PIANO TECHNICIANS
Journal
September 1991

PTG's 'Keystone' Convention

"The Baldwin piano has a rich, warm sound; the tone quality is incomparable... a truly elegant instrument in every way."

Marian McPartland

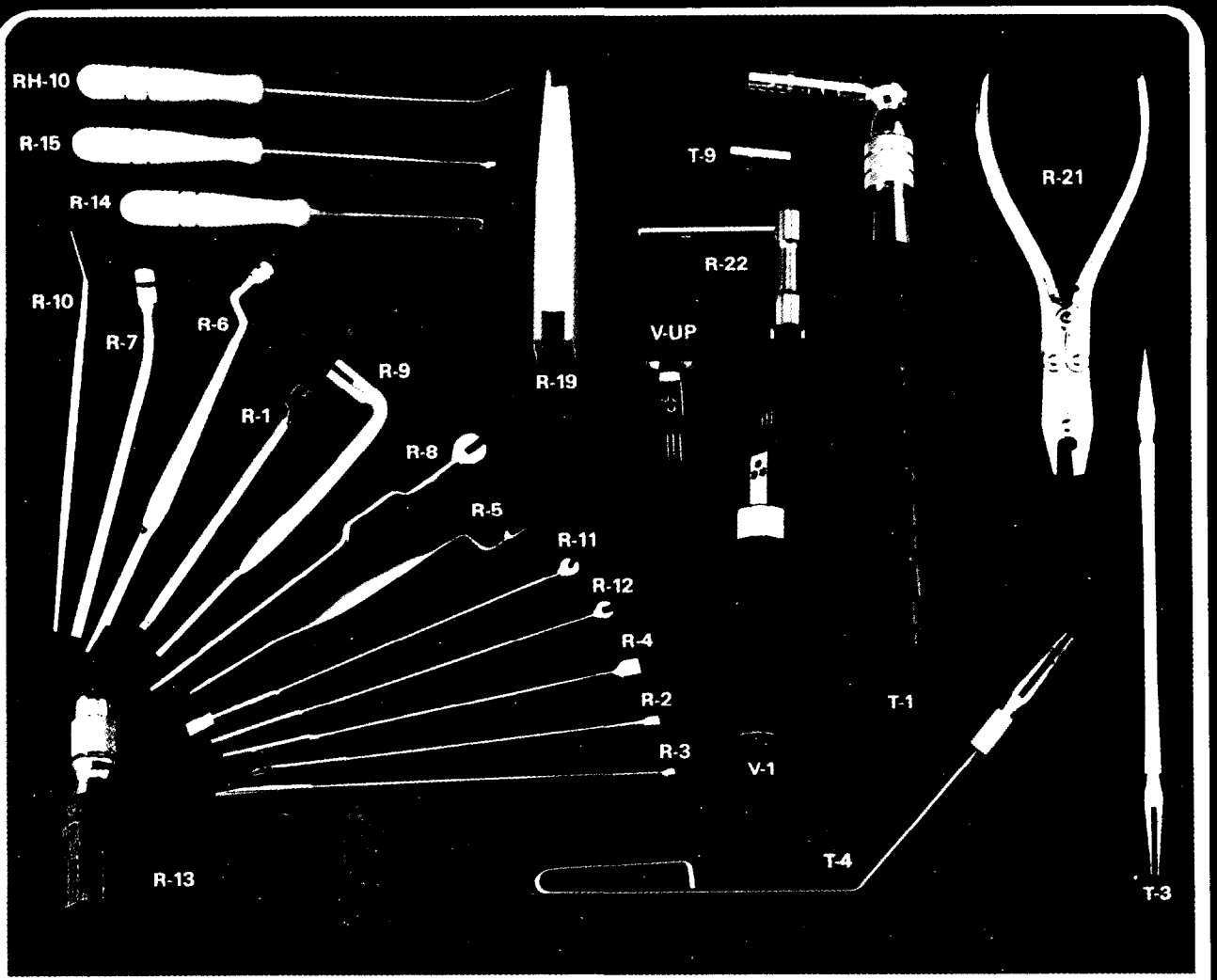
"Tuning and servicing the Baldwin pianos for Marian McPartland and her guests on the weekly radio show is especially rewarding because my efforts have a direct result on the performance and music itself. It has been my goal to inspire pianists in their creativity by providing them with perfectly tuned pianos that are voiced to their individual preferences. The new Baldwin pianos enable me to achieve that goal."

Ingo Hoffman
Concert Technician

Baldwin . . . *Leading the way through research*

Schaff now has available...

YAMAHA TOOLS



Through an agreement with Yamaha International Corporation, Schaff is now a Distributor for tools imported by Yamaha International Corporation

STOCK NO.	TOOL DESCRIPTION
R-1	SPACER
R-2	JACK SCREWDRIVER
R-3	STOP RAIL SCREWDRIVER
R-4	REGULATING SCREWDRIVER
R-5	DAMPER REGULATOR (UP)
R-6	DAMPER REGULATOR (SP)
R-7	POST WIRE BENDER (UP)
R-8	OFFSET KEY SPACER
R-9	SPOON BENDER (UP)
R-10	CAPSTAN SCREW WRENCH
R-11	DAMPER REGULATOR
R-12	DAMPER REGULATOR

STOCK NO.	TOOL DESCRIPTION
R-13	COMBINATION HANDLE
R-14	SPRING REGULATOR
R-15	DROP SCREWDRIVER (GP)
R-19	BACK CHECK REGULATOR
R-21	WIRE PLIERS
R-22	KEYFRAME SCREW REGULATOR
RH-10	CAPSTAN SCREW WRENCH
T-1	TUNING HAMMER
T-3	WOODEN MUTE
T-4	WOODEN MUTE
T-9	TIP
V-1	FELT PICKER (LARGE)
V-UP	FELT PICKER (SMALL)

THE HOUSE DEDICATED TO SERVICE

Schaff PIANO SUPPLY COMPANY

451 OAKWOOD ROAD,
LAKE ZURICH, IL 60047-1516

24 Hour Hot-Line
Reg. (708) 438-4556
T-Free (800) 747-4266
Fax (708) 438-4615

PIANO TECHNICIANS
Journal

SEPTEMBER 1991 — VOLUME 34, NUMBER 9 OFFICIAL PUBLICATION OF THE PIANO TECHNICIANS GUILD, INC.

The Piano Technicians Journal (ISSN 0031 9562) is the official publication of The Piano Technicians Guild, Inc., 4510 Belleview, Suite 100, Kansas City, MO 64111. The *Journal* is published monthly. Second class postage paid at Kansas City, MO., US ISSN 0031 9562 foreign and domestic. POSTMASTER: please send address changes to: *Piano Technicians Journal*, 4510 Belleview, Suite 100, Kansas City, MO 64111.

Annual subscription price: $85 (US) for one year; $155 (US) for two years; $7.50 (US) per single copy. Piano Technicians Guild members receive the *Piano Technicians Journal* for $45 per year as part of their membership dues.

Piano Technicians Journal Staff

SUSAN GRAHAM, RTT
Technical Editor
2967 Madeline
Oakland, CA 94602
(415) 482-4707

RICK BALDASSIN, RTT
Tuning Editor
2684 W. 220 North
Provo, UT 84601
(801) 374-2887

LAROY EDWARDS, RTT
Journal On Tape Reader

HOME OFFICE
4510 Belleview, Suite 100
Kansas City, MO 64111
(816) 753-7747

LARRY GOLDSMITH
Editor/Executive Director

LISA GRAY
Publications Manager

SANDY ESSARY
Subscriptions

MARY KINMAN
Director of Membership

BEV THOMAS
Accounting Manager

Randy Potter School Purchases Aubrey Willis

As you may be aware, the Aubrey Willis School of Piano Tuning and Repairing ceased to exist September 21, 1990, when Career One, of Phoenix, Arizona, a licensee, went out of business.

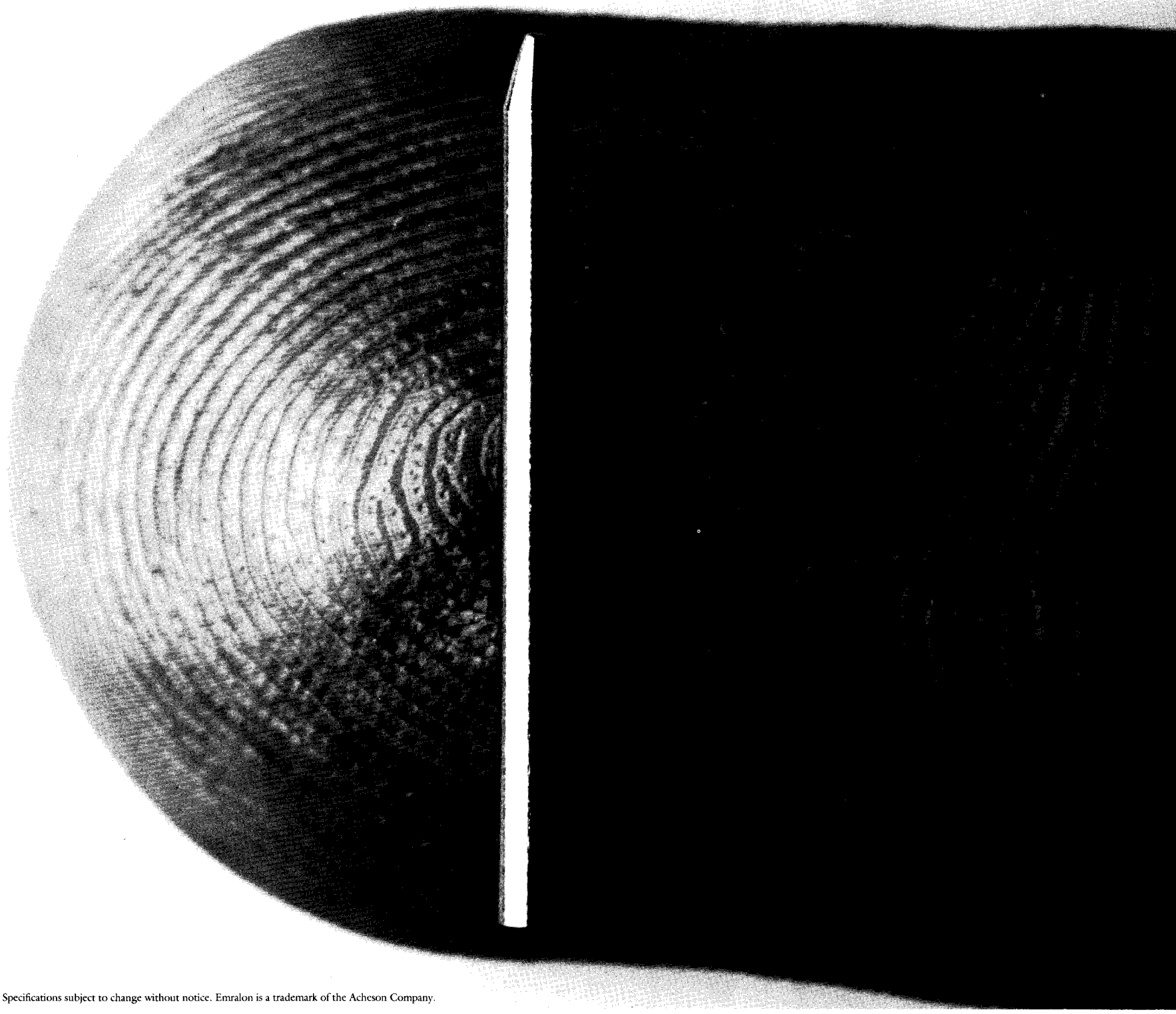
Owners of the course Dave and Rose (Willis) Pennington asked us to consider taking over the license, to offer to "teach out" to stranded Aubrey Willis students, and to allow former Aubrey Willis students to transfer into our school as Continuing Education students. Many already have.

David Pennington, RTT, former President and Director of Instruction at Aubrey Willis, said "It was the best course in its day, but it has needed rewriting and updating for many years. When the Randy Potter course was published (in 1987) it was more complete and up-to-date than anything even my father-in-law had conceived of. They have become the industry leader in teaching piano technology. I have been recommending Randy's course for some time." Pennington, was trained by Aubrey Willis and is married to his daughter, Rose.

For more information, see the related News Release in the July 1991 Industry News section of the *Piano Technicians Journal*.

See us at the 34th Annual PTG Technical Institute, Philadelphia, PA, July 13-17 and the Arizona State Seminar, Tuscon, January 3-4, 1992.

Call or write:
Randy Potter, RTT
61592 Orion Drive,
Bend,OR 97702
(503) 382-5411



At Young Chang, there's nothing too small to improve.

No one notices a center pin until there is a problem.

Most manufacturers make them out of brass. Eventually they tarnish, and can cause verdigris to form. But it usually happens after the piano has left the sales floor. And often after the warranty has expired.

At Young Chang, we make our center pins of non-oxidizing German silver. They don't tarnish. So they move freely for the life of the piano. Chances are you will rarely need to repin or ream the bushings of a Young Chang action. And chances are our efforts will go completely unnoticed.

You also may not notice we coat many of our action parts with Emralon™ to reduce friction and noise and eliminate graphite penetration in felt and buckskin.

Or that we're using an improved premium English hammer felt that lasts longer and produces a bigger sound. Or that there's now whippen auxiliary springs on our 7' and 9' grands for finer touch adjustments.

Or that we've strengthened our grand keystop rails to prevent damage during moving, and steel-reinforced our grand keyslips to minimize warping due to changes in the weather.

We've also developed a moisture absorbent finish for our black keys and a new satin case finish to bring out more of the natural wood grain highlights.

While these recent improvements have gone largely unnoticed, our 12 year *full* warranty is getting all kinds of attention. It's the kind of promise people understand. And the kind of promise no other manufacturer is prepared to offer.

Little by little, we keep refining our pianos. Because it's the little things that make the difference between a good instrument and an extraordinary one.

For your free copy of our Service Guide & Technical Specifications Manual, write to Director of Technical Services, Young Chang America, 13336 Alondra Blvd., Cerritos, CA 90701 or call (213) 926-3200.

YOUNG CHANG

The best the world has to offer.®

PRESIDENT'S MESSAGE

Continuing Our Success

Nolan P. Zeringue, RTT
President

I write this for the September *Journal* as I return home from the 1991 PTG International Convention in Philadelphia. It was a grand success in many ways and surely turned out to be one of our largest conventions. It goes without saying that it was a success because so many people worked hard so that we might all benefit. For the members who chose not to come, I feel that they missed an opportunity of a lifetime; an opportunity for education in our profession that is unequaled anywhere else. For those of you who thought that you could not come for whatever reason, do just one thing for me, or rather for you. Find someone who did attend and ask them if they think that it was worth the money and the time spent to attend the convention. Ask them if they feel it was a waste of time and money to go to to Philadelphia. And also ask them if they feel you should have gone to the convention.

I would like to take this opportunity to personally thank the many individuals and companies who helped make the convention the meeting that it was. The exhibitors, manufacturers, suppliers, instructors, examiners, committees, staff and the PTG Board all played important parts in making the convention successful. Your dedication and hard work is appreciated by all of us.

We are now into another year and I am pleased with the interest and dedication we find in the members who have given of their time and talent to serve on PTG's committees. In trying to find just the right people for the right committees we have really been successful in receiving many requests to serve now or whenever we may need help. This year as we start we have names in reserve even as most of the committee positions are filled. I even had someone yell from an elevator, "Just put my name wherever you need me."

I feel good that we must be doing something right especially after seeing the work to come from the PTG committees this past year. If you feel that maybe you're being left out, don't! Just send me your name and we will keep it on file. One example is the Marketing Committee. I put as many on the committee as I thought would make the committee function best. Now we still have another list of about 30 names of members who would like to serve on the committee. We certainly won't discard this list of names, but we will use them as a network field from which information can flow to the committee and the Marketing Committee Chair can field questions to these members. We are never full up!

I hope the input we are getting is a show of confidence and trust in me and the Board we have for this coming year. You have elected a good Board and I assure you we will constantly work on your behalf. Don't ever think that any of us are unapproachable; We are here to serve you whenever you need, and all you need to do is drop a line or a phone call.

INDUSTRY NEWS

First Annual Wolfies Awarded To Advertisers

Move over Clios, Beldings, Addays and other prestigious advertising awards. There's a new award, the Wolfies — as in Wolfgang Amadeus Mozart, that is — presented to advertisers that most prominently and imaginatively feature pianos in their ads.

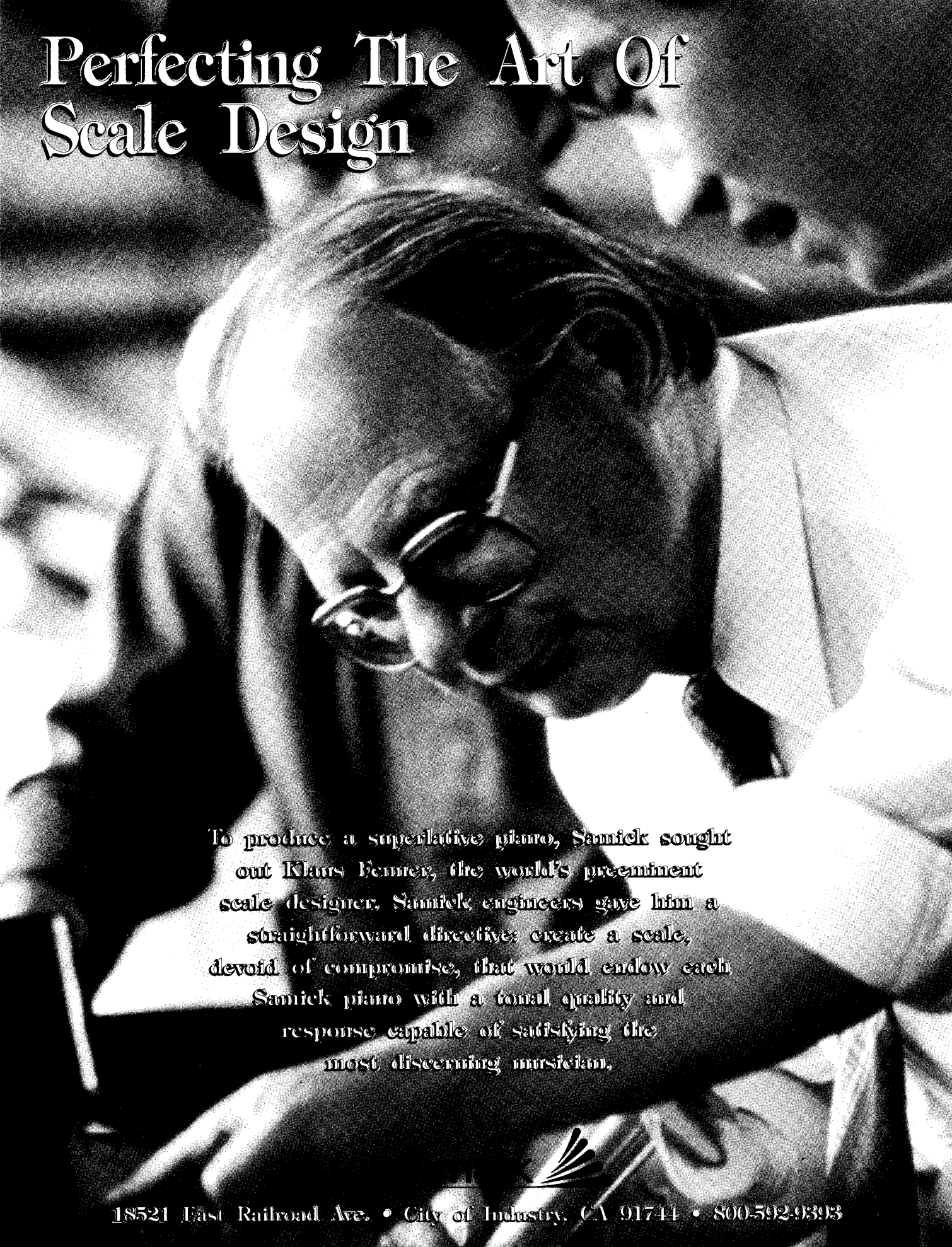
Presenting the Wolfies is the National Piano Foundation (NPF), a non-profit organization dedicated to educating people about the benefits of playing the acoustic piano.

Luxura Dupont Stainmaster Carpet receives a Wolfie for the most creative use of a piano in an ad. BBDO, New York developed this surrealistic image that has white cats, a spilling punch bowl, a woman with a cello and a grand piano floating precariously above Stainmaster Carpet.

Kodacolor's True Debut ad, created by J. Walter Thompson, New York, is awarded a Wolfie for best humor category. Kodak's ad amusingly features a tiny tot in a white tuxedo with tails and a white top hat marching in front of a white

continued on page 8

Perfecting The Art Of Scale Design



To produce a superlative piano, Samick sought out Klaus Fenner, the world's preeminent scale designer. Samick engineers gave him a straightforward directive: create a scale, devoid of compromise, that would endow each Samick piano with a tonal quality and response capable of satisfying the most discerning musician.

18521 East Railroad Ave. • City of Industry, CA 91744 • 800-592-9393

From The Home Office

Milestones Past — And Future

Larry Goldsmith
Executive Director

One of the biggest and best PTG conventions ever is now in the history books. In the pages of this issue, you'll read about what you missed or — even better — reminisce about the gains you made by attending.

More than 1,000 people registered for the Philadelphia convention. That makes it the second-largest in our history, and a lot of people deserve pats on the back for putting it together. I'm proud to have been associated with the many who voluntarily and tirelessly gave of their own time, energy and often money to pull this off, as well as our very competent and dedicated Home Office staff.

While we pat ourselves on the back, however, we must keep a weather eye on the future. In many ways, this was the most promising convention I've seen, simply because of the number of ideas floating around. I feel that PTG's decision to expand its marketing efforts is perhaps the most positive thing the organization has done in years. But what really amazed me was the number of people who wanted to participate in the process. Once the inertia was overcome, once members started thinking in terms of possibilities, it was as if a dam had broken. People were communicating and contributing. Momentum is gathering, and I think you'll see many positive developments in the months ahead. A commitment to a more professional organization will ensure PTG's strong presence for many years to come.

One of PTG's most appropriate functions is to act as a clearinghouse for information. Tracking down reliable sources for parts, supplies, equipment or even advice is often difficult for a technician working on his or her own in the field. In many cases, PTG is a technician's only link with the music industry, and if there's no local chapter structure, the task of staying informed can be even tougher.

Although we've published a listing of industry contacts in the April directory issue for several years, it's a list that's neither complete nor descriptive. But we're about to change that.

We're in the process of preparing a guide to resources in piano technology. The publication will include detailed listings of companies and individuals who offer a variety of products and services to the trade. To my knowledge, this has never been done in quite this fashion before, and our hope is that it will become an indispensable tool in every technician's kit.

Why announce it now? Because we need more information. We feel that we have a fairly complete list of vendors in our segment of the industry, but there may be some who have not been contacted. If you sell a piano-related product or service to the trade — or even if you have a favorite supplier you think other technicians could profit from knowing — drop us a note, and we'll send you a data sheet.

And watch for this important new publication. By sharing information, we'll all become stronger.

continued from page 6

grand piano. He looks as if he's ready to perform a grand concerto.

Omega Watches, Significant Moments ad wins in the category of ad that best encourages piano playing. A father plays piano for the baby he is holding on his lap in this touching black and white ad, created by Saatchi and Saatchi, New York. The caption reads, "For a moment, there were just the two of you. And the whole world to discover. Omega. For all your significant moments."

A tongue-in-cheek "Werewolf" award goes to what the Foundation considered the least favorable ad. The 1991 recipient of the Werewolf was Salem cigarettes for its "Tune into the Refreshment" ad which featured a bikini-clad girl on a pink raft floating in a grand piano. (Wolfie would roll over in his grave if he saw this one!)

