jong Ro-Gu, Seoul, Korea
Phone:	732-2221

Brief Personal History

1951	Trained as a piano technician
1956	Graduated from Hanyang Institute of Technology (3 years)
1976	Retired from SAMIC Musical Instruments Co.
1982	Elected Vice-President of KAPT
1983	Elected President of KAPT
1989	Advisor of KAPT Working for Welfare Association for the Blind in Korea.

I hope each of our overseas and Japanese members continue to enjoy prosperity and good health. I was invited as an observer to the 3rd Tokyo Conference of the International Association of Piano Builders and Technicians (IAPBT). Each time I look back on the conference, I remember vividly what was said by Mr. Utsunomiya, the Director of the Japan Piano Technicians' Association. He suggested that each nation's technicians should share business information with one another through genuine good friendship that cannot be interfered with by differences in political or economic systems.

What we have to consider is to cope with the steady growth of piano production, even though pianos have been out-produced by electronic keyboard instruments. We also must find ways to restructure the tuning industry—a field in which the number of technicians has been sharply expanding. Our mission is to provide clients with the finest quality service so that they can enjoy superbly tuned piano music. Our pre-eminent desire is to keep clients' keyboard instruments in the sterling condition recommended by all fine musicians. This will help promote the nation's "next-generation" educational programs.

As we all know, there are some persons who know very little about what constitutes a good musical scale. Such people never think of having their pianos tuned as long as their pianos work at a certain level—meaning as long as there is no mechanical damage to be repaired. Other owners don't use their pianos so often and therefore neglect to have their instruments tuned. A key point for us is to encourage such owners to receive regular piano tuning service.

The following outlines the status quo of South Korea's piano and tuning service markets, as well as the nation's tuning-education activities. The figures shown are approximate.

- Piano manufacturers overview
- Monthly domestic piano sales
- Number of pianos owned
  1 million
- % of piano owners to number of households
- Present number of piano technicians
  1,200
- Technicians' training facilities outline
- Technicians' license examination overview
- Music educational institutions outline
- Music facilities outline
- Average monthly operating rate (per technician) **50 pianos**
- After-sales service details
- Average number of clients (per technician)
- Tuning service details
- Average required tuning time
  1.5 hours
- Educational activities

(By Technicians)
- Personalized client education while tuning
- Utilization of music magazines
- Mail approach
- Telephone approach

