Piano Technicians

Journal

June 1987

The Baldwin Piano...

You can see why it sounds better

Baldwin grand piano standards are set in the ultimate testing laboratory, the concert stage, by the final judges of piano performance, the artists who can afford to consider nothing less than the finest.

We pay particular attention to the comments of our artist pianists. The constant critical evaluation of these artists, some of the country's most distinguished pianists, contributes substantially to piano design.

One unique way in which we utilize our artists is in the tone tests that we regularly schedule. This important "behind-the-scenes" activity plays a major role in maintaining and improving the quality of the Baldwin concert grand, and ultimately, other pianos in our line.

The highly respected artists who participate in these tone tests provide constructive input both tonally and functionally on Baldwin concert grand pianos. The visiting artist compares tone test pianos on the relative desirability not just of tone, but also of various elements such as touch, repetition, and level of sound. Pianos typically used in tone tests include production models, prototypes, pianos representing a previously established standard, and competitive instruments. Baldwin staff members from research and engineering, manufacturing, merchandising, and top management participate to hear first-hand the artist's evaluation.

In addition to analysis of potential refinements in piano design, tone tests help establish tonal standards for pianos in current production. To insure tonal consistency from piano to piano, we have a tonal standard piano at our factory for every size of grand we make. A tonal standard instrument is used until a production piano is judged in a tone test to be better, at which time that piano becomes the new tonal standard.

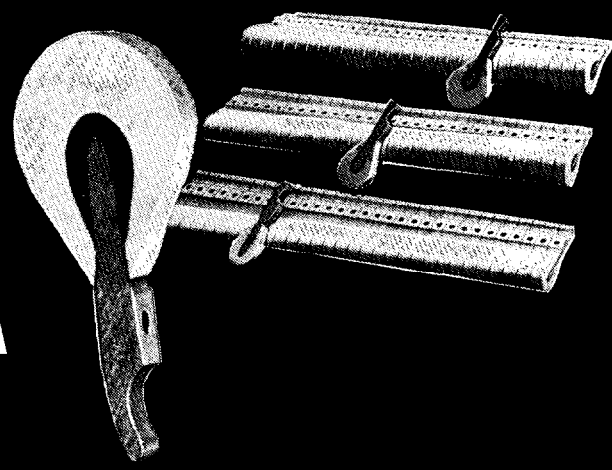
Seventh in a series of informative ads on piano tone published by Baldwin exclusively for the benefit of piano technicians.

Baldwin. - *Leading the way through research*

Schaff

NOW HAS AVAILABLE...

IMADEGAWA
HAMMERS FROM JAPAN.



Due to the increase in popularity of Japanese-made hammers the last few years, Schaff has contracted with the Imadegawa Company in Japan to be a nationwide distributor. We will maintain a large stocking inventory which together with our years of replacement hammer expertise, will enable us to provide the finest hammer duplication service in the U.S.A.

Who else can offer...

1. A full range of wood moulding sizes and felt weights to accommodate almost any hammer duplication requirement.
2. Both upright and grand type hammers.
3. Either standard bore stock sets or custom made hammers.
4. A long standing history of providing reliable service and selling quality products.

CHARACTERISTICS OF STANDARD BORE STOCK HAMMERS

UPRIGHT HAMMERS—A set consists of 30 bass and 64 treble hammers. All bass section hammers are drilled at an 18° angle. Tenor section has 14 hammers at 12°, 10 hammers at 7° with the balance of tenor and treble at 0°. A 7/32" diameter drill is used for the bore hole. On a special order basis a type "B" set can be ordered with all tenor and treble hammers bored at 0° angle. On a stock basis upright hammers are available in the following striking distances (as measured at the treble end) of 2⅜", 2 7/16" and 2½". Also 12 Lb., 14 Lb., and 16 Lb. weights of felt available. All hammers are made of birch wood moulding, stapled throughout and have the option of being reinforced and unbored.