Dozens of clever ads featuring pianos were put before the NPF panel of judges that included music teachers, educators, physicians, piano manufacturers, music suppliers and music enthusiasts.

"We appreciate corporations and advertising agencies that feature pianos in their creative concepts," said Don Dillon, NPF executive director. "These ads assist us in our ongoing efforts to promote piano playing and other music participation."

Convention Report — Exhibit Hall

Susan Graham, RTT
Technical Editor

The exhibit hall offers a great opportunity for piano technicians to enhance the benefits they gain attending classes. The knowledge we acquire isn't very useful without the tools and supplies to put it in practice: the Exhibit Hall offers the chance to see the material and talk with the people who supply it. We also have the opportunity to see pianos; many manufacturers have instruments on display and representatives on hand. It's no wonder that the hall becomes the gathering place and focus of activity for the week.

The supply houses were out in full force. The greatest variety is probably at the two big houses: Schaff and American. Each has specialty items — the Remgrit TFL lubes at Schaff, Renner parts and a wide selection of hardware at American. Dwight Pile was along in the Schaff booth, demonstrating polyester finish repairs. Bob Beck reports that American will have a new catalog out soon.

Superior Imports has merged with Pacific Piano Supply, bringing to that company the line of Tokiwa action parts and other specialty rebuilding items: Superior can now be reached at the Pacific address and telephone numbers.

More specialty and import items could be seen at the Renner display, including very thin, high quality bushing cloth (useful for those pedal rod guide holes) and color string felt and bushing cloth (no more nasty clashes of reds on your rebuilding jobs). Pianotek continues to focus on custom hammer duplication, carrying Imadegawa and Ronsen and offering boring, shaping, custom-cut tail length and other services to aid in successful hammer installation. They are always on top of new developments in tools, carrying the reversible Foredom (an exclusive for our trade, developed for use with the McCall mini-belt sander for hammer filing), agraffe reamers patterned after the one developed by Chris Robinson, counterbores for use in agraffe installation, the bushmaster keybushing system, etc.

Webb Phillips also carries the bushmaster, and supplies climate control systems; they are probably best known as a source of wood and woodworking materials, particularly water-based finishes (and information about them). As with a number of these smaller, specialty supply sources run by technicians, the advice you get can be as valuable as the product.

Brooks, Ltd. has two new lines: Encore hammers, made to their specifications by the German manufacturer Abel and provided for those who prefer a softer style hammer than the Nu-Tone. Action parts from Flemming (Leipzig) will include grand shank sets with either 30 or 90 tapered (Steinway or Mason & Hamlin dimensions — other dimensions available with 30 tapered). They carry a variety of other parts

Staff Photos By Lisa Gray

and hammers, as before, and offer specialty services such as pre-hung grand hammers.

Ruth McCall carries the mini-belt sander for filing hammers (developed by her late husband, Raye) and the reversible Foredom needed for its use. McCall also carries a selection of PVCE glues and the McLube products.

Everyone tells me it's great stuff for verdigris, so I finally picked up a bottle of Protek from Ford Piano Supply: composition not specified beyond a cleaning agent and a space-age lubricant (this is the liquid version — they also carry the same lubricant in a solid base). Ford features a line of specialty tools clearly developed by technicians who work with them every day.

Dryburgh adhesives will soon have a product called Spray and Cure, an accelerant similar to Kickit containing no fluorocarbons or Freon. It is more expensive and somewhat slower-acting, but is more environmentally friendly and less personally hazardous to use. Ed will be carrying it along with the line of superglue he already supplies.

Bill Spurlock's newest idea for the technician who has everything is a carbide router bit designed (by him) to cut out a crack in a soundboard so a shim can be installed. With this bit he supplies plans for making a small, easy-to-control router out of an air-powered die grinder: perfect for use with this bit. Bill just keeps cranking out the ideas and we all benefit!

More specialty displayers were on hand with samples of their products: Jansen benches, Dampp-Chaser climate control systems, Inventronics with the Accu-Tuner II (electronic tuning aid including a computerized memory and other advanced features). The "Quiet Keys" piano mute was on display. Piano Disc had a piano set up with their CD-operated "player" system. Kevin Cory had his line of polishes, cleaners, buffers and lambswool bench covers, including a starter kit of small samples of each — handy for the tool case. John Travis displays not only his own books but piano novelties — where can you get a keyboard necktie for those formal tunings? This is the place. Sharing his booth was Ruth Ann Jordan promoting "Jordan's Organizers," holders to put magazines in a looseleaf binder — with the catching line of "Keep Your *Journals* Off the Floors" (how did she know?).

Several of the schools which offer training in piano technology had representatives on hand. Randy Potter not only sets up a booth but sponsors an evening reception. He has also just completed a big task for the PTG: editing the latest version of the "Piano Action Handbook." Due to family illness, Bob Perkins was unable to attend — we wish him well. The North Bennett Street School had a booth and information available.

The practice of technicians offering services to other technicians has become more prevalent and was evident in the exhibit hall. Sharing the North Bennett Street space was Bill Garlick, offering consulting services to technicians and manufacturers, covering a wide range of piano and harpsichord technology needs. Dave Stanwood offers action analysis and carries touchweight products. Ralph Joseph Onesti offers rebuilding services. Piano Key Works specializes in making new keyboards for both uprights and grands. The Piano Shoppe, run by Victor Benvenuto, also makes keys as well as soundboards, offers other grand rebuilding services, and has several instructional videos available.

The Museum of the American Piano is performing a different kind of service, preserving the history of the industry — their representatives were also on hand.

Larry Fine/Brookside Press carries his own publications, books as well as pamphlets on specialized subjects (such as reprints of his tuning school review which appeared in *Keyboard*) and is also publishing pamphlets from other writers. He rents part of his booth space to anyone who wants to distribute written material at the convention but is unable to attend or is operating on a small scale and needs to defray the cost of exhibiting.








Another type of service is offered by those who have developed software to help piano technicians run their businesses. Two such companies represented were Reyburn Piano Service (which also carries Accu-Tuner and Accu-Tech cases) and The Piano Technicians Helper software company.

And for those who might be forgetting one of the important details of running a business, Nowogroski Insurance was on hand to answer questions about liability, bailees, tool coverage, etc.

And then, when you get tired of supplies and services, there are always the *pianos* to look at. Darrell Fandrich/Chris Trivellas had a Steinway K equipped with their new vertical action. Samick was there with a small grand and a 45" vertical. Houston-based Performance Piano had a Zimmerman grand, two Sauter verticals, and an August Forster grand. Schimmel showed a 6'10" grand and a 51" vertical. Young Chang had a G-200 grand on display. Weber also brought a medium sized grand. Seiler showed two grands, 5'11" and 6'9" and a large vertical. The Mason Hamlin Companies had a Mason & Hamlin BB (seven-foot) and a 6'1" Falcone. Baldwin brought in a SDIO concert grand, an R grand, and their big vertical. Wurlitzer showed a small grand. Kent Webb informs me that Wurlitzer Technical Services has been made part of Baldwin Technical Services, so the Holly Springs number is no longer operating but Wurlitzer service questions can be answered at the Baldwin number in Trumann, Arkansas.

Kawai had one of the Rl grands (the production model of the R8). Yamaha had a DG1F disklavier grand, the MX80 vertical (also a disklavier), a WX7 vertical, and the new C6F grand.

Charles Walter showed one of the high-quality consoles for which they are known, and also had the prototype of the new grand piano which Del Fandrich is helping them develop.

Last but not least, Steinway had an attractive display including an L grand, a 1098 45" vertical, a grand rim and a plate.

Many manufacturers help out the convention not only by renting booth space and displaying instruments, but by providing pianos for classes and special events. Baldwin provided a piano at the opening ceremony and a party afterwards; Young Chang sponsored a party before the chapter night auction; Steinway provided a piano and artist Judy Carmichael as entertainment at the banquet and a dessert reception afterward. Yamaha threw another outstanding evening bash, featuring the return in force of the A440 Combo and also brought in 30 pianos for use in classroom, tutoring, testing and so forth. Many of the other manufacturers provided instruments as well. We owe them thanks for this invaluable assistance (not to mention a huge vote of thanks to the indefatigable Jim Geiger and his moving crew — superb job of moving, removing, setting up and generally doing the dirty work for the rest of us!). A piano tuners' convention without pianos wouldn't be the same. But, hey, piano players out there — have a little consideration for your fellow exhibit hall attendees, not to mention the faithful booth watchers, and back off the fff playing and skip a few of the repeats, ok?

Well, that's about all I have to say. It was a great week, I didn't get stuck in any elevators, saw a lot of friends and even got to talk to a few of them. It was my great pleasure and tremendous honor to receive a Presidential Citation from Nolan Zeringue, not to mention kind words from many of you about my efforts with this *Journal*. Please read on for some class reviews prepared by a cheerful and hard-working staff of volunteers — and thanks to them as well!

Action Centers —
The Secret of Consistent Touch

This class was a lively and energetic display by Young Chang's Don Mannino on controlling friction. With an easy charm and quick wit Don soon had us exploring the realms of too much vs. too little (friction), the factory method of repinning, store-bought and homemade broaches, to what constitutes "good/better/best" bushing cloth. One main point worth repeating is "in repinning, choose your pin size according to the needs of the bird's-eye — then select the proper broach and ream the bushings! One class worth seeing.

Bob Bartnick

Disklavier —
The Future Of The Piano

This class gave us Yamaha's Dynamic Duo of Bill Brandom and Dean Garten performing on Yamaha's trio of new generation player pianos. To call them players would be like com-

paring a Model T Ford with a Lambourgini by saying they are both cars. That is about as far as you could take it and not be struck by lightning!

The Disklavier is four pianos in one — fully acoustic, it functions as a player using a 3 1/2" diskette digitally encoded, also capable of reproducing your performances recording every nuance, *and* is MIDI capable!

Following this general introduction to Disklavier and an overview to its capabilities the demonstration on proper disassembly of case parts for access and repair was interspersed with a spirited question and answer session. If the Yamaha figures are correct (25% of Yamaha sales are Disklavier) it behooves the calculating technician to be aware of the latest wrinkle in our business.

Bob Bartnick

Temperaments Of The Masters

Randy Potter gave technicians of all skill levels an opportunity to delve into the bread and butter of our business and see how past experimentation and study found several ways to arrive at the answer to the question "What is the object of temperament tuning?" As everyone knows, the answer is to get the piano in tune, of course, and Randy took us on safari through the tangled techniques as practiced by such luminaries as Jim Coleman, the late George Defebaugh, Franz Mohr, Ernie Juhn, as well as two temperament refinements of his own creation. With concisely laid out charts we followed step by step and check by check toward Valhalla and the tuned piano.

Now all was not as lofty and high brow as I might lead you to believe. This class is for and about questioning. We survive because we question and experiment and seek to improve and even Randy warned that although we try to do a "concert tuning" on every job, sometimes you run into the dreaded P.S.O. — Piano Shaped Object! If for no other reason the need for knowing alternate temperaments is proved. A word to the wise was also given about tests and proofs: George Defebaugh warned, "You can test yourself right out of business." Nuff said.

Bob Bartnick

Shop Procedures For Fun And Profit

Substituting for the ailing Jim Harvey (doing nicely last report) Bill Spurlock stepped into the hot seat like it was made for him. With slide show and jigs galore, Bill showed how to maximize time in the shop with intelligent use of time, material and planning. "Everything is basic" was the theme of the presentation and the "tricks of the trade" he showed had multiple applications at minimal cost. Action refelting procedures, glue sizing, key mortise treatment, key rebushing, backcheck replacement... boom, boom, boom — all fell from the ranks of drudgery to "boy I can't wait to get back and try it" with the simplest tools and homemade jigs! A scrap piece of masonite board became the ideal capstan cleaning jig with one simple cut! A piece of plywood with an old hacksaw blade mounted on it became a precision sandpaper cutter!

Probably the *piece de resistance* was Bill's sandblasting setup — a four-holer big enough to fit an entire keybed, action or what-have-you and by lightly shooting with 100 mesh glass bead he transforms tired ugly and dirty actions and keys into like new! Boy! Sounds like a dishwashing detergent ad on the TV doesn't it? But it works!

If there was a problem with this class, it was that there was too little of it!

Bob Bartnick

Pinblock Installation

Andre Bolduc introduced us to the fascinating world of wood manipulation. In his soft French-Canadian accent, Andre mesmerized the SRO audience as he told of wood growth and harvesting, cutting techniques, experiments with glues and adhesives, drill bits and drilling procedures, tests for strength and tests for elasticity: all in search for the stable pinblock. He compared European vs. American pinblocks for materials and workability and pointed out the pros and cons of both. Grain orientation to string direction was but one point on the checklist for a stable pinblock.

Andre showed how a pinblock is made using some marvelous oversized mock-ups complete with giant tuning pin to show how the wood fibers and grain interact with the microgrooves of the tuning pins. Dowel plugging became an interesting side point as Andre showed the correct way to drill and plug a dowel to get maximum strength. He cautioned against too little glue (resulting in a loose dowel) or different species dowel stock (resulting in uneven moisture absorption and subsequent warping/splitting). His final trick was to machine a special taper to the back portion of his drill bit to aid in waste ejection. All in search of the perfect pinblock!

Bob Bartnik

Voicing — Theory And Practice

This class was taught by Leonardo Duricic, the Chief Advisor for Piano Technology for Schimmel Pianofortefabrik, Braunschweig, Germany.

The first half of his class was divided into three topics of discussion: 1. the history of hammer making, 2. myths of hammer construction and 3. modern hammer materials and construction. Emphasis was placed on the importance of understanding the evolution of hammer making in order to dispel any myths about modern hammer construction. The discussion centered on the purpose of staples, wire brads and shoulder reinforcement with respect to their historical vs. modern significance. The design and materials of hammers from Cristofori's era, up through leather covered hammers to modern day hammers were examined and discussed in relationship to what affect musical tastes, acoustics of recital halls and changes in piano design have made on hammer construction and piano tone.

The second half of the presentation was devoted to a demonstration of the techniques used to analyze and develop the tone of a Schimmel grand piano Duricic had brought to the classroom. Everyone was given an opportunity to play










Institute Instructors

Clockwise from above: Andre Bolduc; Wade Alexander; Jim Coleman, Sr.; Rick Baldassin; Jamie Marks; Bill Spurlock; Bob Hundley; David Stanwood; Tom McNeil; Keith Bowman.

the instrument before he began working on it. Then he sat down at the piano and made adjustments to the hammers (needling, filing, etc.) producing tonal changes according to what most of the class was hearing with his guidance. An interesting concept that he touched upon during this part of the class was how the pianist judges the sound through his fingers as well as his ears.

This class was beneficial in that it afforded an opportunity to observe the slightly different German approach to hammer voicing. Duricic provided the participants with a seven-page handout describing Schimmel voicing procedures in detail. He encouraged class participation and was very gracious in attempting to answer all questions.

Matt Grossman

Spielart — How To Determine Tone And Touch Quality

For Ed McMorrow the piano is a combination of elastic components: strings, hammer felt, repetition springs, keyframe, soundboard, and rim. Their interaction is mostly set by the piano's manufacture but we should learn to be sensitive to this aspect. "What is important," he says, "is the elasticity of one part of the system and how it deals with the stresses that it has to carry, and how it reacts to elasticities in other parts." Though difficult to measure, these elasticities are (to him) fairly simple to experience physically.

There are two approaches to the best musical quality in any piano. First is the dimensional: if a factory successfully adheres to one set of specs in all their pianos, their qualitative bottom line will at least be consistent. The second approach pays attention to the interaction of elasticities. Spielart is the dialogue between technician and piano which informs us whether these elasticities are well-balanced.

We should be guided in this as much by sound as by feel. Nearly all of western musical heritage is based on the Bel Canto tradition, the beautiful singing tone which all instruments from the voice on outwards should have. Crashing and clanging sounds from a piano contribute nothing to this.

For Ed, the question of "where have all the beautiful pianos of yesteryear gone" is a matter of increasing hammer weights. A heavy hammer delivers a lot of force, but because of its inertia, hangs around at the point of impact to spoil half of that transaction. No amount of adjusting the texture of the hammer felt diminishes this extra inertia. Strings which take the beating of these heavier hammers wear faster, as do the points in the action which bear friction.

With these ideas in hand, he walked us through the light hammer tone regulation (LHTR) for a grand piano as described in his book, "The Educated Piano." The radical departure of the LHTR is to knock out the key leads and then sand off hammer felt until touch resistance at the keyboard and tone quality tell you that you have arrived. ("Spielart") He did pass around two sample hammers for notes 20 and 88, whose moldings had been trimmed to the bone. But

Clockwise from right: Ari Isaac; Wally Brooks; Dave Snyder; Chris Robinson; Lonnie Young; Ed McMorrow.






he was understandably circumspect about touch and hammer weights, as the task at hand is qualitative, not quantitative.

What's remarkable with the LHTR is what happens to the action. With mass radically reduced on either end of the lever train, it's quieter, the mechanical and tone regulations are more stable, and it can perform with much higher levels of friction at the keys and action centers. Among other things, the let-off can be much fatter and the keyframe return spring lighter. By contrast the only thing unconventional about his regulating procedure is that his first step is to pull the damper heads and wires out. They are a visual obstruction to several steps following, and in the end correct damper height will be determined by the keydip.

You won't get very far with the piano if the strike line is off, and he provided a chart for strike point on notes 88, 83,78, and 68 for the three groups of Steinway grands. He likes a finer profile on his capo bar than most: it must come down to a two millimeter round. Such a termination allows the waveform to pivot, not bend around the capo, and he hasn't found it to break strings.

It must be said that Ed McMorrow is an early settler on this frontier of low mass action, a territory as far from what most of us call home as, say, the moon with its low gravity. We're only able to repeat this venture and judge this brave new world for ourselves, at the formidable expense of constructing a second action for A-B tests on one piano. But his experience is nonetheless valuable for our own perspective.

Bill Ballard

The Fandrich Action — A Grand Action For A Vertical Piano

This class was a chance for Darrell Fandrich and Chris Trivellas to elaborate on their new vertical action design, introduced in the February 1989 *Journal*. In this design, a safety-pin style repetition spring replaces the jack return spring and serves both to return the jack under the butt and limit any dynamic lost motion which may develop between the two. One central feature of the Fandrich vertical action, an adjustable hammer return spring, is set by tilting the action face down in a cradle and increasing the spring strength until the hammer shank just floats in mid-blow. At this point, gravity's pull to return a grand hammer shank has been duplicated in the vertical action.

Chris and Darrell pored over patents from the last 100 years, all of them aiming to improve vertical repetition, and found a variety of springs. They knew right from the beginning that a vertical action which achieved grand repetition using a translation of a grand rep lever would be too expensive to manufacture. That's not say that it hadn't been tried a hundred years ago; Chris and Darrell entertained us with an entire loony-bin of patent drawings produced by this challenge. They started coining nicknames for the basic design categories: buggy bumpers, pogo sticks, shoes, elbows... Less than two percent of these ever found their way into production. Darrell in fact had tried most of these before settling on the eventual, and much simpler design, but he was happy with the experience of coming up with them himself. (Another design from that era which they'll leave to the next upstart manufacturer is for a four-headed vertical hammer, in the shape of a cloverleaf and rotating around a central pivot.)

The safety pin style was the best design and its effectiveness depended mainly on where the ends were located. The drop in this action is no longer a separate adjustment as it would be in a grand: let-off serves to limit hammer rise on the way back. The rep spring is critical because touchweight (among other things) depends on it: this spring has been designed to be stable. The soft pedal on the demonstrator Steinway K takes an unusual approach. As Ed says, "After going to all this work to get rid of lost motion, the last thing we want to do is to put it back in with the soft pedal." They hinged the back rail upward to lift the entire lever train (and not just the hammer rail) to an intermediate position.

How does Fandrich's vertical action compare to a grand action? Darrell says, "The short version of the instruction manual is to adjust the hammer spring as we describe, forget about drop, rep lever height and jack position, and otherwise treat it like a grand action." The next step is to put this action back where it belongs, in the grand. Things will be simpler here, with gravity present and the rep lever spring absent. Darrell observes wryly, "We'll start the line workers out regulating the grand action because it's simple and when they've mastered that we'll send them on to something more complicated, the upright action." Without the rep lever this grand action can be made to fit within a six-inch action cavity, important not so much for acoustic as for electronic pianos. Darrell thinks a practice keyboard with this action would sell well.

They're aiming to debut Darrell's action in Del Fandrich's piano at the January NAMM show. By that time these vertical actions should be available separately. May the best piano win!

Bill Ballard

Pianos Without Sheep?

Sheerly impossible, says David Stanwood. If it's a grossly overlooked fact, that's mainly because by the time we see felt products in a piano they are highly processed. Nonetheless the superior abilities of felt go right back to the fiber. Therefore David's slide show started us with his wife's wool growing business.

As for the animal, there are hundreds of breeds of sheep, developed sometimes for fiber or meat quality, but more often for suitability to local environments. (David confesses a belief that sheep are on a higher spiritual level than we humans.) In fiber quality, diameter is everything. All of the fine fiber sheep are descendents from the Merino breed developed in Spain centuries ago. But if you take one Merino sheep and grow it in five different climates, you'll get five separate kinds of wool. The best Merino wool is grown in dry climates, notably South Africa

and Saxony in East Germany.

The first step is shearing the fleece. The New Zealand technique has no peer, and currently the record for shearings per day is around 230. The object of shearing is to remove the fleece in one solid piece, and it's definitely work for human hands. The Australian Wool Bureau is hoping to develop a computer-run machine, but David cautions, "I'd hate to be a sheep strapped into a device like that when something goes wrong." The best time of year to fleece is late spring: any earlier and the shorn sheep die of cold and any later they risk sunburn. The belly wool, the dirtiest, is discarded.

With the fleece off the sheep, the next job is selecting the wool for fiber quality. David says, "Back a hundred years ago, when wool was king, the highest paid man in the woolen mill was the wool sorter." The wool-sorter's work of maintaining fiber consistency is critical. After all, wool is fiber with no additives, adhesives, steroids, no anything! The fleece must then be washed, or "scoured." This removes the water-soluble contaminants and all but two percent of the lanolin.

The elasticity of the fiber is what makes it work and David is skeptical of any processing which subtracts from that. Too much lanolin content and the carding machines would gum up, but without these trace amounts the fiber would desiccate and crumble. A further step of "carbonizing" with sulfuric acid reduces to ash any remaining organic material. Too severe an exposure to this acid can also weaken fibers. He was pleased to see a sample of damper felt in the exhibition hall which showed small impurities and a lack of bleaching.

David explains, "To make felt we have to untangle it and then retangle it in an extremely uniform manner." The first machine is a picker with pinch-rollers to pull the wool along and another drum with points to pry it apart as it goes by. To demonstrate, David had a smaller version of the big factory machines used at the mills for spot samples. The next step is the carding, done again with a large machine with multiple wire-bristle drums running at differing speeds, which complete the straightening of the picked fibers. Out of the carding machine came the raw material for felt, large fluffy batts which are next turned into thin, wide layers called webs, which are then laid down to form the panels of raw felt. The handful of felt tossed out by David's carding machine would produce something with the thickness and density of nameboard felt. As we could imagine from the machines he demonstrated, a woolen mill is not a nice place to work: lots of noise and fibrous air. Another fact to be understood about wool quality is economic, that most of the money made is with low-margin, high volume production. As a result, there's not much hope for any of us looking for higher-quality hammer or damper felt.

Essential features of felt are found in no other natural fiber and are impossible to duplicate synthetically. The first is the crimp or kinkiness of the fiber which allows fibers to entwine as a group. However, the best feature is the scales covering the fiber. Of a material similar to fingernails, they get soft when wet and hard when dry. The elasticity of wool fiber lies in this elemental structure. Analysis of wool fiber disassembled by alkalis shows the cells of the fiber to be long and spindly. Within these cells are chains of spiral forms and inside those are spiral-shaped molecules! David sums up, "Simply put, what you have is an armor-coated elastic band, but to make something like this of plastic would be a complex undertaking." What makes felt so special in piano actions? Take for instance, its duty as a shock absorber in the upright butt felt. If you substituted a piece of rubber, you'd get a slapping noise and the jack would bounce. No other material absorbs energy as well while retaining its shape.