(By Association)
Present
- Media access at the request of TV and radio stations

Future
- Consumer oriented seminars

story continues—page 42

MEMBERSHIP

MAY • 1992

NEW MEMBERS

REGION 1

059 QUEBEC

CLAUDE BELISLE
1681 GABOURY,
MONT-JOLI, QC G5H 3J1
CANADA

064 CONNECTICUT

ANNETTE K. RUSSELL
10 WAKEFIELD ROAD
BRANFORD, CT 06405

170 SO. CENTRAL PENNSYLVANIA

CONSTANCE M.
ZIVANOVICH
747 PINE STREET
STEELTON, PA 17113

REGION 2

201 WASHINGTON, DC

LAWRENCE J. MULLIN
4013 8TH STREET, N.E., #2
WASHINGTON, DC 20017

274 CENT. NORTH CAROLINA

PASCAL C. VIEILLARD
2571 DOGWOOD FALLS
WINSTON-SALEM, NC
27103

322 NORTHEAST FLORIDA

JOHN D. MACKLIN
6916 OLD KINGS ROAD, #47
JACKSONVILLE, FL 32217

331 SOUTH FLORIDA

TIMOTHY G. WEGMAN
15A 12TH AVE.
KEY WEST, FL 33040

352 BIRMINGHAM, AL

CHARLES E. KERR
RT. 1, BOX 400
TAFT, TN 38488

TROY D. NOLEN
5012 DALE DRIVE
HUNTSVILLE, AL 35803

395 MISSISSIPPI-GULF COAST

JENEANE K. MIXON
1409 POST ROAD
CLINTON, MS 39056

REGION 3

731 OKLAHOMA

NORMAN R. CANTRELL
2251 N. W. 19TH
OKLAHOMA CITY, OK
73107

741 TULSA, OK

MEL R. SUTTER
P. O. BOX 3675
BERNICE, OK 74331

REGION 4

462 INDIANAPOLIS, IN

RICHARD O. PERRY
2193 N. 600 E.
DANVILLE, IN 46122

532 MILWAUKEE, WI

C. ARTHUR RAGLAND
4731 ALCYN DRIVE
RACINE, WI 53402

601 CHICAGO, IL

ROBERT D. LESHTZ
1622 W. SUNNYSIDE
CHICAGO, IL 60640

REGION 5

571 SOUTH DAKOTA

BEN J. WATKINS
2905 CLAUDETTE DRIVE
SIOUX FALLS, SD 57103

585 NORTH DAKOTA

TIM GEINERT
744 10TH STREET, N.E.
JAMESTOWN, ND 58401

803 BOULDER, CO

RALPH W. OSWALD
2595 JUNIPER AVENUE
BOULDER, CO 80304

REGION 6

926 ORANGE COUNTY, CA

SETH ANDERSON
P. O. BOX 3279
FULLERTON, CA 92634

JOEL O. BREDING
1902 PARK SKYLINE RD.
SANTA ANA, CA 92705

941 SAN FRANCISCO, CA

KARL J. AMBROSE
2870 CRESTMOOR DRIVE
SAN BRUNO, CA 94066

RAVENNA TAYLOR
4380 26TH STREET
SAN FRANCISCO, CA 94131

945 GOLDEN GATE, CA

JOHN O. HIGHTCHEW
820 WARREN WAY
PALO ALTO, CA 94303

YOUNG G. KIM
1583 PACIFIC AVENUE,
APT. E
ALAMEDA, CA 94501

950 MONTEREY BAY, CA

ARTHUR G. KESSLER
P. O. BOX 223104
CARMEL, CA 93922

955 REDWOOD, CA

CARMAN GENTILE
2561 CHRISTENSEN WAY
EUREKA, CA 95501

REGION 7

985 PUGET SOUND, WA
MARVIN M. MCDONALD
6448 S. LAWRENCE
TACOMA, WA 98409

RECLASSIFICATIONS

REGION 1

021 BOSTON, MA

DANNY BENJOSEPH
21 SUTHERN ROAD,
APT. 2
BRIGHTON, MA 02146

REGION 2

322 NORTHEAST FLORIDA

JAMES A. BRYANT
1716 UNIVERSITY
BLVD.
JACKSONVILLE, FL
32211

REGION 3

752 DALLAS, TX

JOE T. MCDONALD
1902 ELDORADO
GARLAND, TX 75042

REGION 4

431 COLUMBUS, OH

DELBERT M.
GITTINGER
277 SUMMIT STREET
MARION, OH 43302

537 MADISON, WI

MARY A. NEUMANN
1708 WEST SIXTH AVE.
BRODHEAD, WI 53520

REGION 5

511 SIOUXLAND, IA

PETER W. POOLE
608 - 14TH STREET, C1
SIOUX CITY, IA 51105

REGION 7

011 VANCOUVER, BC

RORY H. FADER
5078 WILSON DRIVE
DELTA, BC V4M 1P4
CANADA

COMING EVENTS

May 1-3, 1992 — **Florida State Seminar**
Ocean Manor Resorts, Fort Lauderdale Beach, FL
Contact: Bob Mishkin, 1240 NE 153 Street,
North Miami Beach, FL 33162 (305) 947-9030

May 9, 1992 — **Baltimore Chapter One Day Seminar**
Valley Presbyterian Church, Towson, MD
Contact: Don Pahl, 6165 DeAnna Drive,
Sykesville, MD 21784 (410) 781-6350