GRAND HAMMERS—A set consists of 30 bass and 65 treble hammers. All bass section hammers are drilled at a 9° angle. Tenor section has 8 hammers at 9°, 8 hammers at 6°, 10 hammers at 2° and the balance of tenor and treble at 0°. A .204" diameter drill is used for the bore hole. All hammer tails are shaped and tapered at no additional cost. On a stock basis grand hammers are available in the following striking distances (as measured at the treble end) of 1⅞", 2" and 2⅛". Also 12 Lb., 14 Lb., and 16 Lb. weights of felt available. Hammers come stapled throughout and can be provided unbored. Except for Steinway style, all grand hammers are made of birch wood mouldings and have the option of being reinforced.

STEINWAY STYLE—A set consists of either 20 or 26 bass hammers, reinforced with walnut mouldings and bored to Steinway specifications.

CUSTOM BORE HAMMERS

Both upright and grand hammers are duplicated from customer samples and bored to exact specifications. With our extensive inventory, we should be able to match 90% of the samples received for duplication. The samples we cannot match for Imadegawa hammers can be made from our high quality U.S. made hammers. Try Schaff and avoid unnecessary replacement hammer costs and order processing delays that occur in dealing with smaller suppliers.

WRITE OR CALL US FOR A COMPLETE PRICE LIST ON IMADEGAWA HAMMERS.

THE HOUSE DEDICATED TO SERVICE

Schaff PIANO SUPPLY COMPANY
451 OAKWOOD ROAD, LAKE ZURICH, IL 60047

Prices Subject To Usual Discount
For Same Day Service Try Our 24 Hour Phone
(312) 438-4556

The Piano Technicians Journal **June 1987**

Official Publication Of The Piano Technicians Guild, Inc.

Volume 30
Number 6

IN THIS ISSUE...

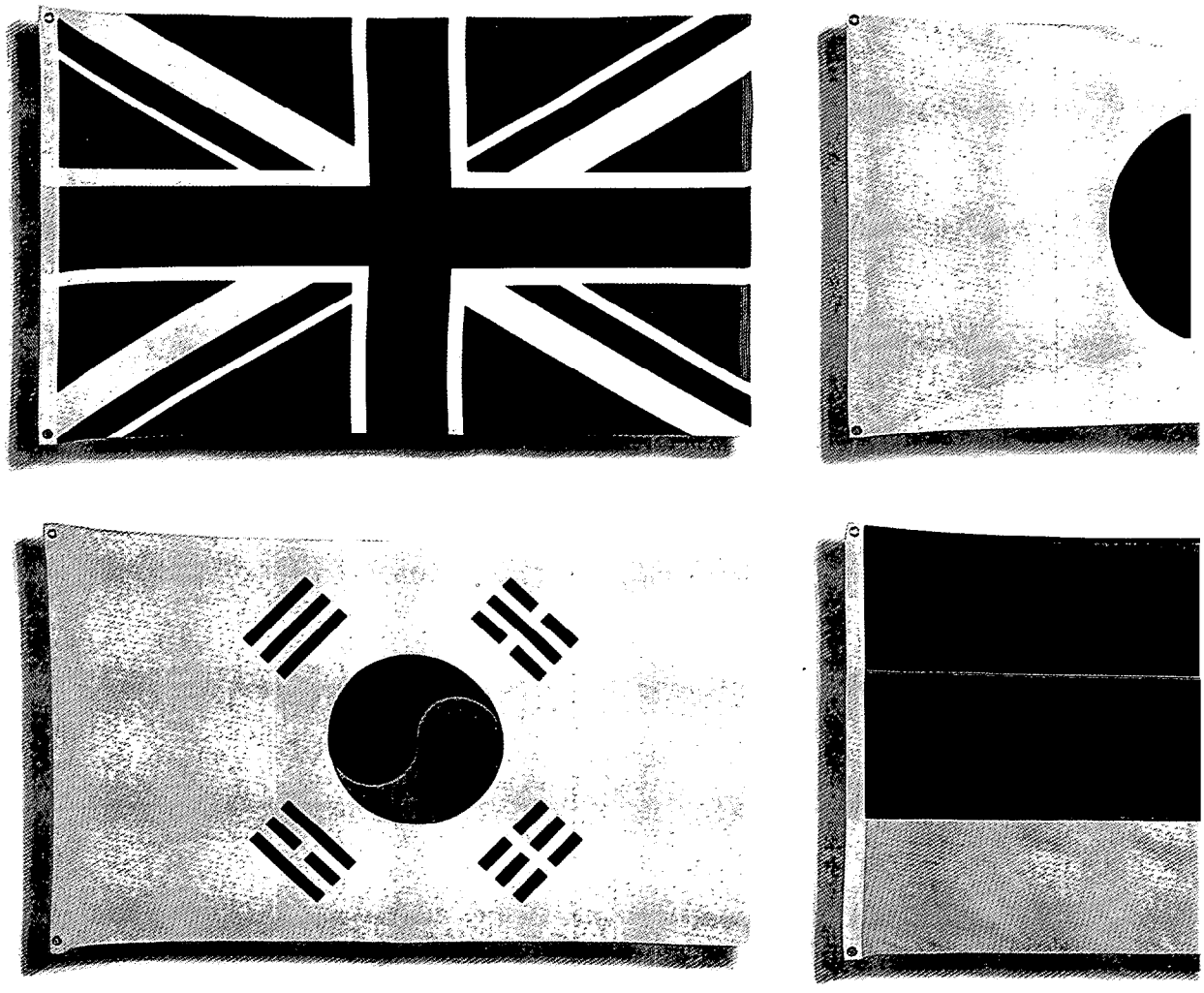
PLUS...