In warm water, wool fibers swell and the scales loosen to form ratchets. In the factory, webs are laid out within huge plates, steam is injected into the panel, and then the plates are vibrated. This felting process, where the crimps entwine and the scale interlock, is irreversible. Although the amount of felting is proportional to the time spent under mechanical vibration, this style of felting can produce only the density of damper felt. For backcheck or hammer felt, the felt mass is pounded with a sledge, which the mills do with a medieval-looking machine called a fuller.

As long as the process is one of mechanical action you'll have a fiber which knows it has been bent out of shape and wants to return to normal, but is held in place by its scales. (Wool fiber's elastic regain is 90%, well ahead of anything else.) Heat is a further agent, which brings up thermoplasticity, another characteristic of wool which may or may not be an advantage. When you stretch a single fiber it will stand under tension like a rubber band. But if in this position, you heat it up, that tension will be released. Similarly, if the cauls of a hammer press are heated as they bend the felt strip around the molding, the normal tension and compression in this operation is automatically relaxed.

David brought along two heat-treating devices: a Kodak dry-mount press for dry heat and a pressure cooker with hose for wet heat, to demonstrate felt's response to these two kinds of heat. The fluffy, bouncy handful of wool he produced 20 minutes earlier was pressed flat and lifeless by the Kodak's cast iron plates. (In fact, if you go above 200° for very long, the fiber will be destroyed, a caution for those of us brightening up tone with a hammer iron of unknown temperature.) The dry-heat pressure simply resets the fibers thremoplastically and presses the air space out from between them. The two ways of restoring resiliency to this flattened mass are wet heat and mechanical action. With steam heat the fibers will expand and press outward to the limits set by the interlocking of scales. Squeezing with pliers, a common voicing trick is an example of mechanical action to restore resiliency. David was able to get his felt pancake to puff back up by flexing it between his hands.

So what has happened to hammer manufacturing? It's a fact that

before WWII, the relative price of Merino wool was much lower; hammer manufacturers could order felt of 100% blends of this high-quality fiber. This felt's elastic qualities were such that it withstood the stress of cold-pressing, and came out loaded with resilience. With the post-war prices for Merino wool, the hammer felts needed blending with lesser quality fibers. Hammer felts nowadays actually need hot-pressing. To understand the results for a set of hammers, just remember the induced spring of a tensed fiber being erased by heat. The same thing happens in a heated hammer press. Heat the filter mass and you erase its resilience.

But buying your hammers from the two manufacturers who cold-press (Ronsen and Isaac) isn't enough. Still lacking is the sheet of 100% Merino, which because of the piano industry's small purchasing power may now be gone forever. How is Steinway doing? They manage to come up with a better blend, but their hammers are still hot-pressed. The trick in all of this is to balance hardness against resilience. You need hardness to survive the pressing and resilience to make the music.

The balance between hardness and elasticity is again encountered in the work done by needles and files to adjust hammer texture. David showed electron microscope photographs of hot and cold-pressed hammers, the first two to three millimeters of a hammer's side in from the edge. The hot-pressed felt was completely lacking for the air spaces necessary for resilience to work. In the cold-pressed hammer the ratio of air space to given changes from the loose outer layer to the dense inner layer. It is this density gradient which David likes to work with in voicing the hammer. Soft tones come from the outer surface and loud, hard tones come from the deeper regions. A hot-pressed hammer needs to have its gradient created, and the alcohol/water and steam treatments, by working from the outside in, do this nicely. (In fact, what happens to these Rambo-style hammers is nothing short of a Quaker conversion.)

Later, during the acupuncture stage of the voicing, the conical point of a bridge or center pin is much better for working at specific depths of the gradient than the standard number six sharp needle. The angle of the cone determines its working depth, and you'll end up with pins of a variety of shapes. (Proper lacquer reinforcing, by the way, will coat fibers but not fill up the air spaces.)

A final point on voicing was illustrated by the story of a late-night card game with fellow members of a yacht crew. The skipper came back on board toward the end, to find the lights gradually dimmed, a result of the crew's attention to the game rather than the generators. When the skipper switched the electrical system to a fresh battery, David and his pals, by then reading their hands at nose-length, were nearly blinded by what was normal brightness. David advises, "The hardest thing in voicing is to know where you are in the piano's color range, and how high the piano can go. Pianists quite often handle a much brighter tone than we think they can. One of the worst things a technician can do is to voice too mellow, because it restricts a pianist's dynamic range."

There was no better way to see firsthand the remarkable abilities of the wool fiber than for David to show us the sheep, pick and card some wool, and then demonstrate felt's reaction to the basic processes. At the very least this understanding is invaluable in approaching hammer felt. No sheep, no pianos... no way around it. (But on the other hand we wouldn't have David Stanwood's baa-aa-aad puns, either!)

Bill Ballard

Why In The World Did They Do That?

For all its hellfire and brimstone, Del Fandrich's message was quite simple. The average person shopping for a first piano is caught in such a hail of claims and features from dealers and manufacturers it's a wonder they don't turn around, bewildered, and spend that few thousand dollars on a boat. Someone, should cut through the confusion to the basic question, "What does this here piano sound (and feel) like?" Del laid it right between our eyeballs, "What the customer is buying is music. The industry has to get back to selling music, and teachers, getting students to create and not repeat music." Del contends that people have no trouble identifying good piano sound. He has seen it happen frequently in a showroom, that if a salesman will lay off the hustle and get the customers to play one note on each of three pianos, by the end they will have sprung for something $2000 more than they expected to pay. Sterling advice for a business wondering where the customers have gone.

Has it occurred to us technicians that any of the only ways to make a piano can produce something perfectly musical? (May the congregation resound, "But how does it sound?") That's not to say that factories don't decide to do it wrong. How about the maker who for years advertised extra square inches in their vertical soundboards. Someone in the bellyroom had a suspicion that treble sound was dissipating in a soft upper corner of the board, and proved to the satisfaction of many in the plant that dropping the top edge of the board an inch or so would restore the treble. "Nix," said the marketing department, "We've got the integrity of our advertisements to uphold."

But on to the specifics. "Tropicalized" or "non-porous lacquer" soundboard finishes have a high snake oil content. Boards do carry sound better when their ribs aren't notched into the rib/liner; notching is actually an old-fashioned way of keeping the ribs from wandering during the bellying. Are you prejudiced against laminated boards? You'd better get used to them. Even when the timber industry replants, it's not with slow-growth spruce. (Ed McMorrow piped up, "We've got our own S&L crisis in the Northwest... sawing and logging.") Just because Story & Clark, way back when, couldn't get a plywood panel to crown in a bellyboard doesn't mean that a laminated board can't be made with a crown. As for the formed vs. forced crown, both methods will pro-

duce good-sounding boards. How does this board sound?

The extra speaking length made possible by a bass bridge apron is no bargain. Scalewise, there's no magic in the extra two inches of speaking length. The short tail length adds its own stiffness to the bridge, and the cantilevers stresses the board. "Hand-notched for greater tone?" The only reason Del is notching by hand is that he can't afford the machine! Just keep it tuned up and its knives sharp, and it'll labor consistently for long hours. As for vertical or horizontal laminations, capped or not, the only type to be shunned is the solid/scarfed — a sorry waste of precious maple. Should the inner and outer rims be bent together or separately? Once again, both methods produce a good piano. For those who scoff that separate bendings avoid the real work, Del advises that the easier your design is to assemble, the better your chance of having it assembled correctly. He continues, "I could also make a good case that unless veneer thicknesses in a single bending are closely controlled, glue lines either above or below the rasten will be weak." Del's opinion of the current wave of hot-pressed hammers is that any hammer that hard shouldn't be in a piano. Certainly, it can be voiced at the factory when fresh, but how about a million bangs later? Reinforcing and stapling are holdovers from the good-ole-days of water-soluble hide glue, which marketing departments are holding onto for their own perverted purposes.

And the list goes on, much longer than Del Fandrich had time for. "But what does it sound like?" the rafters ring. Thanks for a very important class, Del, and by the way, we'll be watching for your own ad campaign. (heh, heh...)

Bill Ballard

Servicing The Service Business

Developing good business skills is something many technicians postpone or ignore altogether, particularly when first starting a piano service. Janet Leary's class was an excellent overview of the "methods of developing and maintaining a solid piano service."

The basis of a sound piano service practice is an adequate level of technical and business knowledge. Technical knowledge can be obtained through colleges, seminars, conventions, and tutoring, and through reading all available technical literature, especially current and back issues of the *Journal*. Janet recommends acquiring business knowledge through reading business publications such as *Economic Trends* from the Federal Reserve Bank of Cleveland and the *Harvard Business Review* to follow current economic conditions. Also recommended for general shop work information was *Fine Woodworking Magazine.*

A technician also needs to decide what services will be offered, acquire the necessary tools, and outfit a shop and office space. A relationship with a reliable subcontractor can be very helpful in expanding service offered, as long as the responsibilities of both parties are clearly spelled out and agreed upon. An analysis of the local competition can help determine what services are most in demand: these services can then be tailored to fit those perceived market niches.

Obtaining new clients is of course of great importance, especially to those entering the business. Private referrals from present clients is the best source, along with referrals from dealers, teachers, and schools. Most technicians advertise in a phone book, although the amount of advertising seems to vary quite a bit from market area to market area. By asking how the client was referred, the technician can keep track of sources of clients and determine which are most effective.

Controlling and reviewing the business is crucial to managing it successfully. Through periodic reviews, the business can be "fine-tuned" and analysis of both variable and fixed expenses can help to determine how jobs are priced and any price increases justified. It is also very important for technicians to be aware of their own physical and mental well-being, and adjust their work schedules and life-styles to avoid becoming overstressed and burned- out.

Learning to deal with customers is another skill which is vital to develop. Interactions must be positive, polite, businesslike, and informative whenever possible. The visual image presented should also be considered, including the appearance of the car, tool cases, shop, and literature, as well as personal appearance. Many no-show appointments can be prevented by reminder calls a day in advance. Awareness of the influence of climatic conditions on the customer's and technician's mental condition, and the interaction of the energy fields we all generate, can be helpful in knowing when and how to approach clients, schedule work, and deal with complaints.

Janet's class was very thorough, thoughtful, and well presented. I would recommend it highly to anyone who gets the chance to attend it in the future.

Patrick Poulson

TUNING UP

Convention Review

Rick Baldassin, RTT
Tuning Editor

So much of my time was spent teaching this year that I was unable to attend any of the tuning classes, other than my own. The material from the class "The Perfect Tuning" by Steve Fairchild, is currently being covered in the series "The Ideal Aural Tuning" by James Coleman, Sr., and the series will continue next month. I was able to solicit the help of Patrick Poulson who reviewed two classes for me, "The Impossible Tuning" by Virgil Smith, and "88-Note Stretch Tunings — Easy As FAC" by Dr. Albert Sanderson. I will conclude by presenting some of the material from my class "Getting To The Bottom Of It."

The Impossible Tuning

In his class "The Impossible Tuning," Virgil Smith had two main areas of focus: his temperament system, and his method of tuning octaves. The temperament pattern was discussed extensively in the December 1990 and May 1991 "Tuning Up" columns in the Journal. It is certainly a perfectly workable temperament, although somewhat unorthodox in that it spans the D3 to D4 octave. On many smaller pianos this would include a number of wound strings, which are sometimes a bit tricky to tune smoothly. On larger instruments this would not be a problem.

Virgil stated that his approach was developed as an alternative to what he described as the high-math-exact-beat-speed-matching-partial approach to tuning. He titled the class "The Impossible Tuning" because his technique used in tuning octaves has been called impossible by some experts. He stated that he does not listen nor tune by matching partials; he listens to the relationship of the fundamentals of the two notes of the interval, as he asserts that our musician clients do, and tunes the fundamentals in the octave to a beatless state.

Why do some experts consider this method impossible? An examination of the mathematics involved in tuning intervals may shed some light on the subject. Beats are created when two tones of different frequencies are heard together. This situation can be described mathematically as frequency 1 - frequency 2 = beats per second. Two strings, one at 441 Hz and one at 440 Hz, sounding together will produce one beat per second (441 - 440 = one BPS). Using the A3-A4 octave as an example, our formula, using the theoretical frequencies, will then be: 440 - 220 = 220 BPS. It is not possible to hear this number of beats discretely (16 BPS is generally considered the maximum which can be distinguished as beats before a tone is heard) even if this tone, generally called a resultant tone, were audible.

How then can we account for Virgil's insistence that he listens to the fundamentals when tuning octaves? One clue may be found in Virgil's description of how he listens to the interval to determine the ideal octave. He recommends that the tuner concentrate on the fundamental of the bottom note and ignore all the other, higher partials — which would include ignoring the fundamental of the upper note! I can resolve the apparent contradiction to myself only by assuming that where he actually listens is at the second partial level of the bottom note, which is coincident with the first partial or fundamental of the top note. Since, as he stated, he consciously does not listen to individual partials, it may be that his ear guides him to intuitively tune the octave to a well-balanced blend of *all* audible partials, just as we do in tuning unisons.

The other "impossible" aspect of his system is his contention that he achieves a smooth progression of beats in all intervals as well as beatless single, double, triple, and even quadruple octaves. As most tuners now realize, two pure (beatless) single contiguous octaves will produce a double octave that is narrow and beats; another contiguous pure octave will produce an even narrower triple octave; likewise for a quadruple octave. He contends that he stretches his octaves, beginning with the temperament octave, while at the same time keeping them beatless. However, an octave has many coincident partials, and the tuner must choose which set he will bring into a beatless or almost beatless state, to the exclusion of the others. Again, it may be that this is what Virgil does intuitively.

An aural evaluation of the *tuning* Virgil put on the classroom piano showed that it was indeed a high-quality aural tuning. His class was much food for thought.

Patrick Poulson

88-Note Stretch Tuning — As Easy As FAC

Dr. Albert Sanderson presented a new class in Philadelphia explaining the theory and application of his recently developed FAC 88-note tuning program, which is now available as an upgrade for the Accu-Tuner. Where the standard stretch tuning program utilizes just one measurement of inharmonicity, between the second and fourth partials of F4, the FAC uses three separate measurements: between the fourth and eighth partials of F3, the second and fourth partials of A4, and the first and second partials of C6. By viewing the inharmonicity of the piano at these three "windows," the program is able to create a tuning that matches the piano much closer than the original stretch program which viewed the piano from only one perspective.

After demonstrating how to derive these three measurements and put

Figure 1

Partial Number:		1		2		3		4
Upper Note Series:		A3		A4		E5		A5
Lower Note Series:	F3		F4		C5		F5	A5
Partial Number:	1		2		3		4	5

Figure 2

Partial #:		1		2		3		4	5	6
Upper Note:		C3		C4		G4		C5	E5	G5
Lower Note:	C2	C3	G3	C4	E4	G4	A#4	C5	E5	G5
Partial #:	1	2	3	4	5	6	7	8	10	12

them in the program, Dr. Sanderson gave an explanation of some of the mathematical formulas used by the program to calculate the inharmonicity of the various partials and the width of the octaves and semitones across the whole scale. He then discussed the comparison of an FAC tuning to a master tuning done on the same piano which was used for a recent tuning examination. The FAC tuning, without any aural checks, deviated significantly from the master tuning on only the top five notes (because of the exam's requirement to tune clean single octaves in the high treble, and the FAC program's design to tune double octaves in the high treble), all of which could have been easily detected and corrected with a few quick tests. As always, Dr. Sanderson emphasized the importance of aural checks when using an electronic tuning aid. He feels that the biggest value of the new program is that it allows the user to get very close to the ideal on the first pass, so that more time can be spent on aural refinement to achieve the best possible tuning. On lower quality pianos, particularly those with wound strings extending up to F3 or beyond, more compromises will have to be made in the tuning to accommodate these compromises in the scaling.

The FAC program promises to be an exciting improvement on the original stretch tuning system, and one which I feel sure many Accu-Tuner users will find very useful.

Patrick Poulson

Getting To The Bottom Of It

"Getting To The Bottom Of It" was a class which covered tuning the bass. The class began by setting out some definitions upon which a framework for tuning the bass could be built. The terms were defined by the class, with direction and prodding from the instructor.

Interval was the first term to be defined. It was ultimately defined as being comprised of two notes, each of which has its own overtone series, and that at some point (at least one), these two series' coincide with each other.

Interval Ratio was defined as the numbers of the partials that coincide for a given interval. The example of a Major Third is given in *Figure 1.*

Figure 1 shows the overtone series for Major third notes F3 and A3. The series coincide at the pitch of A5, which is the fifth partial of F3, and the fourth partial of A3, hence the interval ratio for the Major third is 5:4.

It was next demonstrated that for the octave, there were several sets of coincident partials, all of which were audible at the same time. The example of an Octave is given in *Figure 2.*

Figure 2 shows the overtone series for the C2-C3 octave. The series coincide at the pitches of C3 (2:1), C4 (4:2), G4 (6:3), C5 (8:4), E5 (10:5), and G5 (12:6), hence the octave has each of the above ratios.

It was mentioned that octave tests were used to determine which pair of partials was matched. *Octave tests* were defined as three notes, each of which had its own overtone series, and that at one point, all three coincided at one time. The octave tests were listed and proven as follows:

M10-M17 (2:1) — Since the ratio for the M10 is 5:2, and the ratio for the M17 is 5:1, these two intervals have the five in common, and therefore the test is for 2:1.

M3-M10 (4:2) — Since the ratio for the M3 is 5:4, and the ratio for the M10 is 5:2, these two intervals have the five in common, and the test is for 4:2.

m3-M6 (6:3) — Since the ratio for the m3 is 6:5, and the ratio for the M6 is 5:3, these two intervals have the five in common, and the test is for 6:3.

m6-M3 (8:4) — Since the ratio for the m6 is 8:5, and the ratio for the M3 is 5:4, these two intervals have the five in common, and the test is for 8:4.

M6-m3 (10:5) — Since the ratio (at the second level) for the M6 is 10:6, and the ratio for the m3 is 6:5, these two intervals have the six in common, and the test is for 10:5.

m10-m3 (12:6) — Since the ratio for the m10 is 12:5, and the ratio for the m3 is 6:5, these two intervals have the five in common, and the test is for 12:6.

It was next stated that because of inharmonicity, only one of these pairs of coincident partials can be in tune at a time. This was demonstrated on the piano, by tuning an octave matching partials two and one, then measuring (and testing) at each of the other levels. The octave was then tuned matching partials four and two, then measured at each of the other levels. The process was repeated matching six and three, eight and four, 10 and five, and finally 12 and six.

When the octave was tuned matching 2:1, it measured narrow at all the other partial levels. When 4:2 were matched, the octave measured wide at the 2:1 level, but narrow at the 6:3 to 12:6 levels. When 6:3 were matched, 2:1 and 4:2 were wide, while 8:4 to 12:6 were narrow. It was noted that in most cases, the octave when properly tuned, is in tune, wide, and narrow, all at the same time, disproving the notion that the octave can ever be beatless, or that the octave is always tuned wide.

Each time a higher partial level was matched, it required lowering the pitch of the lower octave note to accomplish this, and the octave was said to be wider than before. It was therefore concluded that the higher the partial matching, the wider, or more stretched the octave was. It was also noted that the octave sounded different with each different partial matching, and that initially as higher partials were matched (or the octave was more stretched) that the octave sounded better, but that there was a point when the octave sounded its best, and that beyond that point, the sound of the octave deteriorated. The best sounding pair of partials to match also varied depending on whether the

octave was in the lower midrange, bass, or low bass.

It was explained that this was a phenomena of both inharmonicity, and the relative strength of each of the partials (or tonal spectra) for the notes involved. Since some of the partials are louder than others, when the octave is tuned, certain pairs of partials will be louder than others. Generally, in the midrange, the loud pairs would be limited to 2:1, 4:2, and 6:3, while in the low bass, all of the pairs from 2:1 to 12:6 would be loud pairs.

It was stated that the "game" in tuning the bass, is to eliminate, if possible, the beats in the loudest pair of partials, while at the same time minimizing the beats in the neighboring pairs of partials. This gives the best sounding octave. It was then noted that the better the piano is scaled, the easier this is to accomplish. An example was passed out where tuning and measuring was done on a concert grand. For the C1-C2 octave it was possible to tune the octave such that there were zero beats at the 10:5 level, and less than 0.5 beats per second at any of the other partial levels through 12:6. It was also noted that in the case of a much more inharmonic spinet, one might have to choose between an octave that has two BPS at the 2:1 level, or six BPS at the 10:5 or 12:6 level.

The class participated in finding the best possible location for the C4-C3, C3-C2, and C2-C1 octaves. In the case of the C4-C3 octave, the whole class agreed on a single placement in very little time. In the case of the C3-C2 octave, there were two main factions, the conservatives and the liberals. When it came to the C2-C1 octave, there were more opinions than there were members of the class. This was because the octave did not sound good no matter where it was placed. It was concluded that this is why piano tuning is called a "subjective art" — it is left to each of us to determine when what sounds lousy sounds its best.

It was stated that partial matching using either octave tests or an electronic device yielded the same results (providing the corresponding tests and machine settings were used), and that other types of parallel interval tests should be used to tie everything together.

Coming out of the midrange, a combination of third, fourth, and fifth above the lower note of the octave, or fourth, fifth, and sixth above this same lower note should be used to confirm the proper placement of this note. The fifth and fourth are compared, and the fifth should not beat faster than the fourth. Slowing one down speeds the other up, so it is not hard to make these intervals conform. Next the fast-beating interval (third or sixth) is compared with its neighbor a semitone above to confirm a proper decreasing speed progression. Finally, listen to the octave to confirm that it sounds good (because it won't be beatless). At some point, it will become difficult to hear the fourth any longer, so at this point, concentrate on the quality of the fifth, and the progression of the fast-beating intervals. When the M3rd gets too slow or hard to hear, switch to the M10th (octave + M3). When the M6th and M10th get too slow or hard to hear, switch to the M17th (two octaves + M3). When the M17th gets too slow or hard to hear, switch to the m21st (two octaves + m7). You should be able to hear this interval to the bottom. With all of the above intervals, lowering the lower note will make the interval beat faster.

It was concluded that when tuning this bass, it was necessary to listen to *all* of the partial levels at the same time to find the best combination. The nice pianos will permit the tuner to eliminate the loudest-beating pair while at the same time minimizing the other pairs. The not-so-nice pianos will not permit this, and a choice must be made between two bad options. Octave tests can be used to determine what partial matching sounds the best, and can be further used as a means to consistently match that pair until another sounds better. The parallel intervals will help tie this all together.

Rick Baldassin

I had a lot of fun teaching this class, and I have had a lot of fun writing these articles. After a great deal of consideration, I announced my resignation from this position at the Philadelphia Convention. I feel with the restructuring of the Editorial Staff, that this is in the best interest of the *Journal*, as well in my best interest at this time. I will continue for the short-term, so that a smooth transition can be made. It is my intention to continue my contributions through teaching and in writing as time permits. Thanks to all of you for your support over the past five years.

Until next month, you can still send your last-minute questions to:

Rick Baldassin
Tuning Editor
2684 W. 220 North
Provo, UT 84601

Growing up Complete: The Imperative for Music Education

The National Commission on Music Education's 1991 Report to Congress and the Administration

Based on the principle that music and the other arts in education have intrinsic value and are essential for a comprehensive, well-balanced education, this report addresses the concerns over—and repercussions of—the omission of music and the other arts from a child's basic education.