May 9, 1992 — **Utah Valley Chapter One Day Seminar**
Utah Valley Chapter, Provo, Utah
Contact: Jack Reeves, 486 N. 300 W.,
Orem, UT 84057

July 22-26, 1992 — **35th Annual PTG Convention & Technical Institute**
Hyatt Regency, Sacramento, CA,
Contact: PTG, 4510 Belleview, Suite 100,
Kansas City, MO 64111 (816) 753-7747

September 19, 1992 — **Washington DC Chapter One Day Seminar**
Ramada Inn-Washington, DC
Contact: Colette Collier, 12113 Somersworth Dr.
Silver Spring, MD 20902 (301) 649-7330

October 2-4, 1992 — **Texas State Association 1992 Seminar**
Sheraton Mockingbird West-Dallas Texas
Contact: Jack Wyatt, 1801 Stratford
Garland, TX 75041 (214) 278-9312

October 8-11, 1992 — **Ohio State Seminar**
Cincinnati
Contact: Ellen C. Sewell, 6985 Wooster Pike,
Cincinnati, Ohio 45227 (513) 272-0693

October 17, 1992 — **New York State One Day Seminar**
Holiday Inn-Westbury, NY
Contact: Marvin Witte, 26 Hollywood Dr.
Plainview, NY 11803 (516) 935-0556

October 24, 1992 — **LVPTG One Day Seminar**
Local Hotel-Allentown, PA
Contact: John Zeiner, Sr., 830 Hanover Avenue,
Allentown, PA 18103 (215) 437-1887

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PTG AUXILIARY EXCHANGE

The PTGA Tour during the 35th Annual Convention at Sacramento, California in July will provide another opportunity for us to once again "Follow the Gold". We are planning a tour of Old Sacramento with stops at the Sacramento History Museum, lunch at historic "California Fats" and a visit to the Crocker Art Museum—the first public art museum in the West and one of only two in the state of California.

The Sacramento History Museum was opened August 3, 1985, after 30 years of preparation. It is a reconstruction of the first public building in Sacramento, the Sacramento City Hall and Waterworks Building of 1854. It houses the world's finest collection of gold from the Mother Lode (valued at over $1,000,000); Governor Leland Stanford's carriage; a recreated 1928 kitchen and a working 1890s print shop whose entrance is the original vestibule from the old Sacramento Bee building. One can also find a miner's cabin and learn how to pan for gold as well as absorb the whole story beginning with native Americans—see a Miwok Indian hut made of reeds—which continues to the present time.

Our luncheon may possibly be served in a dining room boasting an extremely tall, lovely indoor waterfall at the California Fats Restaurant. Those of us who have eaten there before can attest to the excellent quality of their food and the fine service extended by their employees.

Edwin B. Crocker, for whom the Art Museum was named, was born in 1818 in New York and he and his second wife Margaret moved to Sacramento in 1852 where he established the legal firm of Crocker, McKune and Robinson. In 1864, he was appointed legal counsel for the Central Pacific Railroad. His brother Charles was one of the "Big Four" who built the railroad.

The Museum, donated to Sacramento over 100 years ago by Judge E.B. Crocker's widow, Margaret, is loved for its spectacular Italiante architecture, as well as its collection of Early California Art. Gorgeous galleries are filled with 19th Century European art, "Old Masters" drawings and many American paintings collected by Judge Crocker.

The building, which was redesigned in 1868 by architect Seth Babson for the family's use, contained a ballroom and library, gallery space on two floors, a bowling alley, roller skating rink and billiards room. Original lighting fixtures hang over Judge Crocker's library and gas jets may still be found over niches in the ballroom. Look for examples of Trompe l'oeil (fool the eye), the Corinthian Columns in the ballroom and Judge Crocker's rolltop desk. Sacramento was indeed fortunate to have these patrons of the arts, the Crockers, move to the area so long ago, and to have the treasure donated to the city by Margaret Crocker. The dazzling new Crocker Museum Art Gift Shop contains jewelry, cards, books and fun art projects for kids (Grandparents please take note)!