THE COVER...

Variously known as "Stonehenge" and "Fred Flintstone's bunk bed," Jack Krefting's soundboard press is massive. For more on its construction, see this month's Technical Forum.

The *Piano Technicians Journal* (ISSN 0031 9562) is the official publication of The Piano Technicians Guild, Inc., 9140 Ward Parkway, Kansas City, MO 64114. The *Journal* is published monthly, with two issues in December. Second class postage paid at Kansas City, MO., US ISSN 0031 9562 foreign and domestic. POSTMASTER: send address changes to: *Piano Technicians Journal*, 9140 Ward Parkway, Kansas City, MO 64114.

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.



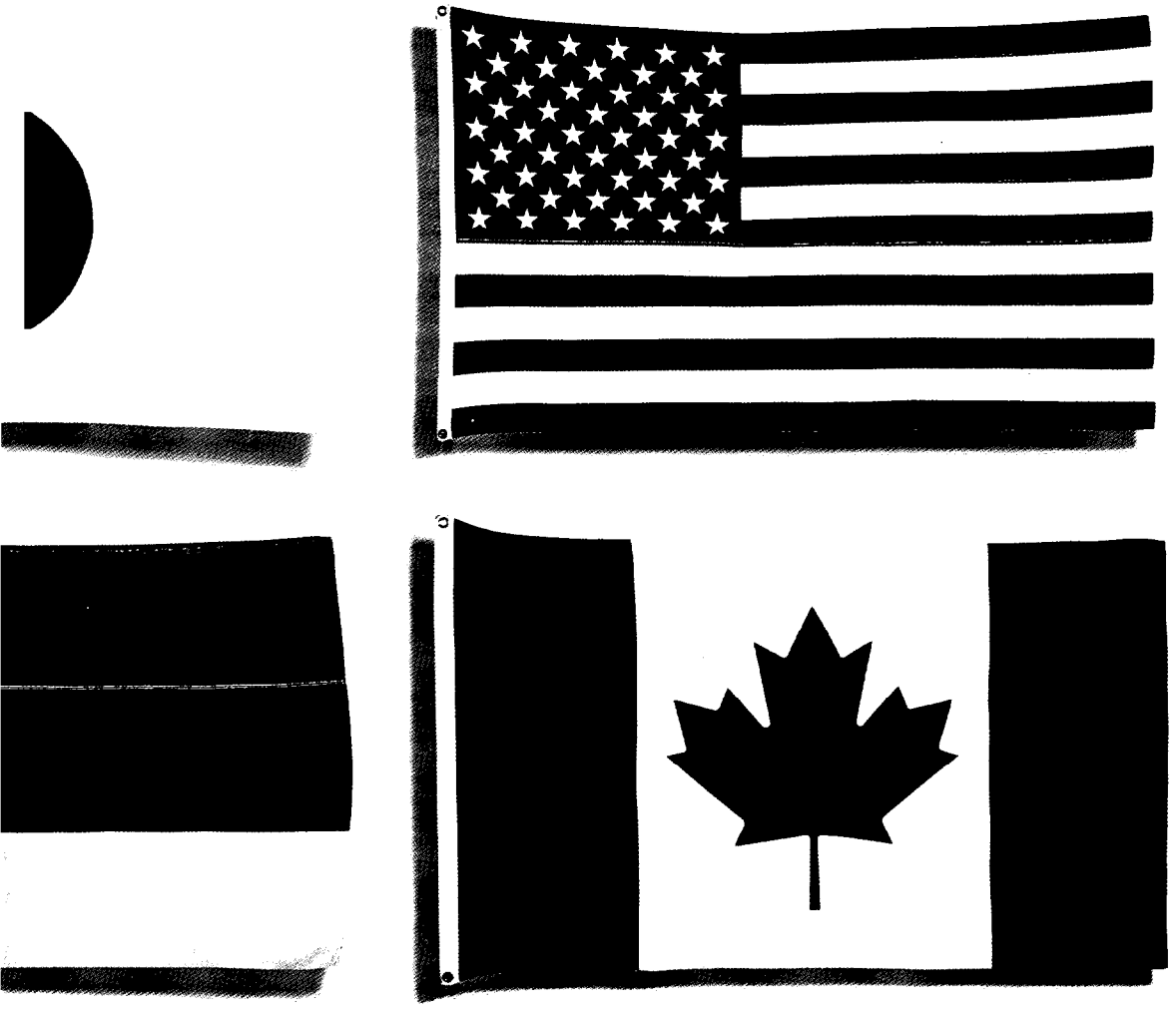
The best the world

Only the finest materials are used to create a Young Chang piano. And we've gone to great lengths to find them.

To Alaska and Canada for premium grade spruce for our soundboards, keys and back posts. To Vermont for maple. To England's Royal George Feltworks for our hammer felt. To Germany and Japan for our premium core wire.

And because Young Chang pianos are created in Korea, we can offer exceptional instruments carefully crafted of the finest materials in the world at the very best value. Instruments that come with a 12-year *full* warranty—our promise of continued outstanding performance year after year.

At Young Chang, we're dedicated to creating instruments of



has to offer.

outstanding quality and extraordinary beauty. It's a commitment to produce instruments nothing short of remarkable. Instruments that approach perfection.

Because at Young Chang, we're dedicated to offering the world the very best.

For more technical information, please call Ray Chandler at (213) 926-3200. Or write to him at Young Chang Technical Services, 13336 Alondra Blvd., Cerritos, CA 90701 for a free copy of our Service Guide and Technical Specifications Manual.

YOUNG CHANG