The report:

- presents a rationale for music and the other arts in education
- examines the status and trends of music education into the '90's
- provides testimony on why music is critical in children's developmental process
- offers recommendations for parents, teachers, school officials, and the music community on how to make music basic in our children's education

1991. #1018. Price **$7.95**

To order, send payment to:
MENC Publications Sales
1902 Association Drive,
Reston, VA 22091. Credit card holders may call 1-800-828-0229, Monday–Friday, 8:00 AM–4:00 PM, EST.

Convention Snapshots

Awards And Honors

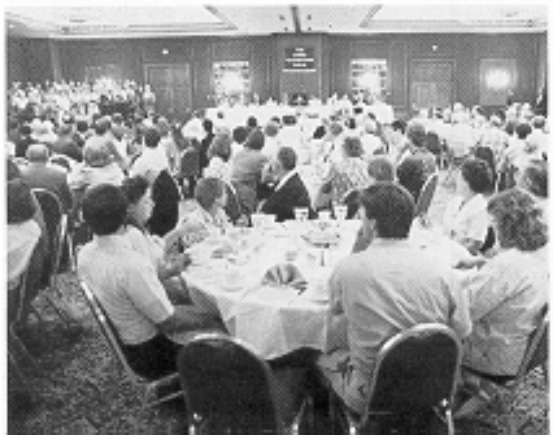
Dick Bittinger, above right, received the Golden Hammer Award from its maker, Bill Smith, and President Zeringue. Member of Note Awards, above right, were presented by Awards Chair Hilbert Felton, left, to Yat-Lam Hong, M.B. Hawkins, Rick Baldassin and, near right, Vic Benvenuto. Ernie Preuitt, far right, and James Coleman Sr. were inducted into the Guild Hall of Fame. Susan Graham, near right, received a Presidental Citation for her work on the *Journal*. Honored for their membership development activities were President's Club members, far right, from left, Sid Stone, Don Valley, Randy Potter, Jack Stebbins and Norman Heischober.

Staff Photos
By Lisa Gray

1991 Institute Director Ernie Juhn, left, was all smiles as he welcomed attendees to one of the largest conventions in PTG's history. Attendance reached 1,022, second in size only to the 1987 convention in Toronto.

Host Chapter

On behalf of the host Southeastern Pennsylvania Chapter, Host Chair Ruth Brown and Webb Phillips welcomed attendees to the 1991 convention. Among other contributions, the chapter staffed an information booth in the convention foyer, and its Sunday night auction provided a welcome break in the proceedings.



At left, a near-capacity crowd was entertained by the Barbershop Chorus during the Closing Luncheon.

The Entertainers

Bob Discon, below, played for attendees at both the Opening Assembly and the Awards Banquet. The Barbershop Chorus, right, under the direction of Larry Crabb, performed at the Closing Luncheon. Greg Pollard, below right, had the audience joining in with his rendition of "Equal Temperament Blues" at the Opening Assembly. Stride player Judy Carmichael, center right, performed at the Steinway reception after the Awards Banquet. During the Opening Assembly, National Association of Music Merchants Executive Vice President Larry Linkin, far right, displayed a music promotion kit developed by NAMM and discussed music industry initiatives.

An International Affair

President Nolan Zeringue, above, received a gift and greetings from the seventh biennial meeting of the International Association of Piano Builders and Technicians. Secretary-Treasurer Sharla Kistler, above right, called the roll of states and countries represented at this year's convention. Ralph Long, right, brought greetings from the Pianoforte Tuners Association of England. Lin Zhiquing, below center, visited from Shandong, China. He is shown with Yat-Lam Hong, left, and Kelwin Bakker.

1992 Institute Director Ben McKlveen and Sacramento Chapter President Patrick Poulson previewed next July's convention in Sacramento, CA.

Francis Hollingsworth led a Sunday morning worship service in the Auxiliary's hospitality room.

Outgoing Board members, from left, Ron Berry, Bruce Dornfeld and Danny Boone, were honored for their service to the organization.

Fitting The Block To The Flange

Susan Graham, RTT, Technical Editor
Walter Brooks, Jr., RTT, Connecticut Chapter

The new block has been rough cut from the blank. Put it on sawhorses next to the old block and eyeball the two for an initial comparison of shape (figure 1). You can get an approximate idea of the chamfer needed at the top of the flange edge (at the webbing), or of particularly noticeable hollow spots where the top of the block was fit to the webbing, etc., and quickly rough in those details now.

A good belt sander is an invaluable tool for shaping. For our purposes, it doesn't need to be a floor-finishing monster. A 3" x 21" belt is the most commonly available useful size, although a 3" x 18" is easy to manipulate and good if it has enough power. When you shop for a belt sander, pick it up and test it for one-hand balance — how easy is it to maneuver? Where is the exhaust hole — is it going to blow dust in an obscuring pattern? Some will. It may be helpful to put a piece of tape across this hole, covering about half of it and directing the flow of sawdust away from the work surface (and your face).

Use 80-grit belts for this operation. Rough shape at the notch first so you can get the block up to the flange for accurate fitting. Once this is accomplished, fit the top of the block to the webbing.

The plate is upside down on solid supports (an upright piano tilter is handy, since it has wheels). In many cases, there will still be enough blackening agent on the plate to mark high spots. If not, redo the coloring with powdered or fine flake graphite mixed with alcohol. Brush it on, let it dry and then wipe off the excess. You want an almost burnished surface, without a lot of loose powder floating around which may yield inaccurate information.

Hold the block down firmly and rub it back and forth on the webbing to mark any high spots on the top of the block (figure 2). Work those off with the belt sander. Continue fitting this surface until the new block sits securely on the webbing, without rocking and with good wood-to-plate contact all across the top surface with no gaps greater than 1/16" or 1.5 mm.

Some blocks have a considerable chamfer at the top edge of the flange face — be sure to duplicate this or the block can't be brought up close to the plate flange.

When you can get the block close to the flange, make a reference mark on the plate with a hacksaw blade and make a chisel cut in the block to match that mark (figure 3). From now on, every time you put the block on the plate for fitting, mate up those lines.

Holding the block lightly with one hand to keep the lines mated, bump it several times in the middle with a rubber mallet to bang the wooden edge against the plate flange. The graphite will mark any high spots where the wood touches. Remove these high spots with the belt sander.

An advantage of the belt sander is that it leaves a smoother surface than a surform or rasp, and marks are easier to see. A very rough, uneven surface may pick up graphite spots which are too small to be detected, especially on the light/dark contrast of multi-laminate block material.

Continue the process of testing, and removing material, until there is good wood/flange contact at least every three inches. If there are gaps between contact points, they should be no greater than 1/16" (1.5 mm). Pay attention to the location of the graphite marks: if they're all on the top or the bottom edge (figure 4), you may need to refine the angle of the entire face.

Watch out for end-to-end rocking. If the cut at the notch isn't deep enough or angled and chamfered correctly, the block may hang up there. When the block is bumped, however, one end may swing in and contact the flange. You may erroneously remove material from first one end and then the other, when what really needs to be done is to take more out at the notch until there is si-

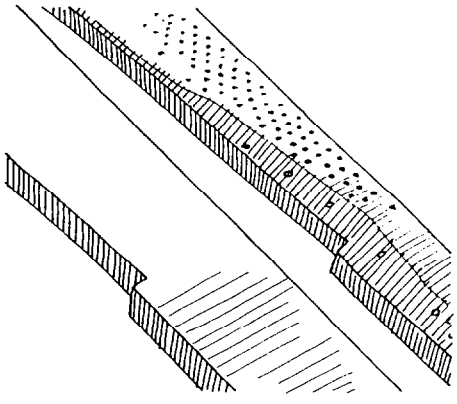


figure 1: old and new pinblocks

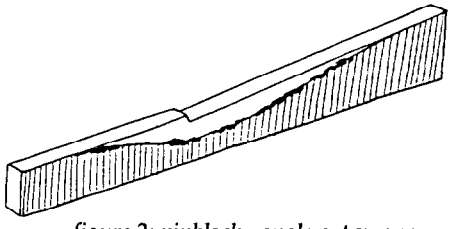


figure 2: pinblock - angle cut wrong

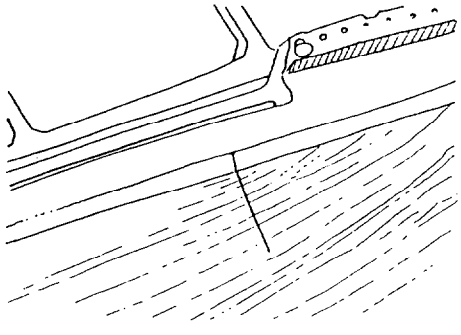
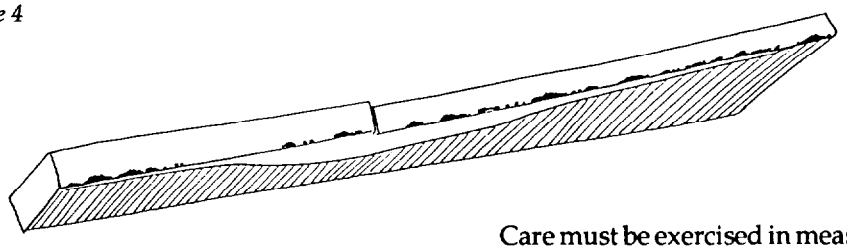


figure 3: mating line - block on plate

figure 4



multaneous contact at both ends.

After the block has been fitted to the plate by removing wood to achieve the fit as specified (contact at least every three inches, no gaps over 1/16"), the fit is refined with epoxy to mate the wood exactly to the plate flange. This is done now, before transferring the reference marks and measurements and trimming the block to fit in the case.

A top quality, industrial grade filled epoxy is used. Wally Brooks can recommend Hysol Epoxi-Patch 11C, which is black in color. Sears also carries a filled epoxy which he has used with success. A filled epoxy is required since it has body to give it compressive strength. Fiberglass resin is not suitable, since it lacks this strength. (*Editor's Note:* It is also possible to buy high quality epoxy resins and mix in the fillers which are sold to create the body. Many marine suppliers carry the Gougeon products, which include resins, fillers, and an excellent handbook on selection of fillers, quantity to be used, etc.).

The plate is still upside down on supports. Prepare it by applying some sort of mold release to the flange and webbing so the epoxy won't adhere: waxed paper, clear shoe polish, teflon spray, etc. Waxed paper is probably the safest, since you can see that it is in place, entirely covering the pinblock contact area (figure 5). Even though you won't be epoxying the entire block surface, be sure to protect any areas which may come in contact with spills or squeeze-out.

When you're handling epoxy, remember that heat will soften it when it is first mixed, but that it also accelerates the cure. Epoxies cure by means of a chemical reaction between the resin and hardener which creates heat and hardens the material.

Care must be exercised in measuring quantities of each component, and mixing them thoroughly. This job requires a healthy dollop of material, so don't fool around working in a tunafish can with a popsicle stick. Mix on a good-sized piece of corrugated cardboard using a piece of scrap wood that's about 1 - 1 1/2" wide, 3/16" thick and 6-7" long (a disposable putty knife, in other words).

Before mixing the epoxy, get set up. You'll need a good supply of big clamps. At least one must be deep enough to reach to the middle of the webbing in the midtenor section where the plate and block are the widest. You may also need blocks of scrap wood to use as spacers or cauls where the clamps have to straddle struts or the lip of the webbing, and also to protect the surface of the plate.

If you're doing the job for the first time, haven't done it for a while, or just want to be sure everything's in order, make a dry run and set up the clamps the way you'll want them. Large "C" clamps, bar clamps and even the wooden-jawed woodworkers clamps can be used — an assortment of each is a necessary investment for any shop.

Mix the material well and apply a uniform coating 1/16" to 1/8" thick to the side of the block which will contact the flange. Put the block on the webbing and push it into place by hand, making

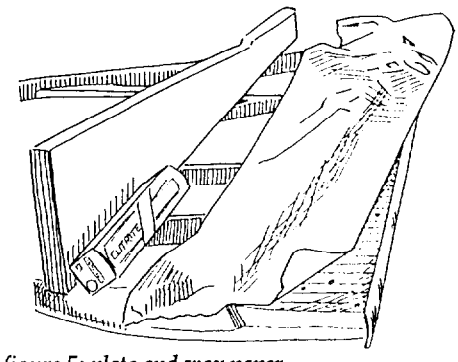


figure 5: plate and wax paper

sure that the mating lines match up. Snug down three clamps to hold the block down to the webbing first: one at each end and one in the middle. These should be tight enough to hold the block down but still allow the horizontal clamps to pull it forward to the flange.

Tighten up the first horizontal clamp at the notch to pull the block toward the flange, and then put two more horizontal clamps in the treble sections and one more in the bass (figure 6). Keep an eye on the mating lines, although they'll be somewhat obliterated by squeeze-out.

Tighten the clamps tight. The process can be thought of as getting rid of as much epoxy as possible. A healthy bead should squeeze out all along the flange.

Let it set thoroughly. If you're in a hurry, the cure can be accelerated with heat (but don't get it so hot you boil the epoxy). This is a good time to chisel out old pinblock material still attached to the stretcher and sides of the case.

When the epoxy is completely hardened, remove the clamps and clean off the excess with the belt sander. Be sure to wear a respirator: the dust will be very fine and is hazardous. Clean off any epoxy which strayed up on top of the block under the webbing, and redo the chamfer at the top edge. Doublecheck the fit of the block to the webbing to be sure no rocking has developed.

Turn the plate over and clamp the block back in place, using the mating lines to be sure it's located correctly.

It's time to drill

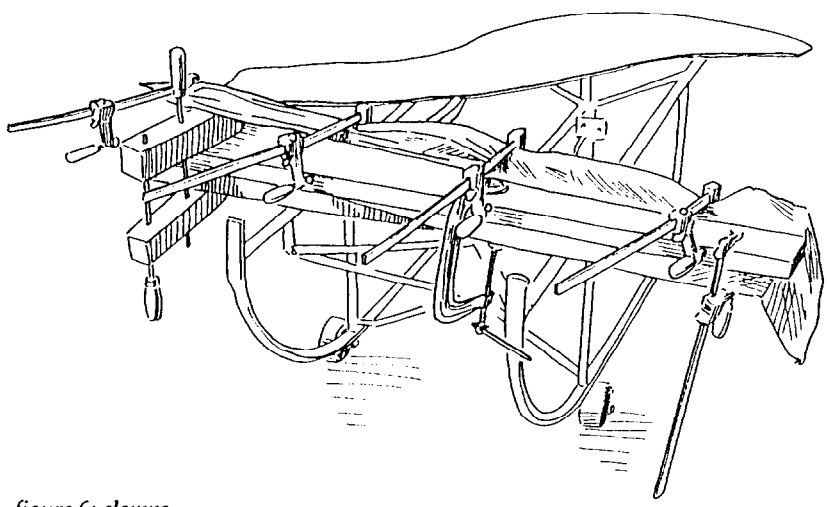


figure 6: clamps

figure 7: diagram of screw hole

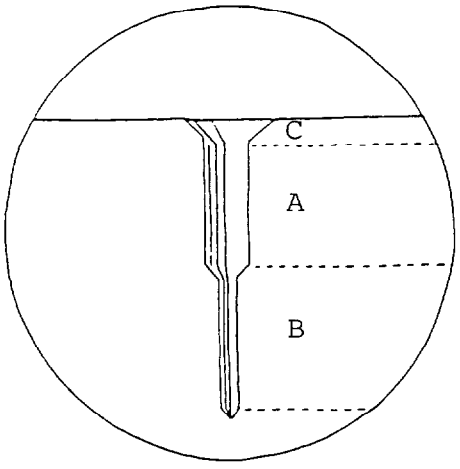


figure 8: using bevel to register case angle

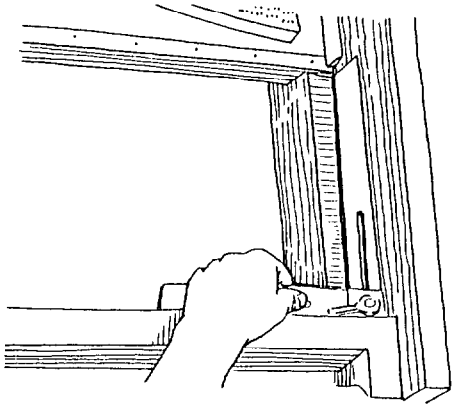
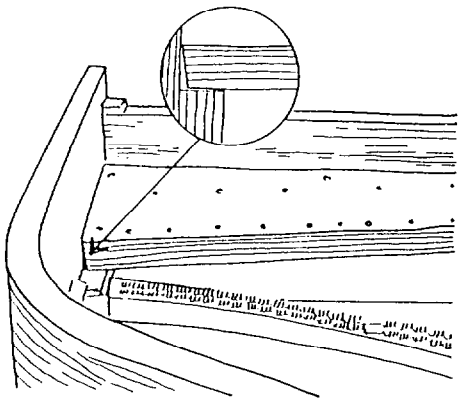


figure 9: pinblock corner angle



for the screws which run through the webbing into the plate. Brooks replaces all these screws (they are usually #18, 1 1/2" long, with plated heads). They can be ordered through a local industrial supplier or from American Piano Supply.

Condition of the heads has a big effect on the overall appearance of the final job. When you put these screws in, be sure they go in straight so the heads will seat well on the webbing, and use the proper sized screwdriver and some caution so the heads don't get all nicked up. Apply Ivory soap or paraffin as a lubricant to help the threads cut (never graphite) before turning the screws in for the first time, especially in multi-laminate material.

Obviously, you must decide whether you want to replace the screws or reuse the old ones before you drill pilot holes. Drill right through the holes in the plate. It will take two bits. The first bit is the same diameter as the shoulder of the screw — the unthreaded portion just under the head (figure 7a). The diameter of the bit must match the largest part of that shoulder. If anything, the bit can be slightly larger, but it must not be smaller than the screw shoulder. Use a drill stop or a piece of tape to mark a depth gauge on the bit. Drill to the depth necessary to provide clearance for that unthreaded portion of the screw.

The bit to complete the hole should match the diameter of the shank of the screw — the smooth part "inside" the threads, not the threads themselves (figure 7b). The shank tapers: use a caliper to reach between the threading and measure the inner shank halfway down the threaded portion. Drill all the way through the block with this drill bit. Countersinking is done later (figure 7c).

Put in a few of the webbing screws — two in each section. Space them so both the front and back of the block are supported. Drill through the two registry holes to transfer those marks to the new block.

Mark the holes for the tuning pins. Use a machinists' center punch which matches the diameter of the hole in the webbing. Tilt the punch a little so the mark is centered slightly to the back of the hole — away from the flange. A drill bit of the matching diameter can also be used for marking, using the bit in a running drill, tilting it in the same fashion, and making a shallow mark (no more than 1/16" through each tuning pin hole.

Remove the block from the webbing. Transfer the "box" of measurements which reference from the registry holes by writing the measurements right on the top of the new block and then using the scale to make a mark at the correct distances. Connect the two marks along the stretcher using a straight edge to draw a clear, straight cut line. This line is drawn first because it will be the reference for marking the cut line on the ends.

The sides of a piano case are not usually at 90 degrees to the stretcher. Use a bevel to register the amount of "flare," referencing from the stretcher (figure 8). Transfer this line to the top of the block, referencing from the cut line for the stretcher edge and intersecting the mark for the measurement to the side (from the reference hole). If you don't have a bevel, you can calculate the flare using a square. Hold it against the stretcher butted into the corner: measure how far the side of the case is from the square at the place where the front (flange) edge of the block will contact the case. Use this distance, the square referencing off the back (stretcher edge) cutting line, and the reference measurement from the the registry hole to transfer the correct line to the pinblock for cutting the ends.

Cutting the pinblock to final size is one of the most critical steps in the whole operation. The cut has to be right the first time — it's almost impossible to trim very slight amounts accurately. You literally must be able to split your marking lines with the saw blade. A circular saw (either table or hand-held) will give a smoother, more accurate cut than a bandsaw.

When you cut off the treble end, set the blade so the cut is angled in at about three degrees (figure 9): the lower edge of the block (which sits on the shelf of inner rim) is slightly away from the case. In addition, round off the corner of that lower edge. These are both necessary so the treble end of the block can be dropped into the case without jamming or causing damage to the side. Whenever you drop the block in place, put the bass end in first and then lower the treble end. You may even need an additional 1/16" of end play to prevent jamming — but no more.

Countersink the top and bottom of the plate screw holes, and sand and clean up the block. If you have used a machinists' punch to mark the tuning pin holes, you may want to go over them again and make them slightly deeper so the bit for drilling the holes can "find" the marks a little more readily.

Mask off the gluing surfaces — all the edges — and apply a light coat of finish to seal the wood. *Do this before drilling the tuning pin holes.* Excess mois-

ture can get into an installed pinblock; although it will penetrate through lacquer or varnish, the rate of absorption is slowed. An advantage of the full-fit block is that gluing at the ends and along the stretcher helps seal the wood. In addition, epoxying the flange face seals that edge. Multi-laminate blocks are self-sealing; moisture doesn't penetrate beyond the first two laminations because of the sealing effect of the glue used to assemble the plank. A light coat of finish will help protect the remaining surfaces.

The block is now cut to final dimension, ready for drilling and installation into the case.

We'll cover that subject (and finish this series) next month. ≡

GOOD VIBRATIONS

Economics And The Piano Technician — An Introduction Into The Dual American Economy

Nick Gravagne, RTT
New Mexico Chapter

A few issues ago I wrote of an upcoming series that would not only deal with technical details of organizing and running a rebuilding shop, but with equally important matters relating to the philosophical soul and mind-set of those engaged in any form of piano technology, particularly those independently employed. Real static and dynamic economic forces are at work which first need to be explored to set a backdrop placing in perspective future articles, and so the stratified economic system in which we find ourselves might be at least recognized. A certain amount of de-mythification must ensue: certain illusions (some of which we hold dear) must be stripped clean of window dressing that we might see past the veneer and into the core. And so the series begins.

How many times have you heard the following lament from a piano technician or another highly skilled but small-time artisan or craftsman: "I can't understand how after 10 years in this business, and after all the skills I've developed, I still can't earn the kind of living my friend down the street is earning with half the effort." Sour grapes? Idle complaining? In some cases, certainly. But such aside, there are reasons which validate the lament.

A young man I know recently graduated with a BA from an engineering college and within a short time landed a job with a federally-funded research laboratory. This 23-year-old man, although very polite and pleasant, is not particularly gifted — neither as a communicator, nor in charisma, nor even as an engineer. His starting salary is $27,000 per year. Additional benefits, including health insurance, life insurance, a pension plan, travel, vacation time, and paid-for continuing education, effectively boost his salary to better than $31,000 — and that's conservative. In addition, healthy pay hikes and additional "bennies and perks" can easily be expected as the years pass. He is, of course, quite satisfied with his future prospects. And so are his mother and father who agree that, by all criteria, their boy has really landed a "good" job.

Their other son, 28 years old, is another story. He loves wood and tools and things artistic. He is twice the communicator of his younger brother, has twice the personal presence and magnetism, and, in a native way, is twice the engineer. And in the next five years he will work twice as hard for much less income. For the past six years he has been running a woodworking/cabinet shop, and probably will never see an annual salary of $25,000. The shop he works for cannot offer health insurance, a pension plan, or paid vacations. To his parents, who love both sons with equal severity, the elder son (whom they admit embodies greater natural and developed gifts) is something of an economic flop. He plays guitars beautifully, builds them beautifully. He's intelligent, diligent, personally engaging, and, in caring for a wife and two children, nearly poor. Why? Mom and Dad would like to know.