The Crocker Family Gallery recreates a parlour setting from the 1880s and contains marble fireplaces, gilded mirrors and furniture from the original home. The Museum received a National honor award from the American Institute of Architects in recognition of its artistic significance and was added to the National Register of Historic Places following its restoration in 1980. Our visit will be a fitting close to our Sacramento Tour. If your spouse is responsible for making all the PTG registration decisions for the convention, please urge him or her to sign you both up for the tour! If this is part of your "job description", then sign up soon! We are limiting the tour to 94 people—the total number held by two buses.

Arlene M. Paetow
President

IN AND ABOUT SACRAMENTO

As Benjamin Franklin said, "At 20 years of age the will reigns; at 30 the wit; at 40 the judgement." What he neglected to say was "At my age you find the expedient and most direct method from point A to point B." I have received several letters from members asking pertinent questions about Sacramento. Rather than answer them individually, I will answer them collectively, the most direct method!

Don't let the weather forecaster scare you. Summers are mild, with an abundance of sunshine and low humidity. We have our days of 98 to 110 degree weather, but the average temperature for July is 88. Do bring a sweater, as our evenings, due to a breeze from the two rivers surrounding Sacramento, will send you to the nearest stores to purchase one. In answer to another question, yes, the stores in the area keep the air conditioners going full blast. That includes the hotel. I'm not the only person you will see shopping in 100 degree weather with a sweater over my arm!

Our hotel , the Hyatt Regency, is centrally located to many of the most interesting attractions. We are directly across from the State Capitol, which after a massive restoration in 1982, reflects the grandeur and beauty of the 1900s. The magnificent dome, marble mosaic floors, crystal chandeliers and monumental staircases are highlights. The 40 acre park surrounding the Capitol features tress and shrubs from around the world. We are within walking distance of Old Sacramento—the gateway to the "mother lode". Today, Old Sacramento stands as one of America's best examples of historical reconstruction. The area is home to the California State Railroad Museum—the world's largest; the Sacramento History Museum; the Sacramento Waterfront—depicting an 1870 riverside scene, complete with sailing vessels and paddlewheelers. The area offers more than 20 restaurants ranging from fast food to continental cuisine. You will find over 100 unusual shops featuring jewelry, both antique and custom made. If you can't find it in Old Sacramento you won't find it in any other city.

We have more museums that I could possibly cover in the space allotted. One of the most famous being the Crocker Art Museum, given to the city in 1885 by Judge E.B. Crocker. It is the oldest public art museum west of the Mississippi.

For those of you driving, or planning to rent a car, we are 90 minutes from San Francisco; 90 minutes from Reno/Tahoe and only 60 minutes from the beautiful Napa/Sonoma wine country. For those of you who feel adventurous, rent a bicycle built for two or take a tour in a horse drawn surrey! An evening of musical fun may be your desire. Just 5 blocks from the hotel is our famous Music Circus. The week of July 13th will feature "Oklahoma," the week of July 20th will be "Fiddler on the Roof" and the week of July 27th will feature "The Sound of Music.'

California's capitol tastefully blends history and progress. Ideal climate, great location and interesting attractions make Sacramento a "destination for all reasons and all seasons'.

Ginger Bryant

NOMINATED OFFICERS SLATE FOR 1992-93

The PTGA Nominating Committee chaired by Phyllis Tremper with Kathryn Snyder and Sue Speir has submitted the following slate of officers for your consideration:

President	Phyllis Tremper 413 Skaggs Road Morehead, KY 40351
Vice Pres.	L. Paul Cook 3137 Voltaire Drive Topanga, Ca 90290
Rec. Sec.	Pearl Krietz 532 Meade Terrace Shillington, PA 19607
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Treasurer	Barbara Fandrich 3001 Murphy Street Hoquiam, WA 98550

THE DARING YOUNG WHAT? OR SIC TRANSIT GLORIA MUNDI

Stopped by the Post Office the other day to pick up some stamps. Recently there has been a rash of new stamps commemorating a variety of different things and people. The Post Office must be working hard to develop special stamps for collectors.