President's Message

M.B. Hawkins
President

Toronto In The Air

June is bustin' out all over and Toronto is in the air! That is only to say we are on the threshold of July, the month of Piano Technicians Guild's 30th Annual Convention and Institute.

This year in Toronto we expect to total at least 1,200 in attendance which will be the largest number ever. The big question is this: Will you be one of the 1,200 in Toronto? The choice is entirely yours.

Let me point out some of the reasons why I made the decision many years ago to always be present as long as I have the strength to travel. First, I recognize that there are many things to learn. When one recognizes that he or she doesn't know it all and continues to add to what has already been learned, I believe that he or she is on the right track. It does not matter that you were at the last institute or the last regional conference. This one will be totally different with completely different experiences awaiting you.

Second, I have always enjoyed being with other technicians. When the makeup involves the best talent from around the world, I'll be there! Third, I found out that the cost is really the small part but it tends to loom the largest when the decision is made as to whether you will or will not attend. There is travel fare to be considered. You must also take into consideration the time missed from work. Oh yes...we can't forget registration fees and by all means do plan to eat while you are there. Don't forget to add lodging. This cost can be handled rather inexpensively if you avail yourself of sharing a room with someone else. As a matter of fact, the hotel will add a cot at a very minimal rate. After all, you are only going to sleep there. Most of your time will be spent out of the room. This factor should not be overlooked. There are many in the same position who would be happy to share the sleeping space. Check it out.