Those who routinely sit in judgment of the small-time self-employed will be quick to point out that there must be something missing in the elder son's organizational and administrative makeup. If not with him, then certainly with the small firm he works for. Its craftsmanship must be average, its advertising bad, people-skills bad, accounting and financial management bad, shop management bad. At any rate, *some* indictment must be leveled if the myth that only talented and industrious people can succeed is to survive. Interestingly, any of these indictments can safely be leveled in part or full at many corporations, or federal, state, and city personnel and management. Yet the salaries, "bennies and perks" drawn by those in attendance are hardly suffering as a result. On the contrary, except in times of scandalous exposure of their inner workings to the public, remuneration is on the rise, at least for those in the higher echelon. And herein lies our first and most important clue as to the dual American economic system in operation. One part of the system is really plugged in hot, the other is not. We will come to this presently.

The purpose of this essay is not to present even a moderately in-depth review of economic history and theory. For that a suggested reading list will be provided. One of our interests here is to point out that, as piano technicians, our place in the economic scheme is outside the space of our control to choose — it has been set a long time ago by a complex set of historic, economic, and governmental influences. Only after recognizing this fact can we better unearth not only our place in the economic landscape, but our possibilities as to general business opportunity, strategy, and financial potential.

Something else we might to do as this series progresses is to juxtapose a self-employed piano technician who possesses a college degree, and a salaried professional such as the technician could have been had he or she so chosen, in order to compare incomes and opportunities. The point is to show that the self-employed must earn more in order to effectively earn what his professional counterpart is earning. Moreover, especially for the piano rebuilder, much of this series' discussion must relate to or

suggest pricing and shop policies based on sound accounting and manufacturing principles.

Finally, but perhaps of prime importance, the philosophical basis on which the small entrepreneur operates must be explored. Here, in the often fuzzy or mystical underworld of perceptions, clearer lines must be found dividing art and craft, the artisan and the artist, and the power of personality of the technician and the businessman in influencing customers to buy his services and products. Although there are no guarantees, recognizing these distinctions can make the difference between being in demand, or merely bidding with the lot. At the very least, such awareness places in perspective not only business competition, but the wide divergence which exists in success and incomes of piano technicians.

For the sake of brevity, the following discussion must be painted in broad strokes. The usual problem with brief yet broad discussions is that too many smaller elements which don't fit the large types under investigation get left out. There are always exceptions to rules: Although it is possible that a man running or owning a woodworking shop can pull down $50,000 plus benefits, it is not probable. By way of illustration imagine two mountains as seen from a distance. One is forested green, the other scrubby and brown. And from a distance that is how the artist must paint them. But upon climbing those mountains elements and pockets of green foliage will be found on the otherwise scrubby and brown landscape, while dry and rocky places will be found skirting the otherwise forested mountain. Such are the experiences and investigations of life — we need both the telescope and the microscope.

The Dual Economic System

It is a marvel of astonishing naiveté to hear commentators, politicians, and news broadcasters chronicle the events in countries such as the U.S.S.R. that are moving these nations to what they call a "free-market economy." Their statements along with the tone of their discussion and debate indicate their belief that America fully operates as a free-market economy. Certainly, considering all of world history, this is relatively true. Still, it is technically only half true, as any real economist knows.

The classical model of the free market — of free and unimpeded competition in the arenas of product pricing, wages, and resource allocation — has for the last 100 years, particularly since the Great Depression, metamorphosed into a hybrid system of monopoly by the few (oligopoly) at the high end of the economic "food chain," and a more or less true free market at the middle-to-low end of the chain. Thus there exists a broad division between those relatively few mega-corporations such as General Motors and the oil conglomerates — where the organizational structures and sub-structures are enormous, interlocking, and highly-influential at the governmental/bureaucratic level — and a vast sea of non-organized smaller firms, partnerships and entrepreneurs. The mega-corporation and its workings may be referred to as the planning system (after John K. Galbraith), while the smaller firms — those far less organizational or influential in nature — may be said to comprise that economic block of activity known as the market system.

The essential difference between the two can be summed up in the ability of the planning system, due to its dominant presence and influence over the entire economy and its large cash or convertible assets reserve, to control prices and production output with near impunity regardless of the economic climate. To the extent it can do this it does not conform to the classical market model where prices are believed to be absolutely subject to those sacred forces called supply and demand. Typically, where demand is strong, supply will rush to satisfy it; hence prices will be higher than when demand is weak and supply resources are fleeing to stronger markets. And all of this is said to be subject to King Consumer. But the planning system, except in small and superficial ways, is only partially interested in the consumer's wishes — indeed, through advertising and social conditioning it shapes and controls those wishes. Rather, its two most important goals are to corner the markets it specialized in and, like the queen ant, to survive at any cost.

Recently there has been talk of a merger between IBM and Apple Computers. Competing neck-and-neck for years, they have apparently decided that together they will become considerably stronger, and that their ability to dominate the hard and software market is almost assured. This trend toward corporate giantism and monopoly does not necessarily promise to consumers significant savings, or increased service and conveniences (although these benefits may materialize). The real benefits will accrue to the new and enlarged corporation in its ability to become more and more immune from the classical market forces which the rest of the smaller business community must live by, and incidentally, which IBM and Apple will praise as having made them and America great.

The planning system has been masterfully successful in accomplishing its goals due to two primary criteria. First, as already noted, a colossal organization built upon the dedication and absolute loyalty of committed members is a key factor. One must not imagine by this a sort of enlarged Chamber of Commerce, or an off-the-cuff community of like-minded business people sharing common concerns. Suggested here is something more like a trained army. Beneath each soldier's immaculate business suit is hidden chain-mail — battle will be done on the economic holy ground. But a crack organization's power stands to be severely or moderately limited by government depending upon whether the goals of the two entities are opposed or compatible. And here is where the genius of the oligopolistic mega-corporation currently shines, and has historically shone, the brightest.

Through a protracted series of American fiscal, monetary, and congressional policies, through the anguish of the Great Depression and its consequent bail-out, through two world wars, a cold war, and other military "policing" actions, through social upheaval and complacency, technological progress, space flights, moon landings, union struggles, corporate shields, SDI and the GNP — something incredible has emerged, and not only by accident. The goals of the large industrial corporations and those of the state have become one and the same. To attack or criticize one is to attack or criticize the other. It is here where jobs, affluence, and the roots of world power are perceived to originate and nurture. The planning system, and

everyone existing on its hierarchial rungs, has become a "social Isaac," the apple of government's eye. As such, it receives preferential treatment, and the promise of great inheritance. This symbiosis is, of course, categorically denied except in those instances where the relationship clearly serves national security.

To the extent that the planning system succeeds in furthering its own ends, it becomes a giant magnet. Drawn into its fields are vast financial in-house resources, personnel, federal subsidization or outright patronage (as in the case of the gargantuan weapons industry), technological advantage and prowess (again usually federally subsidized), and entrees into every nook and cranny of governmental, social, and academic institutions the world over. Any wonder that the planning system tends toward political conservatism? To upset the status quo of only one component of this highly-complex mechanism would be, as in the case of the space shuttle, to upset all of it.

The planning system wields an authoritarian power over the job market. Always maintained in the wings, if not on the payroll, is a constant pool of labor resource — the whole gamut from lowest menial worker to PHD in finance management, and technology. It is not surprising that most people, when choosing a career or a career change, almost instinctively look to the robust corporation or its subsidiary where relative job security, prestige, higher pay with benefits, and opportunity for advancement are expected to exist. And, in fact, they do in stark contrast to the relatively anemic business and career world of the market system — where the cash flow often dribbles, where insurances are hard to come by, and capital for investment and expansion must be secured from lending institutions rather than internal savings, where political influence at any level of government is scant or nil, and where wages paid by owners to workers are low. In those localities in America where the planning system is strong and unassailable, there is an accompanying affluence — if directly only for the chosen few, and indirectly for those fortunate businesses and services orbiting the planning system's economic center. And the reverse — where the mega-corporations are silent or absent or have pulled up stakes, those localities are said to be depressed.

Now to return to our two sons who opened this discussion. Where does each exist in the economic landscape? On the green mountain where the water flows abundantly? Or the brown one where water is scarce? Clearly, the young man who landed the government research job has fully plugged into the massive turbine power of the planning system and is, fresh out of college, already perceiving the fruits of the system's lineage and largesse. Our woodworking and artistic son, despite all his uncommon gifts, is plugged into much weaker circuitry. His cause, except for lip service paid to the sterling character and spirit of American individualism and entrepreneurship, cannot be pleaded with earnest before the powers that be.

And of the "piano technician's lament?" Piano technicians — like plumbers and electricians, small-time retailers, service shops and offices of every kind — do not directly enjoy the fruits of the planning system as remuneration or privileged access to protection under the corporate umbrella. Neither do they stand in gilded relationship to state subsidies granted to the many scientific or technological manufacturing enterprises which serve the purposes of government; nor to the tax dollar as a pool of income derived *not* from creating the products and wealth of nation, but rather from filling the ranks of public service or officialdom. The small-to-medium sized self-employed is, indeed, a full-blown part of the free market system, and as such, is subject of the capricious classical forces of supply and demand. As to the "friend down the street" who is working less hard for more effective income, it remains almost a certain bet that he or she has, in one way or another, access to incomes doled out by large corporations, or a system of manufacture, research and development, or other institution funded completely or in significant part by some level of government.

But note an important point regarding the self-employed: To the extent that products and services are, or are perceived to be, generic and indistinguishable from one another, the forces of competition, particularly those which tend to push down the selling price are strong and stubborn. But where those products and services are in fact, or perceived to be, partially or wholly artistic in nature, competition lessens along with a correlative lessening in the tendency for downward pricing. It is here, in this understanding, where piano technicians and small cabinet shops and technical artisans of all types have an edge — an edge, that if it is dull, must be honed.

We will return to these thoughts at a future date.

Those interested in further study of both the history and interpretation of economics will find the following books helpful. The first three are general in nature.

"The Worldly Philosophers" by Robert L. Heilbroner, revised 1980, published by Simon and Schuster. This book is a lively and informed study of the "lives, times and ideas of the great economic thinkers." Unlike many economics books (especially anything labeled "neoclassical") which seem to place the greatest emphasis on obfuscation and jargonized prose, this book is delightfully readable. "New Ideas From Dead Economists" by Todd G. Buckholz. "Economics In Perspective" by John K Gailbraith.

The next three books were conceived and written as a trilogy, and, although each book can stand alone regarding content, the series is best read in order. Author, economist, Harvard professor, and former statesman, John Kenneth Galbraith is famous for his elegant and witty prose. His writing, which rings with immense scholarship and truth, is clear, readable and enjoyable. "The Affluent Society," "The New Industrial State," "Economics And The Public Purpose"

Other books of interest include: "The Capitalist Manifesto" by Louis O. Kelso and Mortimer J. Adler. Actually anything by Kelso makes for fascinating and thought-provoking reading. Kelso's unrelenting thesis is that much more capital producing income should be made easily available to all Americans, not just that tiny minority at the peak of the economic and industrial pyramid. Kelso is the originator of the ESOP (employee stock ownership plan) as passed by Congress.

Two unsettling books by MIT professor David Nobel, "America By Design" and "Forces Of Production" which deal with the theme of technological

progress and its far-reaching impact on corporate organization, economics and politics. Noble goes well out of his way to document and footnote his content and thesis.

Another unsettling book penned by professor Noam Chomsky, "American Power And The New Mandarins" deals with the ability and propensity of big-time corporate America in league with government to impress upon the world, particularly third-world countries, its politico-economic beliefs and strategies. Like Noble's books, this one is drenched in backup documentation and footnotes. Don't read this unless you have an open mind.

"The Myth Of The Machine" by Louis Mumford. More broad-ranging and philosophical in nature, but stirring, clear and readable.

INDEX OF DISPLAY ADVERTISING

JULY 1991 MEMBERSHIP

New Members

REGION 1

CHAPTER 021 — BOSTON, MA

BARBARA J. KING
76 BOSTON STREET
SOMERVILLE, MA
02143

CHAPTER 062 — TORONTO, ON

TED DEGROOT
B2304, HWY. 48, RR #3
BEAVERTON, ON
L0K 1A0

CHAPTER 101 — NEW YORK CITY, NY

ROBERT P. BERNARD
60 SUTTON PL., S., #1D
NEW YORK, NY 10022

CHAPTER 111 — L.I.-NASSAU, NY

DONALD T. KING
20 SARAH DRIVE
OLDBETHPAGE, NY
11804

REGION 2

CHAPTER 201 — WASHINGTON, DC

BUDDY CURILLOA
9606 FRANKLIN AVE.
SEABROOK, MD 20706

CHARLES J. JOHNSON
1403 ELSON STREET
TAKOMA PARK, MD
20912

CHAPTER 240 — ROANOKE, VA

CAROLYN MACNEAL
AUDIO DR., BOX 140
GOLDBOND, VA 24094

CHAPTER 274 — CENTRAL NORTH CAROLINA, NC

SHEILA HUNTER
650 RUGBY ROW,
APT E
WINSTON-SALEM, NC
27106

CHAPTER 275 — RESEARCH TRIANGLE, NC

LUTHER R. MULLEN
RT. 5, BOX 161
DURHAM, NC 27704

CHAPTER 278 — PAMLICO, NC

PAUL E. HANOVER
HQ USEUCOM, BOX
1292
APO NEW YORK, NY
09128

CHAPTER 292 — PALMETTO, SC

PHILIP M. ROMANO
P.O. BOX 33
MURRELLS INLET, SC
29576

CHAPTER 301 — ATLANTA, GA

CHARLES H. COOK
238 E. COLLEGE ST.
GRIFFIN, GA 30223

PAUL R. GERMANN
3210 PADDLE WHEEL
COURT
SUWANEE, GA 30174

CHAPTER 322 — NORTHEAST FLORIDA, FL

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

REGION 3

CHAPTER 727 — NORTHWEST ARKANSAS, AR

STEPHEN E. MYERS
1313 SYLVAN HILLS
VAN BUREN, AR 72956

CHAPTER 752 — DALLAS, TX

RAPHEAL M. IZZO
1300 MELTON LANE
MESQUITE, TX 75149

REGION 4

CHAPTER 431 — COLUMBUS, OH

RONALD MAY
3129 RAINIER AVE.
COLUMBUS, OH 43231

CHAPTER 481 — DETROIT-WINSDOR, MI

F. CAL MUNSON
1213 ISLAND DR., #104
ANN ARBOR, MI 48105

CHAPTER 601 — CHICAGO, IL

MICHAEL P. CRISTOL
7046 N. DAMEN, #3E
CHICAGO, IL 60645

CHAPTER 612 — QUAD CITIES, IL

LEE A. WOLF
RR 1
WEVER, IA 52658

REGION 5

CHAPTER 631 — ST. LOUIS, MO

JOHN E. KINNISON
RT. 7, BOX 128
PERRYVILLE, MO
63775

CHAPTER 801 — DENVER, CO

RON R. BEGLEY
11525 W. MISSISSIPPI
AVENUE
LAKEWOOD, CO 80226

VICTOR P. SMITH
1515 VINE, #30
DENVER, CO 80220

REGION 6

CHAPTER 901 — LOS ANGELES, CA

RAFFI KECHICHIAN
4375 ALLOTT AVENUE
SHERMAN OAKS, CA
91423

CHAPTER 931 — SANTA BARBARA, CA

MIKHAIL GLEZIN
215 BLUEBERRY LANE,
APT. C
THOUSAND OAKS,
CA 91360

REGION 7

CHAPTER 972 — PORTLAND, OR

WILLIAM D.
HAGGERTY
4790 SKYLINE ROAD,
SOUTH, #32
SALEM, OR 97306

CHAPTER 981 — SEATTLE, WA

DARRELL FANRICH
210 THIRD AVENUE, S.
SEATTLE, WA 98104

Reclassifications

REGION 1

CHAPTER 144 — ROCHESTER, NY

ROBERT EDWARDSEN
21 COURTNEY CIRCLE
PITTSFORD, NY 14534

REGION 2

CHAPTER 337 — SOUTHWEST FLORIDA

JOHN M. RAGUSA
7318 PONDEROSA DR.
TAMPA, FL 33637

REGION 4

CHAPTER 462 — INDIANAPOLIS, IN

WILLIAM LAUGHEED
208 SOUTH B STREET
RICHMOND, IN 47374

REGION 5

CHAPTER 581 — MINN-KOTA, ND

STAN M. KROEKER
59 QUIRING BAY
WINNIPEG, MB
R2G 1Y5

REGION 7

CHAPTER 974 — EUGENE, OR

KATHLEEN LEONARD
360 EAST 46TH AVE.
EUGENE, OR 97405

CHAPTER 981 — SEATTLE, WA

DARRELL FANDRICH
210 THIRD AVENUE, S.
SEATTLE, WA 98104

Coming Events

September 28, 1991	**Pomona Valley Annual Seminar** Clairmont Presbyterian Church, Clairmont, CA Contact: John Voss; 2616 Mill Creek Road; Mentone, CA 92359 (714) 794-1559
October 3-6, 1991	**Ohio State Conference** Truman Hotel, Columbus, OH Contact: Don Gagliardo; 752 Macon Alley; Columbus, OH 43206 (614) 444-9630
October 11-13, 1991	**Texas State Association 1991 Seminar** The Crest Hotel, Austin, TX Contact: Mary Smith; 2002 Oxford Avenue; Austin, TX 78704 (512) 462-0212
October 17-20, 1991	**1991 New York State Conference** Sheraton Inn, Buffalo Airport Contact: Robert Tarbell; 358 Bedford Avenue; Buffalo, NY 14216 (716) 873-5465
November 8-10, 1991	**North Carolina PTG Conference** Adams Mark Hotel, Charlotte, NC Contact: Eugenia Carter; 4317 Commonwealth Avenue; Charlotte, NC 28205 (704) 568-1231
January 3-4, 1992	**Arizona State Seminar** Aztec Inn, Tucson, AZ Contact: Bob Anderson; 5027 E. Timrod Street; Tucson, AZ 84711 (602) 326-4048
February 21-23, 1992	**California State Convention** Red Lion Hotel, Ontario, CA Contact: John Voss; 2616 Mill Creek Road; Mentone, CA 92359 (714) 794-1559
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

AUXILIARY EXCHANGE

President's Message

Following nominations from the floor, at the PTGA Council Meeting, which was held July 14th at the Adam's Mark Hotel during the 34th Annual Convention in Philadelphia, PA, the entire Auxiliary Executive Board was returned to office for one more term. We appreciate your support and vote of confidence and will do our very best to follow your advice and directives.

The two Auxiliary Scholarship recipients, Tsukasa Mizuguchi and Brian Farrell played for the Piano Technicians Guild Opening Assembly and were sponsored by the Baldwin Piano Company. Later, on Sunday, they played for our Auxiliary Tea and at both presentations demonstrated their unbelievable musical skill and style at the piano keyboard. There can be no doubt of the importance of the fundraising support and the generous financial contributions which make possible these annual scholarships. The Guild Auxiliary can have no finer purpose than to continue to work to make these scholarship presentations an annual event. We are not only honoring and furthering the careers of these talented young people, but we are demonstrating the importance of the work and careers of our spouses. We the Piano Technicians Guild Auxiliary, owe our appreciation and praise to the considerable effort and time put in by our Scholarship Committee.

Ginger Bryant has consented to chair this committee once again, ably supported by Pauline Miller. Jennifer Reiter has been appointed our new Auxiliary Exchange Editor. Please send all copy to her. Her name and address will appear on our Exchange pages. Sue Speir, who has done such a fine job in her first year as Editor of the Auxiliary Newsletter has very kindly agreed to my reappointment of her time, for which we can be truly grateful. The Bylaws Committee appointments include Ginger Bryant as Chair and Bert Sierota assisting with the aid and advice of Ailsa Thompson who presides at the National Convention as our Auxiliary Parliamentarian, which is really fortunate for us when one considers all her duties as parliamentarian of the Piano Technicians Guild. I don't know where to begin to thank our Scholarship and Bylaws Committees as well as our editors and other committee members. No one can really understand the amount of time, devotion and effort which is expended on our — the Auxiliary's behalf. Much love and praise to you all.

Although this may seem strange, I have only yesterday returned from Philadelphia and ask your understanding as I continue this list of appointments in a later issue of the *Journal*. I did not want to forget to mention the beautiful display of silk violet baskets, which Ruby Discon and her committee prepared for all the Auxiliary Installation Luncheon tables an the lovely violet corsages created for each Board member at the head table, and a thank you to Randy Potter for his piano rendition of the theme "At The Ball Park." His accordion was so badly mauled on his return trip by air from Dallas that he felt it didn't deserve this long-trip battering and will favor us again with this accordion magic, when a shorter jaunt permits. See you all next in Sacramento. We're working on that already.

Arlene M. Paetow

A Note Or Two From The New Editor...

Thanks to Julie Berry for the nice introduction I received in the last issue of the *Journal*. I am looking forward to my "term" as editor. However, to have the Auxiliary Exchange reflect all of our diverse interests (after all, this is an international organization) it takes input from all corners.

I would like to encourage anyone with input — whether an anecdote or a continuing series of articles — to please submit them to me. It gets a little tricky with seasonal items since the copy for the entire *Journal* is prepared a full two months ahead of the mailing date. If you have a tip about helping with business or a tried and true hint for traveling with kids, etc...

I will try to get everything submitted into print as space allows. (Now is the time to get any holiday related tidbits to me!) I look forward to hearing from all corners!

Board Activity Reports Filed

(Editor's Note: At the Philadelphia Convention the PTGA Board members each filed reports as to their activities on behalf of PTGA for the prior year. The following is a synopsis of the reports.)

All six of the Piano Technicians Guild Auxiliary Board members submitted Ac-

PTG Auxiliary Executive Board

President	Recording Secretary	Treasurer
Arlene Paetow (William)	Ivagene Dege (Ernest)	Barbara Fandrich (Delwin)
Rt. 1, Box 473	2056 Milan Avenue	6336 S.E. Foster Road
High Falls, NY 12440	S. Pasadena, CA 91030	Portland, OR 97206
(914) 687-0364	(213) 682-2064	(503) 774-1537
Vice President	**Corresponding Secretary**	**Immediate Past President**
Phyllis Tremper (Fred)	Marge Moonan (William)	Agnes Huether (Charles)
413 Skaggs Road	811 Amherst Drive	34 Jacklin Court
Morehead, KY 40351	Rome, NY 13440	Clifton, NJ 07012
(606) 783-1717	(315) 337-4193	(201) 473-1341

Auxiliary Exchange Editor
Jennifer Reiter
902 185th Street, Court E
Spanaway, WA 98387
(206) 847-6009

tivity Reports for the period between the convention in Dallas, TX, and the recently completed one in Philadelphia, PA. After reading all the reports it is very obvious that all of our Board members are working very hard to keep our membership informed and exposed to as many opportunities as possible.

Few people realize the preparation that goes into putting on any convention, let alone an international convention. President Arlene Paetow spent an enormous amount of time and energy getting the Philadelphia activities organized. Program planning, determining what, if any, tours would be organized and planning a Sunday worship service all fell to Arlene to get done. The President also has to submit a "President's Message" for each issue of the *Journal* as well as for the Directory and *Auxiliary Exchange Newsletter*.

Our Vice President, Phyllis Tremper, has been very busy as Membership Chair encouraging the payment of membership dues and the recruitment of new and former members. As of July 12, 1991, she reported the membership as 216.

Recording Secretary, Ivagene Dege, is responsible for the minutes of Board meetings as well as chapter report forms, delegate credential forms and any activity report forms and recording of those forms into permanent record books.

Margaret Moonan is the Corresponding Secretary and is responsible for sending holiday, get well, sympathy and other "sunshine" cards when it is appropriate. (If you have any knowledge of someone in need of a "sunshine" greeting please address that to Margaret!)

Treasurer, Barb Fandrich, has been very busy in her personal life with travels all over the country. However, in spite of all the moving she has been a very able treasurer as well as a champion of spouse involvement. One comment from the activity report is a quote from Larry Goldsmith who stated in regards to our fundraisers: "It's nice to see that your fundraising efforts are as effective as the scholarship program they fund."