I don't collect stamps but do find some of them interesting. Once in a while I notice on a letter a stamp which I like. Could be a place I have visited or would like to visit; someone I like in the theatre or the arts or an historical figure. Even for a non-collector like me, the various issues are interesting and I will buy a sheet to use instead of the usual roll which always has the flag as its motif.

Not long ago I received a letter with a stamp which got me to sit up and smile. There he was, quietly looking out at me from the stamp. William Saroyan, my favorite author and playwrite, a face, a voice from the past.

Prewar 1930s and 40s, "The Man on the Flying Trapeze," "The Time of Your Life," "My Heart's in the Highlands," "Hello Out There," "Across the Board on Tomorrow Morning." Every book, every play was a joy. The production on Broadway of the two one act plays "Hello Out There" and "Across the Board on Tomorrow Morning" was the last show I saw just before leaving for the Army. And my basic training in the remote and lonesome heart of Texas

story continued—page 42

Convention Classes for Visually Impaired

The Visually Impaired Committee has scheduled classes on Thursday, July 23, by instructors, Franz Mohr, Dick Hassig and Don Wigent.

During periods 1 & 2, Franz will deal with the absolute solidity and accuracy required for world class concert tuning as well as a board ranging question and answer period. This instruction may alter the basic concepts of your work style; in brief, you must be there.

During period 3, Dick Hassig, will discuss computer and cellular phone adjuncts to a lucrative tuning practice. Following Dick during period 4, Don Wigent will deal with the service and human relations challenge engendered in servicing college piano inventories. Both Dick and Don are top exponents in their specialties and again, like Franz, your future know-how will be tremendously enhanced from hearing these great gentlemen.

...The Daring Young What continued from page 41

shortly thereafter kept the scene in a Texas jail which was the setting for "Hello Out There" etched in my mind.

So here he was, William Saroyan, being honored by the Post Office.

And here I was buying stamps.

Of course the clerk had no sheets of Saroyan stamps. But he did have a corner block of four which collectors look for. As I took the stamps and handed over the money he asked, "Who was he?"

A tear came to my eye. Who was he? Who was William Saroyan?? Just about the most important writer in my life at a very important time in my life. How could I explain that?

"He was a writer and playwrite back in the thirties and forties" had to suffice.

As I left the building I could only think: what a perfect opening for a Saroyan short story, for a play. At first I was saddened and in a way I still am that he was not recognized. But them, Bill would appreciate the situation and in his own wry way would enjoy it. Joy and sadness; simple feelings deeply felt; finding in the ordinary something extra-ordinary, that was Saroyan. How wonderful that someone back at the Post Office also remembered him.

Written by Charles Huether and submitted by Agnes Huether

...International Relations continued from page 37

- Educational institution-sponsored seminars designed for professional pianists

PIANO TECHNICIANS IN THE WORLD OF MUSIC

Piano technicians are paid less than before because of the eased labor market situation steming from the growing number of technicians. We should keep in mind, however, that we piano technicians are closely connected with the world of art. We should also be proud of being able to contribute to the progress of music. These points should be kept in mind when we provide technicians service.

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Display Ad Index

A GOLDEN OPPORTUNITY

Who are they? You tell us!

As promised, here are some new clues to help you solve the mystery. We don't have a winner yet — and remeber — you can enter as many times as you like. Keep in mind, all eight of the folks pictured below grew up to become prominently involved in PTG activities—in some way.

So go for the gold! You're eligible to win a special prize... gold coins valued at more than $300! The earliest postmarked entry wins. The winner will be announced during PTG's 35th annual Convention and Technical Institute, July 22, 1992, at the Hyatt Regency Sacramento.