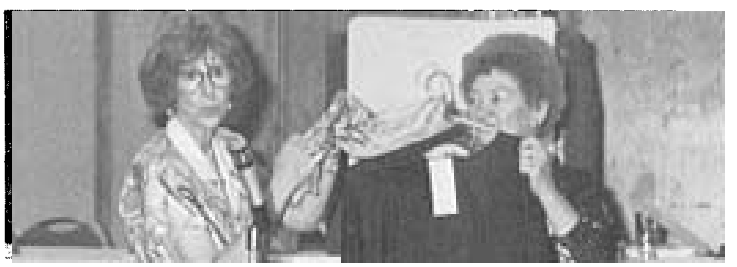
Immediate Past President, Agnes Huether has been very busy attending seminars and conventions all over the country, especially in the northeast, encouraging spouses to become involved in PTGA and showing by example what a supporting organization this can be. One note of special interest from Agnes' report is that she has encountered a number of spouses who rarely if ever read the Auxiliary Exchange pages of the *Journal*. We need to find ways to make these couple of pages something worth beating the technicians to the mailbox for!

Time For "New Year's Resolutions"

I don't know about your household, but around here summer's end and the start of a new school year is sort of a mini-New Year's. The winding down from hectic summer schedules and settling down to routines and school lunches signals a time for reassessment and prioritizing.

A good portion of the tuning schedule here is built around two universities and as they settle back into studies the concert and recital schedules really pick up. It is also the time of year that students are getting back to their piano lessons. At our house this Fall it should be a little different. We are trying to sell our suburban "tract home" and move to a place with seven acres of land and more of a "country" way of life.

As you help with the harvest, shop for school clothes, get the tuning schedule under control or start back to school yourself, take a moment to sit down with a cup of coffee or a glass of lemonade and reflect and anticipate another "New Year!"





Classified Advertising

Classified advertising rates are 35 cents per word with a $7.50 minimum. Full payment must accompany each insertion request. ***Closing date for ads is six weeks prior to the month of publication.***

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

Send check or money order (U.S. funds, please) made payable to Piano Technicians Journal, *4510 Belleview, Suite 100, Kansas City, MO 64111.*

For Sale

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

BRASS ON IVORY — Piano hardware refinished, repaired — stripped, buffed, lacquered. References available. Delivery 2-3 weeks. $110 per set. **(301) 798-6536. 302 Linden Avenue, Edgewater, MD 21037**

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

HIGH TECHNOLOGY LUBRICANTS. PROTEK (CLP) Center Pin Cleaner Lubricant. Field tested at Tanglewood Music Festival on pianos in outdoor environments. Excellent for treating verdigris action centers. Unequaled in performance and longevity. Contains no Silicones. *NEW* PROTEK Multi purpose lubricant (MPL-1) Fluoropolymer grease type lubricant. Clean, non toxic. Exceptionally long life span. PROTEK products available at: **FORD PIANO SUPPLY 4898 Broadway; New York, NY 10034 (212) 569-9200, PIANOTEK 214 Allen; Ferndale, MI 48220 (313) 545-1599**

"LET'S TUNE UP" Hardback 1st Edition only $17.50 per copy. Paperback 2nd Edition *still available* per copy $17.50 *No immediate plans* for another printing. Make checks payable to ***John W. Travis; 8012 Carroll Avenue; Takoma Park, MD 20912.***

SANDERSON ACCU-TUNERS. New and used. Bob Conrad, 1-800-776-4342.

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

FIT SOUNDBOARD SHIMS IN MINUTES INSTEAD OF HOURS with the new Spurlock Specialty Tools SOUNDBOARD ROUTER BIT. Custom carbide bit turns cracks into perfectly machined grooves, ready for fitting of any width shim. 13 page manual included. For catalog of all items call or write **Bill Spurlock; 3574 Cantelow Road; Vacaville, CA 95688 (707) 448-4792.**

STEINWAY GRAND LOCK ESCUTCHEONS. Also fit M&H, Kimball and others. Now available from Pianotek and Steinway, or in quantity from **Richard Anderson, RTT (708) 464-4500.**

SANDERSON ACCU-TUNERS from Authorized distributor. Tuning lever note switch for Accu-Tuner: $35/coiled cord, $30/straight cord. Consignment sale of used Accu-Tuners and Sight-O-Tuners for new Accu-Tuner customers. Call for details. **Rick Baldassin (801) 292-4441, (801) 374-2887.**

HANDCRAFTED SOUNDBOARDS by NICK GRAVAGNE. Ready-to-install crowned boards or semi-complete. Your choice. Ordering and installation instructions $15.00. **20 Pine Ridge; Sandia Park, NM 87047. (505) 281-1504.**

RESTORATION OF CARVED WORK, turnings, inlays, and marquetry, including repair of existing work and reproduction of missing pieces. **Edwin Teale; 19125 S.W. Kinnaman Road; Aloha, OR 97007 (503)642-4287**

NEW! ENCORE Piano Hammers: Consistent, strong round bass; clean clear tenor and treble without a lot of bite normally associated with European and Oriental pianos. More like the Mason and Hamlins, Chickerings, and some Steinways made in the early part of this century. Lightweight — easily voiced — no chemical hardener or impregnation — pre-filed — finest quality workmanship — mahogany molding — "T" rivet tensioner — underfelt — 15 lb. or 17 lb. **ENCORE** Hammers are made to the strictest specifications of Wally Brooks by the Abel Hammer Company of Germany. **Write or call: Brooks, Ltd.; 376 Shore Road; Old Lyme, CT 06371 — (203) 434-0287; (800) 326-2440.**

WHY SETTLE FOR LESS THAN THE BEST? We have the finest tools: SOLID BRASS ACCUCAULS, BUSHMASTER, KEY BUSHING IRON; we have the fastest, most accurate, and easiest to learn method: THE ACCUBUSH SYSTEM; and now we have the best deal for ordering. Join the experts who agree: THE ACCUBUSH SYSTEM is the BEST system for rebushing keys! (Many have already changed over; if you haven't you are losing time and money). MASTERCARD & VISA accepted. **KEY BUSHING SUPPLY; 84A Main Street; Kingston, NH 03848. For information only, call 800-628-0292.**

THE GUIDE $10. The Piano Technicians Guide. A job-time study and work guide. Revised and printed to fit a pocket. **Newton J. Hunt, Piano Tuner-Technician; 74 Tunison Road; New Brunswick, NJ 08901. (201) 932-6686**

INCREASE YOUR INCOME WHILE PROMOTING PIANO PLAYING. Each tuning, show THE SUDNOW METHOD, America's revolutionary adult home-study, cassette keyboard course. Self-teaches rich sounding songs from the start, by ear; skills every tuner needs, piano owners desire. **(612) 426-4274**

CUSTOM PIANO COVERS MADE TO YOUR SPECIFICATIONS. Perfect for any storage or moving situation. All work guaranteed. Also available, many gift items. Send for brochure and samples. **JM FABRICations; 902 185th Street Court; East Spanaway, WA 98387 (206) 847-6009**

BUMPER STICKER. "Piano Tuners Still Make House Calls." Two-color, graphics. $3.50 to **B.S.E.; P.O. Box 93297; Rochester, NY 14692.** MC/VISA orders, **1-716-473-0300.**

52 PIANO KEYS RECOVERED — .050-$60.00; .060-$70.00; .075 with fronts—$85.00. New sharps—$35.00. Keys rebushed, felt—$75.00; leather — $95. Return freight paid with prepaid order. **Charles Wilson; 1841 Kit Carson; Dyersburg,TENN, 38024. (901) 285-2516**

"COMPONENT DOWNBEARING GAUGES (bubble type) give readings in degrees (string angle) and thousandths of an inch (dimension). Available at supply houses. **Box 3247; Ashland, OR 97520."**

FOR SALE — "A Guide To Restringing" Paperbacks $16.50 plus $1.50 for postage and handling. Hardbacks $21.50 plus $2.00 for postage and handling. Order today. Sorry, no COD's. Make check or money order payable to: **JOHN TRAVIS; 8012 Carroll Avenue; Takoma Park, MD 20912.**

THE RANDY POTTER SCHOOL OF PIANO TECHNOLOGY — Home Study programs for beginning students, associate members studying to upgrade to Registered Tuner-Technician, and RTTs wanting to continue their education. Tuning, repairing, regulating, voicing, apprentice training, business practices. Top instructors and materials. Call or write for information: **RANDY POTTER; RTT; 61592 ORION DRIVE; BEND, OR 97702. (503) 382-5411** See our ad on page 3.

FOR SALE: San Francisco School of Piano Tuning and Piano Supplies business. — Well established. **(415) 543-9833**

DON'T LEAVE HOME without your bottle of Pearson's Super Glue ($3.25) or your tungsten carbide sanding file ($7.00). Rapidly becoming an essential part of every technician's bag-of-tricks (Postage extra). **Steve Pearson Piano Service; 831 Bennett Avenue; Long Beach, CA 90804. (213) 433-7873**

NILES BRYANT OFFERS TWO HOME STUDY COURSES: Electronic Organ Servicing: Newly revised. Covers all makes and models — digital, analogue, LCT's, synthesizers, etc. Piano Technology: Tuning, regulating, repairing. Our 87th year! Free booklet; Write or call **NILES BRYANT SCHOOL, Dept. G, Box 20153; Sacramento, CA 95820 — (916) 454-4748 (24 hrs.)**

SIMPLE SOUNDBOARDS. VICTOR SOUNDBOARD REPLACEMENT SYSTEM. Complete removal instructions on video tape — $94.75. Custom boards shipped ready to install. **THE PIANO SHOPPE, 6825 Germantown Avenue; Philadelphia, PA 19119. (215) 438-7038**

PRE-HUNG HAMMERS: We are now equipped to pre-hang Nu-Tone, Encore, Imadegawa or Abel grand hammers to your samples (for almost any grand piano) on new shanks and flanges for an $80.00 pre-hanging fee. An example of the total price for a Steinway M, using Nu-Tone mahogany molding hammers, Tokiwa shanks and flanges, pre-hung with hot animal hide glue, would be $468.00 complete. Highest quality workmanship, fast turn-around time, ready to screw on. Expect minimum travel and burn-in. Highest quality, Nu-Tone (Knight), Abel, Encore, Imadegawa, Tokiwa and Flemming. Large inventory, quality boring and shipping. Fast service. Honest, knowledgeable technical support. **Wally Brooks; Brooks, Ltd.; 376 Shore Road; Old Lyme, CT 06371 (203) 434-0287; 1-800-326-2440.**

PERKINS SCHOOL OF PIANO TUNING & TECHNOLOGY Since 1962. Courses offered: Tuning & Repairing, Grand & Player Rebuilding. Write or call for free catalog. Licensed by the Ohio State Board of School and College Registration. **225 Court Street; Elyria, OH 44035 (800) 852-1185**

PLATING-PIANO HARDWARE. Stripping, buffing, and NICKEL plating, with hinges up to 60" lengths $125-$225/set, depending on quality of parts included. Enclose packing list indicating number of screws with description and quantity of items. REFERENCES AVAILABLE. COD delivery in 2-3 weeks. A.R.O.M. throughout the U.S.A.! We will serve you with quality & reliability. **CRAFTECH ELECTROPLATING; #46R Endicott Street; Norwood, MA 02062. (617) 769-0071 days, (617) 469-9143 evenings.**

KORG MT1200 Tuner. $275 (list $360). Hears A0-C8. Plays C2-B5. Shows pitch, note, octave. Can program calibration, temperament. **KORG AT12 TUNER.** $155 (list $225). **SONG OF THE SEA; 47 West Street; Bar Harbor, ME 04609. (207) 288-5653** Brochures.

FREE: Demo diskette of the Piano Tuners Database. Attain all of your customer information with the touch of a key stroke. The Piano Tuners Database is very easy to use and very powerful. This program maintains all customer information, service calls, piano information, directions, appointments, etc. The program was written especially for Piano Tuners. The program works on all IBM compatible PCs with hard disk and 640k of RAM. The program is being offered at an introductory price of $99. Money-back guarantee if not completely satisfied. (Please state diskette drive type.) **Steve Hofman, 18660 Walmer Lane, Beverly Hills, MI 48025. Phone (313) 644-6977**

BUMPER STICKER. "Have You Played Your Piano Today?" Two-color with piano on quality vinyl. Send $4.00 each to: **TPT; P.O. Box 906-A; Johnston, IA 50131.**

SIGHT-O-TUNER SERVICE: Repairs, calibration & modifications. Fast, reliable service. **Richard J. Weinberger; 18818 Grandview Drive; Sun City West, AZ 85375. (602) 584-4116**

STEINWAY 1982 6'10" model "B" new showroom condition. Before buying new at $37,000, must consider this one appraised at $32,000, but selling for $25,000. **(914) 271-5855**

SENECA PIANO KEY. Quality key services at competitive prices. Sharps replaced, key bushing and the finest key recovering at any price. Write or call for price list and discount information. **Seneca Piano Key; Ted Oberhaus; 4593 E. Seneca Road; Trumansburg, NY 14886; (607) 387-3095**

NEW!! FLEMMING ACTION PARTS: The Flemming Factory located in Leipzig, Germany, est. 1874 has over a 100 year history of making quality action parts for some of the world's finest pianos. Grand shanks and flanges now available for Steinway, Mason & Hamlin, and most other American pianos. Highest quality cloth bushings, finest buckskin knuckles, nickeled German center pins, STY and M&H available with all 90 shanks with sides tapered. Original knuckle placement and size. Competitive introductory prices. Exclusively from **BROOKS, LTD., 376 Shore Road, Old Lyme, CT 06371 (203) 434-0287; 1-800-326-2440**

VICTOR VIDEO TAPE INSTRUCTIONAL THEORIES. •keymaking — $124.75 •rebuilding the grand piano — $225.75 •grand regulating — $175.75 **THE PIANO SHOPPE; INC.; 6825 GERMANTOWN AVENUE; PHILADELPHIA, PA 19119 (215) 438-7038**

88 PIANO KEYS REBUSHED with extra quality felt $55.00. Return freight paid with prepaid order. **Tommy L. Wilson; 1418 Ewell Avenue; Dyersburg, Tennessee 38024, (901) 285-4046**

HOW MUCH am I worth? Don't second-guess the value of your most important asset — your business. We will value your business using the four most common accounting methods and weigh them for a balanced approach. Computer printout. Call for details Wayne Jordan 301-263-2628.

WONDERWAND: Try the Tuning Lever you read about; hear about; and see at Seminars. Enjoy Less Stress; Better and Faster Tunings: $50.00 p.p. **Charles P. Huether, RTT, 34 Jacklin Court, Clifton, NJ 07012-1018**

STATE OF THE ART KEY COVERING - 52 piano keys recovered .075 with fronts - $85.00. Premium Work - includes tops and fronts resurfaced, clean and renew wood and back check coverings, polish capstans. New sharps, $55.00. Return freight paid with prepaid order. Fast service. "Try us, you'll like us." **Mr. C. Brunkow, 4991 104th Way North, St. Petersburg, FL 33708 (813) 397-1699**

I have access to my deceased Brother-in-Law's equipment. Hammond B2 organ; Leslie speaker with cable; microphone boom; some old fake books; snare drum with case; stand-up bass drum; two timbales; 20" Ziljian cymbal; 12" Crash cymbal; pearl bongos; Kustom amp.; Echo Plex #1761. (All are playable.) What is offered for this equipment? **(303) 242-5872 Musser Piano Service; 547 Normandy Way; Grand Junction, CO 81501.**

1884 STEINWAY VERTICAL 53 1/2" STYLE X complete restoration includes new action. An antique gem. $5900.00 firm. **Call (319) 351-3796 for details.**

STEINWAY CONCERT GRAND 1985 MODEL D — superb tone and touch, ideal for professional use, recording or concert hall, perfect condition sacrifice at 35,000. **John Hartman, RTT, 914-838-3635**

DIXIE PIANO SUPPLY
We carry Dampp-Chaser Products.
Great Service • Great Prices
Fast Delivery
Ask for Buddy Gray (205) 345-1296

PIANOS! PIANOS! PIANOS!

We buy all types of usable pianos. We pay cash and will not hesitate on any fair price. We will remove immediately. Also we sell fine vintage pianos — large stock — Steinway and other top-name brands.

Call Irv Jacoby collect (216) 382-7600
P.O. Box 21148, Cleveland, OH 44121

COLEMAN-DEFEBAUGH
Video Cassettes

•Aural & Visual Tuning	$79.50
Pitch raising, temperament, setting, beat counting. Sanderson Accu-Tuner, etc.	
•Grand Action Rebuilding	$79.50
Hammers, shanks & flanges, wippens, key bushing, backchecks, etc.	
•Upright Regulation	$65.00
Troubleshooting, refelting, etc.	
•Beginning Piano Tuning	$55.00
•Grand Action Regulation	$79.50
•Voicing	$79.50
•Exploring the Accu-Tuner	$55.00

VHS or Beta **(805) 273-4273**

Superior Instruction Tapes
220 Shirley Lane
Palmdale, CA 93551

THE PIANO TECHNICIANS GUILD is proud to offer a selection of technical books published by the Piano Technicians Guild and the Piano Technicians Guild Foundation Press. New publications are: "Piano Parts And Their Functions" by Merle Mason — the complete piano nomenclature book $15.50 ($10.50 members); "The Calculating Technician" by David Roberts — key to string scale design $13.00; "The Piano Action Handbook" compiled by Randy Potter — regulating specs for 132 pianos and more $10.00 ($8.00 members); *Journal* indexes. Contact the **Piano Technicians Guild; 4510 Belleview, Suite 100; Kansas City, MO 64111** or call **(816) 753-7747**. Mastercard and VISA accepted.

FOR SALE: Partnership in well established piano shop (Salt Lake City, Utah). Computerized base of 900 customers. For highly skilled tuner to perform all outside work. **Dennis (801) 466-7923**

***JOURNAL* BACK ISSUES** — These issues only $3.00 each: October 1988; May, June, July, August, September, November 1989; October, December 1990; March, June 1991. There is a limited supply, so get 'em while they last! Send a check to **Piano Technicians Guild; 4510 Belleview, Suite 100; Kansas City, MO 64111,** or call **(816) 753-7747** and use your Mastercard or VISA.

CALCULATING TECHNICIAN The premier work on scale design and redesign. A must for all technicians. 170 pages $13.00 **Piano Technicians Guild Foundation Press; 4510 Belleview, Suite 100; Kansas City, MO 64111 (816) 753-7747.**

PIANO ACTION HANDBOOK Regulation specifications for 132 pianos, plus regulation procedures and checklists. 76 pages $10.00 ($8.00 members) **Piano Technicians Guild Foundation Press; 4510 Belleview, Suite 100; Kansas City, MO 64111 (816) 753-7747**

Wanted

HIGHEST FINDER'S FEE paid for successful purchase of STEINWAY or MASON & HAMLIN EX-PLAYER GRAND. Please call me collect at **(612) 824-6722** anytime. **Grant Leonard, 401 W. Lake Street; Minneapolis, MN 55408.**

"I will pay from $100.00 to $5,000.00 finders fee for the following pianos and related items: A. Steinway Ex Duo-Art player, art carved case; B. Mason & Hamlin Ex Duo-Art player in any case; C. Art carved case of Mason & Hamlin, Chickering or Knabe, player or regular grands; D. Ampico or Duo-Art player mechanism or parts; E. Ampico or Duo-Art player rolls; **Please call Jim Brady COLLECT (317) 259-4307."**

MASTER PIANO TECHNICIAN POSITION AVAILABLE. Responsible for final preparation of grand pianos to concert quality levels in a production environment. Must have concert quality action and tone regulating skills. Only applicants with concert experience need apply. Send resume to: **Mason & Hamlin; 35 Duncan Street; Haverhill, MA 01830 Attention: Peter Mohr**

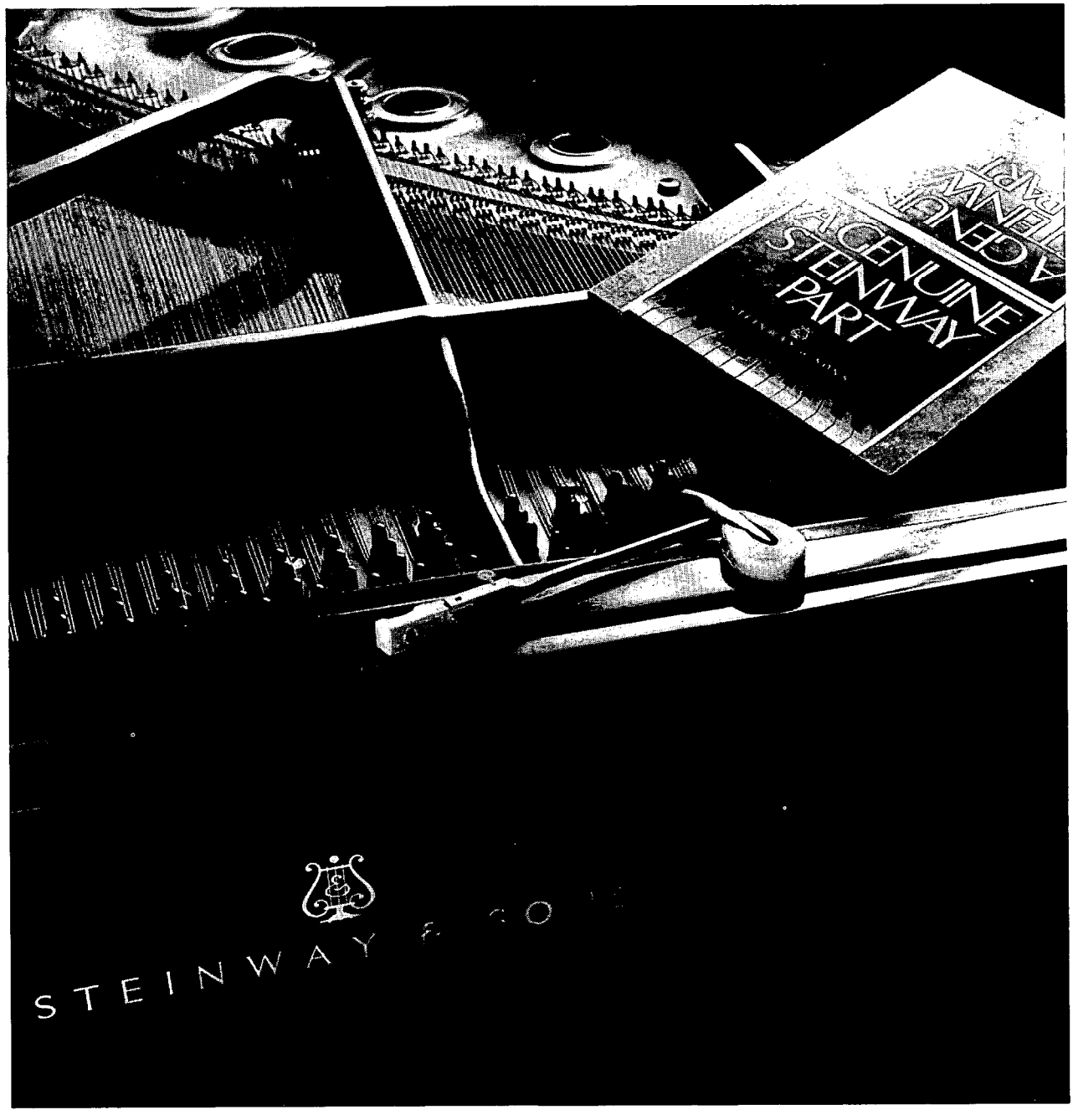
WANTED: Still looking for Steinway player grand in fancy case (prefer unrestored). Also need large Mason & Hamlin player grand with or without player parts, (prefer fancy case). Will also consider Knabe or Chickering. Reward for successful leads. **Bill Kavouras; 2740 Lighthouse Ct.; Lynwood, IL 60411 (708) 474-8787**

CONCERT TUNER WANTED: We are a large piano rebuilder and broker for high quality Steinway and other grands in the San Francisco Bay Area. We are looking for a full-time, top-notch tuner technician to service pianos in our shop, showroom, for local clients and concert halls. Seven years of concert tuning required. Rebuilding experience a plus. For the right person, duties would include representing our company at local trade shows and conventions, all expenses paid. Medical benefits. Salary negotiable. **Contact: Karen Bean, Piano Finders, 1073 Shary Circle, Concord, CA 94518, 415-676-3355, Fax: 415-682-5457.**

WANT TO BUY several reeds for old home style foot pump organ. Contact: **Cedric Flowers; 4123 Woodland Hills Drive; Tuscaloosa, AL 35405 or call 1-205-556-1427.**

WANTED!! DEAD OR ALIVE: "Steinway Uprights." Call collect, **Ben Knauer (818) 343-7744.**

STEINWAY



If it doesn't have 12,116 genuine Steinway parts, it isn't a Steinway.