1

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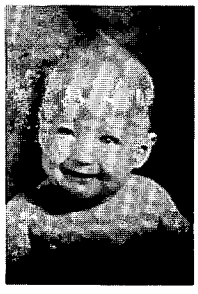

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Contest Rules

The contest is open to all PTG members and non-member registrants at PTG's 35th Annual Convention and Technical Institute July 22-26, 1992 in Sacramento, CA. PTG Board members, staff and Convention Planning Committee members are not eligible to win.

The prize will be awarded to the correct entry with the earliest postmark or, if no winning entry has been received prior to the convention, to the first correct entry received at the convention membership booth.

Send contest entries to:
Gold Contest-PTG
4510 Belleview, Suite 100
Kansas City, Missouri 64111

Entry Form

Name _____

Address _____

City, State, Zip _____

My Eight Lucky Kids Are:

1 _____ 5 _____

2 _____ 6 _____

3 _____ 7 _____

4 _____ 8 _____

Get A Clue!

- If they were all members, half of these kids would live in the Northeast Region. And half of the members live in the Northeast Region.
- Two of the three who talk funny don't have the same accent, even though they only live 600 miles apart.
- Among them, these eight kids grew up to accumulate two Golden Hammers and five Member of Note Awards, or maybe they all didn't.
- This kid's in a capital chapter.
- Not all presidents are present but of those present, one of them is past. But past or present, the presidents didn't preside from the same podium.
- Four of these kids were elected to the Board, one of them twice.
- This one's name sounds like a male relative.
- Sounds like the RVP. He's not, but he used to be.

SEND IN YOUR EARLY REGISTRATION BEFORE JUNE 24!

BE SURE TO FILL OUT THE CONTEST FORM ON THE OPPOSITE SIDE OF THIS PAGE...

CONVENTION REGISTRATION FORM

NAME: _____ NICKNAME FOR BADGE: _____

HOME ADDRESS: _____

CITY: _____ STATE/PROVINCE: _____ ZIP: _____

COUNTRY: _____ ARE YOU VISUALLY IMPAIRED? YES _____ NO _____

ARE YOU A GUILD MEMBER? YES _____ NO ___ IF YES, WHAT CHAPTER? _____

REGION: _____ CHAPTER # _____

SPOUSE'S NAME (IF REGISTERING): _____ NICKNAME: _____

IS HE OR SHE A PTG AUXILIARY MEMBER? YES ___ NO____

FOR OFFICE USE ONLY

Date: _____ **Amount:** _____ **Check #:** _____ **ID:** _____ **Badge:** _____

THREE WAYS TO REGISTER!

PHONE: Call the home office with your membership number, information above and credit card in hand.

FAX: Fill out this form and fax it directly to the home office by calling 816-531-0070.

MAIL: Fill out this form and mail it to our new address: PTG, 3930 Washington, Kansas City, Missouri 64111-2963.

Quantity		*Before June 24*	*After June 24*	*Total*	
_____	Guild Member*	$140	$160	_____	3550-100
_____	Non-Member	210	230	_____	3550-200
_____	Auxiliary Member*	50	60	_____	3550-300
_____	Non-Auxiliary Spouse	60	70	_____	3550-400
_____	Auxiliary Tour	35	35	_____	3630-000
_____	Tutoring	60	60	_____	3610-100
_____	Banquet Ticket	30	30	_____	3590-000
	Total Enclosed			_____	

Please charge my credit card:
____Visa ____MasterCard

_____
Card Number

_____
Expiration Date

***Note: All Membership dues and fees must be paid in full before the convention begins**

Disklavier™ Piano Service Seminars

Yamaha Piano Service May, 1992

Mark Hullibarger Richard Luebbing Ralph Stilwell Jack Thomas Wes Velkov Peg Browne Robert Conrad Charles Hansen Michael Kemper Larry Newhouse Jim Rule Richard Davenport Greg Rorabaugh Ernie Juhn Jack Caskey David Reed Tom Servinsky David Roundtree Jim Davis Elizabeth Ward George Burke Don Case Chuck Cohen Dan Levitan Nick Morris Pete Remneff Christine Cornetta Bob Jones Stephen Schell Walt Eckstein Nori Kowato Larry Crabb Bob Simmons Raymond Butler Clark Foerster Gerald Fruge Michael Keener Laurence LeMasters Alan Nemeth Teri Meredyth James Callahan John Callahan Steven Niederhiser Enrique Rosano Hans Sander Kenneth Snow Jim Amlotte John Borland Denzil Holman Denis Ikeler Dan Mansolino Paul Mueller M. Jack Reeves Philip Saxon Michael Vincitore Kenneth Burget Rick Florence Joseph Goheen Dave Hulbert Samuel Levite Wayne Montag Paul Stephens Kenneth Vesely Bert Bartlett John Cavanaugh Craig Fehrenbacher Aaron Grazette Amos Hedrick Christopher Johnson Mike Rucks Bill Zabielski Mark E. Adams William T. Barrett L. Davidson Lamoreaux Lorelle Nelson Dean L. Reyburn Robert S. Bussell Kevin Campbell Norman Heischober Paul Keogler Edward Lucibello Morris D. Smith Jr. Michael D. Reiter Robert G. Rice Brian S. DeTar Steve Fairchild Larry Fisher Thomas G. Kaplan Jerry R. Malone John Sauve Robert Stanford Wayne Yockey Gregg Abbott Flip Alpern Steve Anderson Steve Fairchild Jr. Horace Greeley R. David Huey Lane Miller Robert L. Ousley Robert Shoffner William Edwards John Grutzmacher Michael Hagen Clark Hale Tom Kinney Don Poetker Kevin Leary Janet Leary Jeff C. Turner Phil Glenn Kenneth Amend Timothy P. Bowling Ruth Brown William A. Elberson Lynn Gilmore Jon Laird Michael P. MacKinney Rolland S. Miller Webb Phillips Thomas Beaty Gerald Cousins Jack Hamilton Steve Houck Sidney Marlin Cal Munson Catherine Pearce Jeff Stickney Mark Stuedli Frank Clinton Helen Jones Keith Kopp David Martin William McCullogh Wade Muncy Randy Potter Eugene Taets David Campbell Pat Green James Johnson Gary Kunkle Michael Miccio Joe Rappaport Mark Stivers John Wheeler Michael Bingham Wade Mizell Will Reed Simon Sagalovich Lowell Unger Robert Gentleman Thomas Gorley Rick Holcomb Jack Krefting Don Shoffner David Steege Don Teach David Calandra Pamella Consoli Alan Eder Joel Engelsberg Philip Frohna Kathleen Gilkey Kathleen Hodge Thomas Juul Lloyd Whitcomb Susan Babcock Dave Brierly Nathanael Davidson Lon Janzen John Jeffery Robb Lasko Paul Nedvecki Charles Sanders Ray Ternstrom David Abdalian Robert Baker Daniel Geoghegan Marshall Hawkins Sam Jones Michael Kimbell Alan Nishimura Timothy Simmons Mark Wisner James Bryant Jack Cashion Thomas Fendon Douglas Hershberger Daniel Lundell Joseph Martin William McKaig Patrick McCormick Frank Nelson Greg Sexton Paul Shoulders George Golka Bo Gotrich Joseph Heisler Michael Oliver David Snyder Howard Stosich Fran Tanguay Lou Thiry

SERVICE: (800) 854-1569 PARTS: (800) 521-9477 FAX: (714) 527-5782

YAMAHA

Tech Gazette

Yamaha Piano Service May, 1992

Piano Services in Review

Yamaha Corporation of America is concluding its fiscal year, and we would like to take this opportunity to review a little of what has taken place within Piano Services during the last 12 months.