Every part of a Steinway plays a part in creating a piano renowned for its unequaled touch and tone, and its enduring value. So, when a person invests in one of our new pianos, it's 100% a Steinway. And we want to make it easier for piano technicians to keep it that way. Our service department has improved the availability of genuine Steinway parts, including a prompt turnaround time on our new, improved hammers. We offer the only case and furniture parts, as well as custom made parts for older Steinways. And now you have the added convenience of using Visa or Mastercard. If you call Glorie Lefrak at (718) 204-3150, she'd be pleased to tell you more about our service and new hammers. Because once it leaves the factory, the most important part of a Steinway piano is you.

STEINWAY & SONS

One Steinway Place, Long Island City, New York 11105. (718) 721-2600.

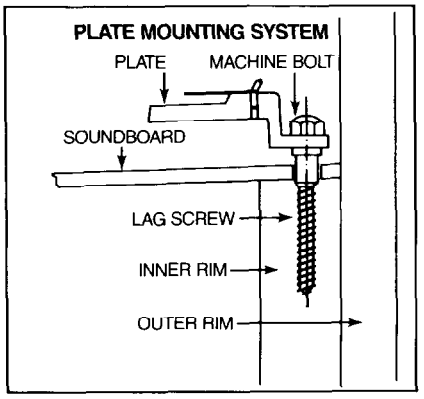
Tech Gazette

Yamaha Piano Service September, 1991

New Products

PRECISION PLATE MOUNTING IN THE NEW G AND C SERIES GRANDS

When we introduced the new G and C series grand pianos at NAMM last January, we also introduced a number of new features that you may not have heard or read about yet. One of them is the new plate mounting system that now appears in all G and C series grand pianos.



As you can see by the drawing, the plate now rests on adjustable lag bolts that are mounted into the inner rim. These can be precisely set prior to the plate being installed. This allows for infinite adjustments to set the plate perfectly at rest at each of its contact points throughout the entire piano. It is then locked into place by a machine bolt that threads into the original lag bolt. This metal-to-metal contact effectively locks the plate into position, and greatly reduces the possibility of loose plate bolts. The resulting stability will be one of many improvements gained through this new system.

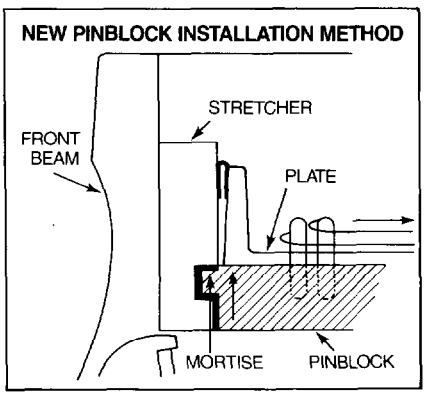
Even more significant than the mechanical improvements are the tonal benefits that were achieved in the process. This type of plate to rim coupling makes the entire piano a more unified tone generating unit. An added plus is that the downbearing factor on the complete scale can be more precisely set at the factory level. This accurate control of downbearing enhances the tonal performance of the overall piano.

All in all, the new plate mounting system is an enhancement that you will appreciate on these new Yamaha grand pianos.

NEW PINBLOCK CONSTRUCTION PROCEDURE

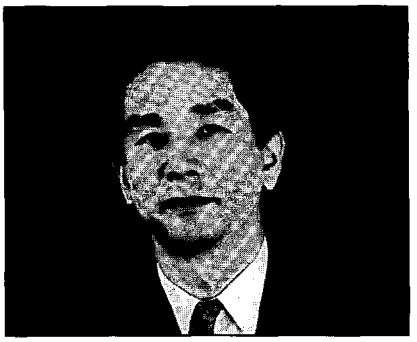
Another change found in the new grand pianos is the new pinblock installation procedure. The pinblock is mortised into the stretcher along its entire length. This ties the pinblock into the overall case and rim, creating a more complete structure to support the tension of the scale. As you can see in the drawing, this new design couples the pinblock and stretcher into one complete unit. It not only adds strength and stability to the pinblock, but improves tonal output, as well.

This new construction procedure, along with the improved plate mounting system, will be found on all the new G and C series grand pianos.



Personnel Profile

KYOTA (KIRK) ISE



After graduating from the Piano Technical Institute (formerly Yamaha Piano Technical Academy) in 1979, Kirk began working in Yamaha Corporation of Japan, Nagoya Branch. He then moved to the International Piano Service Department in Hamamatsu.

Kirk came to the U.S. in 1988, and served as an R & D specialist and concert technician at the Yamaha Communications Center in New York.

In July of this year, he transferred to our California offices. As our new Piano Technical Manager and factory liaison, he assists with both acoustic and Disklavier pianos.

Born in Tokyo, Japan, Kirk now lives in Brea, CA with his wife and 1 year old daughter. He enjoys listening to music, playing guitar, and riding a dirt bike.

Yamaha will Participate in

DISKLAVIER™ SERVICE SEMINARS:
October 28 - November 1
November 18 - 22
PTG CONVENTIONS:
October 3 - 6, Ohio State
October 11 - 13, Texas State
October 17 - 20, New York State
November 8 - 10, N. Carolina State

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

YAMAHA

SEPTEMBER **UPDATE** 1991

Published Monthly For Members Of The Piano Technicians Guild, Inc.

Resume Of Council Actions

PTG's 34th annual Council met July 12-13 in Philadelphia with representatives from 92 chapters present. What follows is a brief, unofficial resume of actions taken during the meeting. Approved Council minutes, as well as the organization's revised Bylaws, Regulations and Codes, will be published as a special Journal supplement in October.

- A charter was issued to the newly organized Quebec chapter.
- After discussion of the rising cost of member life insurance premiums and consideration of several alternatives, Council delegates voted not to discontinue the PTG death benefit as described in the Bylaws.
- Council approved the addition of $10,000 to the 1991 budget to be allocated for expanded publication activities.
- Bylaws Article III, Section 3c was amended to read: "Associate members shall have the right to use the Piano Technicians Guild name, but said name must be accompanied by the words 'Associate Member' in letters no smaller than those used for 'Piano Technicians Guild.' The PTG name may not be used or displayed by any company or corporation or in connection with any 'dba' unless the technician's name accompanies it. This applies not only to advertising, but also to any use of the Piano Technicians Guild name which is accompanied by the name of an associate member, or identifies him or her as a member of the Piano Technicians Guild."

Item six in the PTG Code of Ethics was unanimously changed from "I will not advertise in a manner so as to convey information that is misleading" to "I will not advertise, imply or promote information which may be misleading."

- After hearing a presentation from Board members on proposed marketing activities, Council created a special Marketing Committee to conduct the project and moved $10,000 in the budget from the business aids line item to marketing to support the program in 1991. After discussing the Marketing Committee's charges, Council directed that the committee's first charge be development of a new organizational logo.
- A proposal to include the PTG Mission Statement in the organization's Bylaws, with the words "trade publications, associations, foundations" to be inserted in item four, was referred to the Bylaws Committee.
- A plan proposed by the Continuing Education Committee was accepted for implementation.
- New written examinations were accepted for implementation effective July 17, 1991.

continued on page 2

New PTG Board members are, seated from left: Sharla Kistler, RTT, Allentown, PA, Secretary-Treasurer; Nolan Zeringue, RTT, Thibodaux, LA, President; Fern Henry, RTT, Vacaville, CA, Vice President. Standing from left: James Birch, RTT, Bethel, CT, Northeast RVP; Stephen Brady, RTT, Seattle, WA, Pacific Northwest RVP; Michael Drost, RTT, River Falls, WI, Central West RVP; Donald Valley, RTT, Spartanburg, SC, Southeastern RVP; Richard Bittner, RTT, Royal Oak, MI, Central East RVP; Leon Speir, RTT, Dallas, TX, South Central RVP; Jim Coleman, Jr., RTT, Tempe, AZ, Western RVP.

Council...

• Changed the wording of Bylaws Article VI, Section five and six to clarify policy on membership resignations and restoration. The new article five will read:
a. A member in good standing shall have the right to resign membership in PTG.
b. Any former member must make application as a new member and must pay the regular application fee.
c. Exams taken previously by Associate members for RTT upgrade will be subject to the time constraints as in Regulations, Article V, RTT Exams.
d. Former Registered Tuner-Technicians must take new examinations and pay the required examination fees, unless their most recent examinations are the current versions. The PTG reclassification form must be submitted to the PTG Home Office in order to process upgrade to RTT membership.
e. The effective dates of the current versions of the PTG Exams are: written exam: 7/17/91; technical exam: 6/1/90; tuning (aural) 7/22/86; tuning (electronic) 1/1/90.

• Clarified dues options available to senior members by rewording Bylaws Article VI, Section 1.

• Council defined the official date on which membership commences as that on which a membership number is assigned by the Home Office when all fees and dues are paid. The Bylaws were further modified to state that exams taken before that time may be invalid. New members will now be billed for pro-rated dues beginning the first of the month after acceptance into membership by the chapter. Chapters which elect to have the Home Office collect their dues will receive those dues by April 1. However, even those chapters will be responsible for billing and collecting their own pro-rated dues for a member's first year.

• Delegates moved to require a minimum vote of 25 percent in favor to order a ballot or roll call vote, and required that all ballots include the chapter franchised membership representation.

• Delegates added the College and University Technicians Committee to the list of standing committees, while deleting the Technical Institute Evaluation Committee. A motion to establish an Advertising Guidelines Committee was defeated, but the charges that had been proposed for that committee were added to those of the Code of Ethics Committee. PTG Publications, Continuing Education, Council Enhancement and Membership Category Study Committees were continued as special committees, and the Demographic Survey Committee was deleted.

• A resolution introduced by members of the Chicago Chapter was approved. The resolution states:
"Whereas, the rainforests are finite resources whose destruction is leading to a growing unavailability of piano-specific hardwoods such as ebony, mahogany, and rosewood;
"Whereas, global warming from carbon dioxide emissions, methane escape, and rainforest destruction is projected to soon be occurring at a rate too rapid for the adaptation and survival of forests the piano industry relies on for maple, pine and spruce;
"Whereas acid rain in the northeastern U.S., Europe and Asia is silently eradicating major old-growth stands of piano-specific woods such as maple and spruce;
"Whereas U.S. and Canadian forest resources are being sold at a rate which prevents recovery and irrevocably reduces the supply of old growth timbers used in pianos such as maple, spruce and pine;
"Be it resolved that the Council of the Piano Technicians Guild, Inc., now makes known its awareness of the urgency for conservation methodology, and the formation of public policy regarding forestry management, pollution, and the destruction of global assets such as rainforests and old-growth timber, and
"Be it resolved that the Council

continued on page 10

Andre Bolduc, RTT, accepts the charter for the newly organized Quebec chapter from President Zeringue.

Resume Of Pre-Council Board Action

PTG's 1990-91 Board of Directors met in Philadelphia prior to the annual Council meeting. Those attending were Nolan P. Zeringue, RTT, President; Bruce Dornfeld, RTT, Vice President; Sharla Kistler, RTT, Secretary-Treasurer; Ronald Berry, RTT, Immediate Past President; James S. Birch, RTT, Northeast Regional Vice President; Donald S. Valley, RTT, Southeast RVP; Danny L. Boone, RTT, South Central RVP; Richard Bittner, RTT, Central East RVP; Michael A. Drost, RTT, Central West RVP; Fern L. Henry, RTT, Western RVP; and Stephen H. Brady, RTT, Pacific Northwest RVP.

What follows is a brief, unofficial resume of Board actions. During the two-day meeting, the Board:

- Approved Chapter Sustaining membership status for Donn Foli, Vancouver, BC, Chapter; Frank Hopfinger, Seattle, WA, Chapter; and David E. Houghton, Calgary, AB, Chapter.
- Voted to investigate printing PTG's Bylaws in French and Spanish.
- Considered and defeated proposals to establish family Guild memberships and to have the Home Office collect pro-rated chapter dues for new members.
- Moved to appoint a Board committee to study and define the relationship of subordinate bodies such as state and regional organizations to PTG.
- Accepted Jim Bryant as Host Chapter Chairman of the 1992 annual convention in Sacramento, CA.
- Voted to further investigate a proposal to establish a PTG-operated computer bulletin board.
- Commended and endorsed the work of the Council Enhancement Committee and instructed the committee to submit a final draft of its manual for Council delegates to the Mid-Year Board meeting for approval.
- After hearing a presentation by its Marketing Development and Advertising Committee, Board members voted to approve The Phelps Group of Los Angeles as the Guild's professional partner in its marketing and public relations work. The Board also voted to commend the committee's work, and to bring its work before the Council. Finally, the Board dissolved the Marketing Development and Advertising Committee and recommended that a special Marketing Committee be formed.
- Made a number of recommendations regarding proposed actions which were to be brought before the Council by the Bylaws Committee.
- Recommended to the Examination and Test Standards Committee that they proceed with field testing of the scoring of aural verification in connection with the Tuning Examination. The Board approved presentation of an "Examiner of the Year" award at the 1991 convention and agreed to consider making it an ongoing awards program. Board members also approved creation of a special "Examiner" ribbon which can be worn by examiners at the annual convention and also made available to other assemblies upon request.

Resume Of Post-Council Board Action

Following the Philadelphia Council meeting, PTG's newly elected 1991-92 Board of Directors met to conduct additional business and plan the next year's business. Those attending included new board members Leon Speir, RTT, South Central Regional Vice President, and James Coleman Jr., Western Regional Vice President, as well as new Vice President Fern Henry. The Board:

- Adopted a revised *Journal* staffing structure in which the PTG Executive Director would serve as publisher, with a *Journal* Editor in charge of the publication's technical content. The *Journal* Editor would be assisted by a staff of Contributing Editors. After interviewing candidates for the position, the Board voted to offer the position of Editor to Jim Harvey.
- Moved to rescind previous Board actions and establish the following convention schedule for future years: 1994 — Kansas City, MO; 1995 — Albuquerque, NM; and 1996 — Detroit, MI. Ernie Juhn was selected as Institute Director for 1994, and Ben McKlveen was chosen for 1995. A 1996 Institute Director will be selected in January. The Board also directed the Home Office to investigate the possibility of holding the 1997 convention in one of three cities: Orlando, FL; Charlotte, NC; or Baltimore, MD. All site selections are tentative, pending further investigation by the appropriate Institute Director.
- Approved the following committee assignments: AWARDS: Bob Morris (Chair), LaRoy Edwards, Hilbert Felton, Jack Sprinkle, Bill Stegeman. BYLAWS: Danny Boone (Chair), Colette Collier, Larry Crabb, Bob Smit, Preston Hutt, Sharla

continued on next page

Representing their chapters for Chapter Management and Achievement Committee first place awards are from left: Mark Ritchie, Columbus, OH, Chapter; Mike Carraher, Reading-Lancaster, PA, Chapter; Ed Cetrone, Cleveland, OH, Chapter; and Keith Bowman, South Central Pennsylvania Chapter.

Tellers, from left, Bill Yick, Paul Revenko-Jones, Bill Moonan, and John Haines count ballots cast during the Council meeting for 1991-92 officers and committee members.

Newly elected Regional Vice Presidents were introduced to Council delegates by President Zeringue. They are from left: Michael Drost, Central West RVP; Richard Bittner, Central East RVP; Donald Valley, Southeast RVP; Leon Speir, South Central RVP; James Birch, Northeast RVP; Jim Coleman, Jr., Western RVP; Stephen Brady, Pacific Northwest RVP.

Post-Council...

Kistler (ex-officio).
CHAPTER MANAGEMENT AND ACHIEVEMENT: Webb Phillips (Chair), Ruth Brown (NE), Lewis Spivey (SE), Leonard Childs (SC), Bob Russell (CE), Paul Olsen (CW), Patty Biasca (W), Mike Reiter (PNW).
CHAPTER NEWSLETTER: Willem Blees (Chair), Darren Speir, Sonja Lemon.
CHAPTER PROGRAM DEVELOPMENT: Randy Potter (Chair), Tom Cobble, Matt Grossman, Ward Guthrie, Bob Russell, Paul Woodard.
COLLEGE AND UNIVERSITY TECHNICIANS: Tom McNeil (Chair), Charles Ball, Russell Brown, Tim Coates, Greg Hudak, Mike Reiter, David Skolnik, Ken Sloane, Kathy Teetsell, Rolf von Walthausen.
CONTINUING EDUCATION: Phil Gurlik (Chair), Ellen Sewell, Greg Shaffer.
COUNCIL ENHANCEMENT PROGRAM: Vivian Brooks (Chair), Larry Crabb, Pat Poulson.
COUNCIL MINUTES APPROVAL: Fred Tremper (Chair), Willem Blees, Robert Mishkin.
ECONOMIC AFFAIRS: Jack Wyatt (Chair), David Barr, Janet Leary, Walter Meissner.
EDITOR ADVISORY: Willis Snyder (Chair), Carl Root, Earl Orcutt.
EXAMINATIONS AND TEST STANDARDS: Mike Travis (Chair), Al Sanderson (Advisor), Greg Hulme (Exam Review);
TUNING TEST SUBCOMMITTEE: Kent Swafford (Chair), Jack Stebbins (NE), Ernest Bremner (SE), Walter Connell (SC), John Baird (CE), Richard West (CW), Teri Meredyth (W), Ward Guthrie (PNW).
Ward Guthrie (PNW); TECHNICAL TEST SUBCOMMITTEE: Mike Carraher (Chair), Chuck Erbsmehl (NE), Tom Servinsky (SE), Ray Whitmire (SC), Steve

continued on page 6

Foundation Elects Officers

The annual meeting of the Board of Directors of the Piano Technicians Guild Foundation was held during the Philadelphia convention. Board members in attendance were M.B. Hawkins, President; Ronald Berry, Vice President; Sharla Kistler, Secretary-Treasurer; Bruce Dornfeld, Second Vice President; and Nolan Zeringue, Third Vice President. Charles Huether, Director Emeritus, also attended.

The Foundation Board voted to add two seats to its Board of Directors, with the positions to be filled by individuals other than sitting members of the Piano Technicians Guild Board. A search committee will compile a list of up to four candidates for those positions and elections will be held at the next annual meeting.

Board members reviewed the progress of the Foundation's publications efforts, including the just-completed "Piano Action Handbook," and voted to continue those activities. President Hawkins presented a Citation to Charles Huether for his work with Foundation publications.

Elected to serve on the Foundation's 1991-92 Board of Directors were Bruce Dornfeld, President; Ron Berry, Vice President; Fern Henry, Second Vice President; and Nolan Zeringue, Third Vice President. Outgoing President Marshall Hawkins was named director emeritus.

Council Approves Dues Increase, Funds Marketing With Assessment

PTG members' dues will increase to $126 effective with the 1992 dues year. Council members voted the increase to cover operating costs — costs such as postage, rent and printing, for example — which have risen since dues were last raised in 1982. The new amount will appear on dues invoices that will be mailed in November.

Also appearing on the November dues invoice will be a mandatory assessment of an additional $12 to fund increased marketing activities. The assessment will bring each member's total dues invoice to $138, plus any chapter dues billed.

After hearing a presentation from the Board on possible activities that could be included in such a marketing program, Council voted 77-11 to fund it. However, delegates preferred the one-year assessment to assure control and review over how the funds are spent.

Implementation of the program will be carried out by a committee established by Council. The committee will be chaired by Keith Bowman. Others on the committee are Janet Leary, David Patterson, Carl Root, David Rostkoski, Steve Schell and Gracie Wagoner. Because many members showed interest in the project and wanted to participate, a list of more than 30 other members was established to serve as a resource network for the committee.

Network members include David Abdalian, Robert Anderson, Ron Berry, Dick Bittinger, Larry Caldwell, Gina Carter, Mike Carraher, Walter Connell, Bruce Dornfeld, Jim Ellis, Fred Fornwalt. Ward Guthrie, Phil Gurlik, Clayton Harmon, Marshall Hawkins, Norman Heischober, Preston Hutt, Mitch Kiel, John Lillico, Jessica Masse, Don McKechnie, Tom McNeil, Lorelle Nelson, Webb Phillips, Randy Potter, Steve Smith, Christopher Solliday, Robert Stephenson, Kent Swafford, Lou Tasciotti, Mike Travis, Matthew Wrensch and Jack Wyatt.

The committee's first priorities will be aimed at providing better printed material for members to use in explaining piano services to clients. Current brochures will be expanded and updated, a new "technical bulletin" series is planned to explain in client language jobs that the technician might recommend or estimate. Client-oriented newsletters, an association logo, press releases, a feature syndicate release effort and other projects are all under discussion.

However, member input to the committee and the network is essential. What products could PTG develop to help individual members' businesses? What do you wish clients knew about the services you offer? Your input is needed.

New Exam Corrected

Although a new written exam was approved by the 1991 Council, an error appears on the sample answer key that was provided to Council delegates. Corrected forms will be mailed to chapters soon.

Dues Form Mailed To Chapters

A form authorizing the Home Office to collect 1992 chapter dues has been mailed to all chapters. It should be returned only if the chapter has not previously made arrangements for the Home Office to collect its dues on an ongoing basis or if the amount of dues or the designated chapter contact has changed.

The form must be returned by Sept. 30. Dues invoices, which will include Guild dues, the assessment described above, and any chapter dues, will be mailed Nov. 1.

Continuing Education Program Adopted

Philip Gurlick
Continuing Education
Committee Chair

On behalf of the Continuing Education Committee, I am pleased to report that the 1991 PTG Council overwhelmingly approved implementation of a Continuing Education (CE) program. The regulations for the program follow this article. The program implementation will begin Oct. 1, 1991.

The CE program features a handbook titled "Passport to Excellence" which contains the regulations and a copy of the application form for recording credit hours accumulated. As indicated, credit hours may also be recorded on separate CE forms, which may be photocopied. A copy of the form is included in this mailing.

This program is completely voluntary. It is hoped that RTT members will appreciate the encouragement that the CE program provides to those who remain active in continuing education. Encouraging attendance at PTG-sponsored and other functions can only benefit all members. Associate members will also be encouraged to upgrade to RTT, making them eligible to participate in the CE program. There has been much discussion lately that there needs to be greater incentive to upgrade to RTT, and hopefully this will help work towards that goal.

Handbooks and forms should soon be available by request from the Home Office. Seminar directors are asked to request copies to have on hand, if they have not already been contacted. Chapters may also request copies to distribute to their members.

The CE committee has a desire to continuously upgrade or adjust this program to make it more desirable and useful to PTG members. One of the committee charges this year is to solicit input or suggestions from members, so if you have any ideas to contribute, please contact a committee member. Committee members are: Philip Gurlick, Chair; Ellen Sewell; and Greg Shaffer.

Post-Council...

Hornbeck (CE), John Minor (CW), Carl Lieberman (W), Randy Rush (PNW).
INSTITUTE: Ben McKlveen (Chair), Gary Neie, Ernie Juhn.
INTERNAL CODE OF ETHICS: Taylor Mackinnon (Chair), Merrill Cox, Dave Duncan, Francis Hollingsworth, Ralph Stilwell.
INTERNATIONAL RELATIONS: Ron Berry (Chair), Ed Hilbert, Ralph Long, Hans Sander, Stanley Oliver.
MARKETING: Keith Bowman (Chair), Janet Leary, David Patterson, Carl Root, David Rostkoski, Steve Schell, Gracie Wagoner.
MEMBERS' RIGHTS: Bruce Dornfeld (Chair), Mike Carraher, Joe Garrett (Alternates: Walter Connell, Larry Riley, Chuck White).
MEMBERSHIP CATEGORY STUDY: Jim Ellis (Chair), Keith Bowman, Gary Dunn, Bruce Stevens; SKILLED NON-TUNING TECHNICIANS SUBCOMMITTEE: Neil Davis (Chair), Bernard Mollberg, Steve Schmidt.
MEMBERSHIP PROMOTION: All Past Presidents.
NOMINATING: Marshall Hawkins (Chair), Larry Crabb, Elizabeth Ward, Dick Bittinger, Fred Tremper (Alternates: Bob Russell, Sid Stone).
PIANO TECHNICIANS GUILD PUBLICATIONS: Ron Berry (Chair), Yvonne Ashmore, Paul Revenko-Jones, Fred Tremper.
SEMINAR AND CONFERENCE: Dick Bittinger (Chair), Harry Buyce, Eugenia Carter, Norman Neblett, Carey Werneth.
TEACHER RELATIONS: Monica Hern (SE)(Chair), Sue Armstrong (NE), Martin Wisenbaker (SC), Matt Grossman (CE), Lucy Urlacher (CW), Aiko Porter (W), Gary Dunn (PNW).
TRADE RELATIONS: Marshall Hawkins (Chair), Keith Bowman, David Campbell, Bruce Dornfeld, Brian Mott.
VISUALLY IMPAIRED CONCERNS: Stanley Oliver (Chair), Richard Hassig, Ken Serviss, Jack Sprinkle.

- Approved as new Certified Tuning Examiners A. Keith Morris, Augusta, GA; Richard Ruggero, Research Triangle, NC; William Bremmer, Madison, WI; John Cavanaugh, Detroit-Windsor, MI; and J. Michael Ello, Dallas, TX. Also approved were the recertifications of Christine Lovgren, Boston, MA; Ray Hopland, Calgary, AB; Brian DeTar, Eugene, OR; Michael Wathen, Cincinnati, OH; David Frease, Northern Virginia; Ralph Caskey, Central North Carolina; and Vernon Williams, Central Florida.

Philadelphia Convention Test Center Report And Examiner Recognition

Michael Travis, Chair
Examinations And Test Standards Committee

This was a busy year in the Convention Test Center! We were able to accommodate all who signed up for exams by the June 29 deadline, giving 19 tuning exams and seven technical exams while bringing in $1430 in test fees and, I believe, equalling the 1987 Toronto Convention record. As a result of taking tests at this convention, five Associates met the RTT requirements: James Arledge, Gerry Cousins, Robert Edwardsen, Charles Flaum, and Marvin Rus. Congratulations!

At this time I'd like to mention a few of the names of those responsible for bringing this off so well. To begin with, Ernie Juhn, who got us a third Yamaha C3 on only one week's notice, and had all the test room pianos set up a day ahead of schedule. And our Chief tuning Examiner and master scheduler Kent Swafford set some new standards in that department. In addition, we had the North Bennet Street team of Jack Stebbins and Chris Lovgren; Chief Technical Examiners Mike Carraher and Chuck Erbsmehl; and yours truly, chief arm twister and keeper of the ETSC coffee pot. A special thanks to all RTTs who consented to have their arms twisted by donating their time in the exam rooms: I note especially the yeoman's work by CTE-trainees Richard Ruggero and Bill Bremmer (now CTEs), and also valuable assistance from Dean Reyburn, Keith Morris (new CTE), Dave Hulbert, Alan Crane, Richard West, Fred Tremper, Chris Solliday, John Minor, Keith Bowman, Matthew Wrensch, Evelyn Smith, John Cavanaugh (new CTE), Nancy Buswell, Jessica Masse, David Frease, John Phillips, John Baird and Danny Boone.

In an interesting sidelight to testing, we had a little showdown up in exam room number one before the Yamaha reception — pitting Dr. Sanderson and his "F-A-C" program tuning and Dean Reyburn and his "A-A-A-A-A" program tuning against the master tuning done by the test committee. I don't know who won — I think it was a tie. Al got a few points off only in the top half octave (not too shabby!). Dean would have gotten an absolutely

continued on page 11

ETS Committee Chair Michael Travis presents the Examiner Of The Year Award to Michael Carraher.

Convention examiners from left: Fred Tremper, Kent Swafford, Danny Boone, Chuck Erbsmehl, Mike Carraher, John Baird, and Jack Stebbins.

A Reminder Concerning Exam And Reclassification Paperwork

Michael Travis, Chair
Examinations And Test Standards Committee

After giving any RTT written, technical or tuning exam, exam administrators should send the original (white) copy of the scoreform to the Home Office, ASAP. The old procedure of attaching scoreforms to the reclassification form and discarding failed-exam scoreforms is *not* correct. What is supposed to happen is, after the examinee completes each exam, the examiners send in the original of the scoreform regardless of whether the examinee passed, failed or finished. There are no exceptions to this rule.

You should give a current reclassification form to the examinee upon successful completion of the written exam, with the section on the written exam filled out and signed. From then on, it's the examinee's responsibility to bring this form to a test center to prove his/her qualification for taking the tuning or technical exams. After the examinee successfully completes each exam or exam section, examiners should sign and date the reclassification form and return it to the examinee, while immediately sending in the original copy of each exam scoreform to the Home Office. It's the examinee's responsibility after successfully completing all exams to bring the reclassification form back to a chapter officer for signature to the Home Office. This allows for some chapters ceremoniously voting on the RTT upgrade and publicly congratulating the new RTT at the next meeting. But it's also OK for a chapter officer to simply sign and date the reclassification form and send the top copy to the Home Office, if the chapter's bylaws do not require a formal vote. If a chapter officer wished to verify that the candidate actually passed all exams, it just takes a call to the Home Office. Specific results of exams other than pass/fail are confidential and will not be given out.

The reason for this procedure is so examinees can take exams at any available test center by merely paying the fee and bringing the reclassification form while resting assured that scores are confidential.

If your chapter has old reclassification forms (which show the wrong Home Office address) please discard them and request new ones. Also, if you have the original (white) copies of exams of current Associate members in your chapter files, please send them in immediately. Please discard any old exam scoreforms of non-members.

Booster Club Members Honored

Members of PTG's Booster Club — those who recruited one or more new members in the past year — were honored during the Philadelphia Convention. Those honored and the number of new members they recruited are: Randy Potter, 12; Bob Perkins, 7; Norm Heischober, 6; Karl Roeder, 6; Jack Stebbins, 6; Don Valley, 5; Tom Graves, 4; Lee Hintz, 4; Sid Stone, 4; Larry Crabb, 3; Michael Drost, 3; Jim Craig, 3; Jim Geiger, 3; Christopher Johnson, 3; Don McKechnie, 3; Walter Meissner, 3; Mark Mendel, 3; Doug Neal, 3; Greg Shaffer, 3; Leon Speir, 3; Bob Stephenson, 3;

Julian Agguire, 2; Willem Blees, 2; Peter Briant, 2; Brian Catell, 2; Orville Braymer, 2; Donna Byrd, 2; Mike Carraher, 2; David Durben, 2; John Grace, 2; Chris Gregg, 2; H. Leonard Gustafson, 2; Merrill Jackson, 2; Herb Lindahl, 2; Bill McKaig, 2; David Morgan, 2; Ernie Preuitt, 2; Mike Reiter, 2; Albert Seitz, 2; Fred Sturm, 2; Kathy Voss, 2; Allen Wright, 2;

Billie Allen, 1; Richard Amelang, 1; Paul Angielczyk, 1; Yvonne Ashmore, 1; Frank Avolese, 1; Joseph Bacica, 1; Larry Bailies, 1; Bill Balmer, 1; Robert Barrett, 1; Robert Bayley, 1; Tom Bensberg, 1; Dennis Berryhill, 1; David Betts, 1; Jim Birch, 1; Dick Bittinger, 1; Danny Boone, 1; Don Bratton, 1; Kirk Burgett, 1; Ed Bordeleau, 1; Steve Brady, 1; Russell Brown, 1; Ruth Brown, 1; Peg Browne, 1; Richard Butler, Jr., 1; Denele Campbell, 1; Harry Cardwell, 1; Vince Chambers, 1; Tom Clarke, 1; Tim Coates, 1; Jim Coleman, Jr., 1; J. Sam Corbett, 1; Diane Cottrell, 1; Merrill Cox, 1; Don Davis, 1;

Don Dean, 1; Phil Dehaan, 1; John Delpit, 1; Walter Deptula, 1; Loren DiGiorgi, 1; Timothy Dixon, 1; Lee Dobrins, 1; Vic Dollahite, 1; David Duncan, 1; Gary Dunn, 1; Wendell Eaton, 1; John Eisenhart, 1; Jim Ellis, 1; Chuck Erbsmehl, 1; Rose Fanger,

continued on page 12

The Soundboard

Dear Friends:

When I was 12 years old and received my Tenderfoot badge in scouting, I though, "Boy, I have what I worked for and this is my reward." Some 30 years later, I was presented with the "Scoutmaster Key." Now, this was the ultimate.

Over the next 40 years, I found there was more to come, and I appreciate their meaning greatly, as can be attested by the hall walls in our house.

Being awarded "Hall of Fame" status in the Piano Technicians Guild, takes me back to my Tenderfoot days. This is it, I've had it. I consider it the ultimate award in PTG and will find a prominent place on my "ego" wall to display it.

I do sincerely thank the membership for so honoring me and certainly will hope for and expect no greater honor until my dying day.

Ernie Preuitt

Dear Soundboard:

A week before Christmas I had both hands operated on for Carpal Tunnel. Not only was it instant relief, but I was able to tune after two weeks and I could shake hands again.

I enjoyed shaking hands with all my friends at the convention, and especially after I received the Golden Hammer Award. I was so pleased to receive this award and will never forget the 1991 PTG Annual Convention in Philadelphia, PA. It was great! This award was especially nice to receive in Pennsylvania and have Hilbert Felton of the Philadelphia Chapter and member of the Awards Committee present it to me. Thanks to my chapter for putting my name in for nomination, and to the Awards Committee for selecting me, also to Bill Smith of the Seattle Chapter for creating another work of art. Many thanks to all of you for the thunderous applause and standing ovation. It was beautiful, thank you all so much.

Dick Bittinger

Dear Soundboard:

I would like to thank the local chapter SEPA for hosting a great convention and for all the help given to us before and during the convention with regard to attractions and things to see with children. Since this was our first convention it means a lot. Thanks Ruth!

Patrick and Dorothy Coleman and kids

Nolan's Magic Mustard Mystery

After observing our president, Nolan Zeringue, getting overwrought and upset at our recent national convention, it became obvious to Leon Speir and Jack Wyatt of the Dallas Chapter, that something had to be done in order for our president to stay calm and collected. The dilemma seemed to be caused by the absence of real mustard at the hotel restaurant.

When his sandwich was served, there was no mustard that he could find. The waiter explained that Grey Poupon, sitting on the table, was indeed mustard. He was promptly informed by our president that it was not *real* mustard.

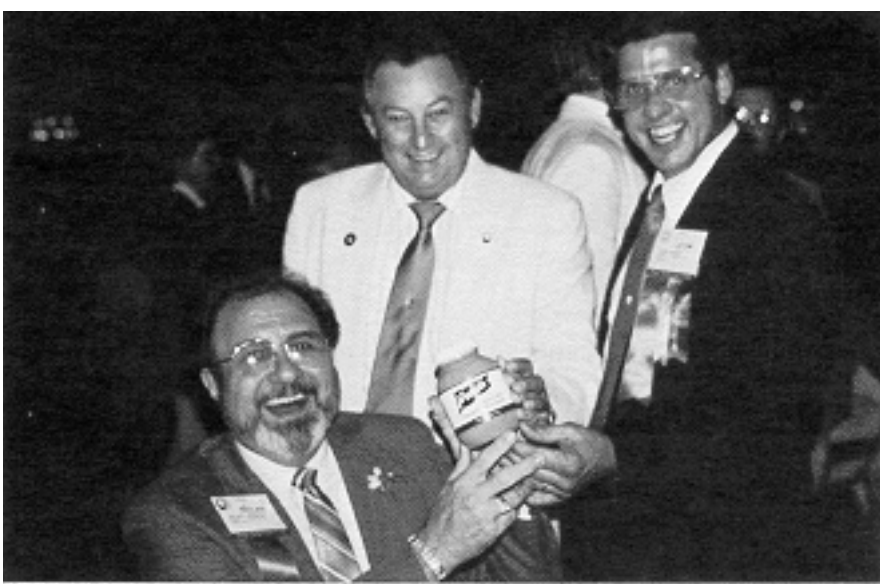
Jack tried to convince Nolan that Grey Poupon wasn't all that bad and all people who own Rolls Royces carry it in their car.

A committee was formed of Jack, Leon and Walt Connell. After agonizing moments the solution was found. So at the Yamaha reception this large jar of *real* mustard was presented to our president. So a crisis was averted, a catastrophe thwarted, the hotel left standing, and the convention continued.

So all in all when it comes to Nolan, you see just how important a little mustard can be.

The photo is courtesy Fred Raudenbush of the host chapter who just happened to be in the right place at the right time.

Jack Wyatt



From left: Nolan Zeringue, Jack Wyatt, and Leon Speir.

Dates & Deadlines

September 2, 1991
Labor Day — Home Office closed

September 30, 1991
Deadline for return of 1992 chapter dues collection forms

October 11-13, 1991
RTT Tuning and Technical Exams. Texas State Seminar. Austin, TX, Chapter Test Center. Application deadline: September 11, 1991. Contact: Bill Cory, 711 Landon Lane, Austin, TX 78705 (512) 472-9358

RTT Tuning and Technical Exams. Dallas Chapter Test Center. Contact: Walter Connell (214) 942-2827; for technical, Will Nieberding (214) 247-4084

November 1, 1991
1992 dues invoices to mail

November 28-29, 1991
Thanksgiving — Home Office closed

December 24-25, 1991
Christmas — Home Office closed

January 1, 1992
1992 Annual dues officially due

New Year's Day — Home Office closed

January 31, 1992
Unpaid membership dues delinquent

February 3, 1992
1992-93 officer nominations to Nominating Committee Chair

Amendments proposed for 1992 Council due to Bylaws Committee Chair

March 2, 1992
Members delinquent in 1992 dues to be dropped

In Respectful Memory ...

Blair Blanton

Blair Blanton, passed June 12, 1991 after suffering a stroke. He was 75.

Blair had been a piano tuner and technician since 1940. He studied at the School for the Deaf and Blind in Staunton, VA. He had been self-employed all his life. He also graduated from William and Mary College in Williamsburg, VA. He was a long-standing member of the Piano Technicians Guild Hampton Roads Chapter.

He was a member of Chestnut Memorial United Methodist Church, Newport News, VA, where he taught Sunday school. He was a past president and current secretary of Lions Club of Hampton, VA. He was recently awarded the Lions' Melvin Jones Fellow Award.

He is survived by his wife, Helen Holland Blanton; a daughter Janie M. Abrams of Fayetteville, NC; two sisters, Catherine Blanton of Hampton, VA, and Alma Spivey of Portsmouth, VA; and two grandchildren. Blair will be missed by all.

Thad Schatzel

Fred W. Wallace

On March 16, 1991, the Piano Technicians Guild lost one of its most memorable members, Fred W. Wallace.

Wallace became a piano tuner after graduating from the Niles Bryant home study course in the late 40s. He began tuning pianos locally for $2.00 a tuning. It wasn't long before he became well-known in the area northwest of Pittsburgh, for besides being a fine tuner, he also sat down and played for his clients.

In 1958 he joined the Piano Technicians Guild. He was an active member of the Pittsburgh, PA, chapter for many years and attended many conventions along with his son Dick, who also became a top technician, through his tutelage.

In 1957 Wallace went to school in San Francisco to learn player piano rebuilding, which he quickly taught to his son. It wasn't long before Wallace and Son were known and loved from Pittsburgh to Cleveland. His son wasn't the only one to whom he passed on his love and knowledge of pianos. He taught his daughter, several grandsons, and many others who wanted to learn.

He was preceded in death by his wife Velma, his son Dick, a grandson, and a granddaughter. Surviving are his second wife Lenora, daughter LaVerne, son Fred, Jr. , eight grandchildren, and 18 great grandchildren.

He lived and died in the house he was born in, September 18, 1907, on the hill overlooking the town of Darlington, Pennsylvania. The piano is silent now, but he'll always be the "piano man from Darlington."

Council...

of the PTG, Inc., expresses its concern by planning to create an on-going executive Resources Oversight Committee whose purposes would include:
"1. To express these and related concerns of Council to public policy makers;
"2. To function as an informational clearinghouse.
"3. To communicate regularly with manufacturers regarding proposed public policy and the disposition of these concerns as information becomes available."

Although the resolution was approved, Council declined to form such a committee.

- Approved the 1991 and 1992 annual budgets as amended.

Testing...

perfect score if he'd only listened to his computer. As we all know, it's results that count!

One of the things ETSC accomplished this year was a re-editing of both of the written exams and reformatting the answer sheets and keys for greater convenience of use. The mastermind behind this was the exam committee's chief wordsmith, Jack Stebbins, ably assisted by his team of editors and our dedicated Home Office Staff. If you like it, drop Jack a line. If not, drop me a line.

Also this year the ETSC agreed to evaluate and annually recognize examiner performance based on a point system, as follows: administering written exam, one point; assisting with a technical or tuning exam, two points; being examiner in charge of a technical or tuning exam, four points. Listed below are all those who participated in exams in 1990 and earned 10 or more points, based on records at the Home Office as of early February 1991. I regret if there have been omissions due to late arrival of test forms, and hasten also to add that this listing does not reflect the dedication of many individuals who participate actively in the testing program, but not necessarily as examiners. We appreciate this effort as well. As ETSC Chair, I want to especially recognize and thank each of these people, but everyone else too, for their effort in support of the PTG exam program, and encourage all RTTs to help with the exams.

Name	*Points*
T. Michael Carraher	46
Michael R. Travis	37
Bill A. Spurlock	36
David A. Vanderlip	36
Charles R. Erbsmehl	30
John E. Stebbins	29
Eugenia Carter	26
John H. Baird	22
Teri L. Meredyth	20
Christine Lovgren	18
Israel Stein	18
William F. Alexander, Jr.	16
William J. Clayton, II	16
Thomas A. Kuntz	16
Wayne O. Matley	16
Stephen F. Schell	16
James D. Snyder	16
Kenneth A. Williams	16
Kent E. Swafford	14
Martin G. Wisenbaker	14
Keith A. Bowman	12
William E. Bremmer	12
Larry B. Crabb, Jr.	12
David H. Frease	12
Steven A. Ganz	12
David B. Porter	12
Leonard L. Richardson	12
Richard C. Ruggero	12
Susan E. Babcock	10
Dale R. Fox	10
John D. Grutzmacher	10
M. Randal Mangus	10
Patrick L. Stone	10
Kathy K. Teetsell	10

As you can see, one name did rise to the top of the list, and at the Closing Luncheon we presented the first "Examiner of the Year Award" to Mike Carraher, who throughout 1990 not only excelled in administering exams but also in sharing with Associates in classes on preparing for the exams. Congratulations Mike! I thank the Board for allowing this award to be presented — even though it's not an officially sanctioned award yet, it will be next year I hope. As ETSC Chair, I felt like we had to take this initiative to get something started, and to begin to recognize such outstanding examiner performance.

Oh yes, I did want to mention in closing that thanks to Board action in July, Examiner ribbons will be available for use by those involved in testing at upcoming regional and annual conventions.

Hope to see you there!

Chapters' Achievements Honored

Winners of the Chapter Management and Achievement Committee's Chapter Management Awards were recognized at the convention awards banquet by Chairman Webb Phillips.

First-place winners were: Bantam Chapter Category, South Central Pennsylvania; Small Chapter Category, Columbus, OH; Medium Chapter Category, Southeastern Pennsylvania; Intermediate Chapter Category, Reading-Lancaster, PA; and Large Chapter Category, Cleveland, OH.

Second-, third-, and fourth-place winners were honored during their regional meetings. Second-place chapters honored were: Bantam Chapter — Hutchinson, KS, East Texas and Monterey Bay, CA; Small Chapter — Maine and Wichita, KS; Medium Chapter — Charlotte, NC, and Richmond, VA; Intermediate Chapter: Austin, TX, and St. Louis, MO; Large Chapter — Chicago, IL, and Twin Cities, MN.

Third-place chapters honored were: Bantam Chapter — Alaska and Palm Beach, FL; Small Chapter — Eugene, OR, and Central North Carolina; Medium Chapter — Quad Cities, IL, and Capitol Area, NY; Intermediate Chapter — Southwest Florida and Golden Gate, CA; Large Chapter — Pomona Valley, CA, and Kansas City, MO.

Fourth-place chapters honored were: Small Chapter — Northwest Florida; Intermediate Chapter — Northern Virginia.

Booster Club...

1; Charles Faulk, 1; Chris Finger, 1; Richard Flegle, 1; Leroy Fritz, 1; Richard Gann, 1; Joe Garrett, 1; John Gibson, 1; John Glover, 1; Tom Gorley, 1; Irvin Griffith, 1; William Grogan, Sr., 1; Mark Haas, 1; Dan Hallett, Jr., 1; Dan Hamilton, 1; Clayton Harmon, 1; Leonard Hartzell, 1; Lois Heindselman, 1; Fern Henry, 1; Gerald Hickey, Jr., 1; David Hoffman, 1; Francis Hollingsworth, 1; Ray Hopland, 1; Terald Howard, 1; Robert Hundley, 1.

Wade Johnson, 1; Henry Jones, 1; Owen Jorgensen, 1; Don Junker, 1; Audrey Karabinus, 1; William Kasimoff, 1; Otto Keyes, 1; Jim Krentzel, 1; Dennis Kurk, 1; Allan Laity, 1; David Lamoreaux, 1; Kevin Leary, 1; John Lillico, 1; Danny Lyons, 1; Vincent Maccaro, 1.

Mike Mackinney, 1; Robert Marinelli, 1; Neil Massey, 1; Francis Mehaffey, 1; Teri Meredyth, 1; Gary Miles, 1; Craig Miller, 1; Bob Mishkin, 1; Ted Mitchell, 1; Paul Monroe, 1; Bill Moonan, 1; Don Morton, 1; Vincent Mrykalo, Jr., 1; Gary Neie, 1; Guy Nichols, 1; Paul Olsen, 1; Ken Ponche, 1; Carlos Ralon, 1; M. Jack Reeves, 1.

Fred Rice, Sr., 1; Fred Rice, Jr., 1; Robert Sadowski, 1; David Sanderson, 1; Bill Sawyer, 1; John Schaecher, 1; Delores Schaefer, 1; Eric Schandall, 1; Robert Schoppert, 1; Paul Seabern, 1; Laura Sladon, 1.

Michael Slavin, 1; Stephen Smith, 1; James Sperry, 1; Lewis Spivey, 1; Michael Spreeman, 1; Morris Strouss, II, 1; C. Mike Swendsen, 1; Carl Teel, 1; Kathy Teetsell, 1; David Thoreson, 1; Mike Tocquigny, 1; Thom Tomko, 1; Michael Travis, 1; Lawrence Vogt, 1; Gracie Wagoner, 1; Dana Wiegand, 1; Bruce Winn, 1; Ron Winter, 1; Martin Wisenbaker, 1; Eric Wolfley, 1; and Jack Wyatt, 1.