First of all, it was a great year to meet and make new friends. Over the last year, eight Disklavier Piano Service Seminars, and seven Little Red Schoolhouse Seminars, were held here at our Buena Park Headquarters. We met and trained 84 new Disklavier technicians, and worked with 51 technicians in the Little Red Schoolhouse program. This brings the total to over 950 piano technicians who have joined us for these seminars since the first Little Red Schoolhouse in 1971.

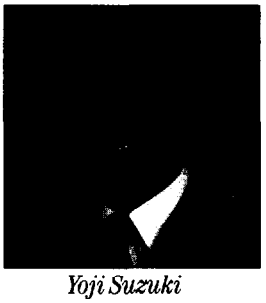
In addition to our in-house seminars, it was a busy year working with the Piano Technicians Guild. We participated in many of the state and regional conventions, making new friends and renewing a lot of old acquaintances. The National Convention in Philadelphia was a great success; we enjoyed the opportunity to talk about Disklavier Pianos, Grand Regulation, Voicing, etc., throughout the year. We are certainly looking forward to Sacramento, where we will address grand dampers in a newly revised class.

We recently completed our annual Institutional Technical Tour where we visited a number of universities throughout the U.S. Having been in existence for the last 5 years, this program has brought Yamaha technicians and Institutional Marketing staff face to face with Yamaha pianos in the institutional setting. In addition, we have had the opportunity to meet the instructors, administrators, and of course, staff technicians who must care for these instruments. Since the inception of this program, Yamaha has visited over 40 universities, and we have worked on hundreds of pianos.

Our Piano Parts Department has also had a busy year. Maintaining an inventory of over 9,000 different parts, and taking nearly 10,000 orders for the last 12 months, has kept us on the move.

Since the dramatic growth that has taken place in the Yamaha Concert & Artist program, the role of Piano Services has become increasingly important. Working with artists such as André Watts, David Buechner and the Labèque Sisters, (to name only a few), keeps us in touch with the ultimate demands that can be placed on our pianos. Overseeing the maintenance of the concert pianos in both New York and the California Showrooms, along with assisting our dealership in keeping their Concert pianos in "performance" condition, has also been an important part of our year. Our thanks to all the technicians who have helped keep these pianos in such fine condition.

The Disklavier Piano has made a major change in what goes on in Piano Services. New training for the entire staff, hundreds of new parts to stock and handle, and a whole new set of technical terms and problems to deal with. Disk drives, circuit boards, digital information, MIDI... It all forces this group of traditional technicians to become acquainted with today's technology. It is exciting to see piano technicians expand their knowledge and skills into such a revolutionary product like the Disklavier Piano.



Yoji Suzuki

Change is inevitable, but one that we are very sad to see take place is the return to Japan for the Director of Yamaha Piano Services, Mr. Yoji Suzuki. Yoji has been a vital part of the Yamaha Keyboard Division, in charge of both Piano Services and the Concert & Artist program. We will certainly miss Yoji's great gift as technician and teacher. He's been such an inspiration to all of us. Yoji will take these special skills, and will put them to work in Hamamatsu as Director of the Yamaha Piano Technical Academy.

Personnel Profile

ANDY NISHIO

Returning to California is an old friend to many of us, Mr. Andy Nishio. Andy was a part of Piano Services from 1980 through 1985, and had recently been a manager and instructor at the Technical Academy in Japan and the U.S. We do look forward to working with him again.

Having just returned to California, Andy is in the process of finding a place to live. Once he is settled, his wife, Junko, will join him. Mami, Andy's 18 year old daughter, attends college in Japan. In his spare time, Andy enjoys playing golf.

Please say hello to Andy when you see him at the next PTG Convention. We will certainly welcome him as an important member of the Yamaha Team.

Yamaha will Participate in

LITTLE RED SCHOOLHOUSE
#111 June 22-26
#112 September 28-October 2

DISKLAVIER™ SERVICE SEMINARS
#27 August 10-14
#28 September 14-18

PTG CONVENTION
July 22-26, National Convention
Sacramento, CA

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YAMAHA