Chapters also have the ability to be inovative. Car pools, charter buses, sharing rides in many different ways all add to the excitement. I know of one chapter that is traveling together on Amtrack.

Being present at the most important "happening" of the year needs to be a main priority. If it is not now, make it one. Make it a priority today. Step up and join those from around the world who realize this is where the action is. Join those who know why their income continues to increase.

All of your expenses do represent quite a sum of money. How does one on a limited income handle it? You must first realize that it is absolutely worth every penny and much, much more. Once you understand that, positive thoughts can continue. My suggestion if you have not previously planned for this event is to sell something or borrow the money. While that may sound heavy, I am very serious. This yearly event is truly worth whatever sacrifice you must make to be there. You will make it back threefold from all that you will learn. Trust me, it really works.

Be a part of this class act — be in on the quantum leap into the future. Step up to the next level of competency and claim your monetary worth.

To borrow a well-known phrase, "Be All You Can Be," join PTG in Toronto and "Discover the Feeling." Be a part of what is going on in the world of piano technology today.■

From The Home Office

Larry Goldsmith
Executive Director

Remembering To Say Thanks

Many things make up a Piano Technicians Guild Convention. It takes a lot of organization, a lot of letters and calls, a lot of expense and a lot of plain old hard work to put on this annual shindig for a thousand or so close friends and associates.

When it comes time to say thanks, one group is easily slighted. I'm talking about the companies who contribute quite a bit of the aforementioned expense and elbow grease to help make this a success — manufacturers of pianos, suppliers of parts and tools, people who invent the proverbial mousetrap and rent a booth in the exhibit hall to show it off.

I suppose some people take the attitude that it's just business for these companies, and therefore they don't deserve any thanks. It's true that some do make money — at least most hope to in the end — from their appearance at our conventions. For most, however, it's a matter of visibility and goodwill more than anything else.

When you're putting together your budget for your own trip to Toronto, think about what it would cost to send half a dozen people instead of just one or two. There's the time it takes to develop a classroom presentation. There's the time and expense of rounding up half a dozen or more of your pianos to display at the convention, and making sure that they're just right — they'll be meeting a critical audience, after all. There's the cost of an exhibit booth, furnishings, handout literature, and the time of the people who will staff it for three and a half days. Some companies bring in a guest artist to perform on their pianos, others bring in distinguished experts (and even pianos) from other countries. Still others contribute lavish receptions and parties.

Why do they do it? I'm sure they see the Guild as a worthwhile organization that deserves their support and friendship. In many cases, their technical experts developed their own skills through Guild programs. Nowhere else can these companies reach such an important group of technical people all in one place. Nowhere else is there such a concentration of people who genuinely care how well they make pianos.

Still, it never hurts to say thanks. When you tour the Toronto Exhibit Hall (that's in the Galaxy Ballroom right behind the registration desk, for those who are already making plans) think for a minute about how much trouble and expense went into putting those displays together. Think how important it must be to those people to get to show their products to you, the technician in the field.

So take a few minutes from your week to browse, look and talk. And remember to say thank you. After all, friendship is a two-way street. ■

The International Scene

Fred Odenheimer
Chairman, International Relations Committee

The World Market

We all agree that in order to be a first-class piano technician one should be well versed in all the facets of the trade. One may elect to perform only certain tasks and perhaps subcontract others, but it should not mean lacking knowledge in that particular phase.

However, being a well-rounded technician should also include being familiar with the music world around us, specifically (naturally) the piano world. To plan for his or her future and ultimately to be successful, a young technician should stay abreast of new developments and changes in his or her field of endeavors. It is valuable to have a subscription to one of the trade magazines; however, Larry Goldsmith's excellent article about the NAMM Winter Market was perhaps a start for more business news in the future, and from my point of view it would be a welcome addition to the scope of our *Journal*.

The next best thing to going to a trade show is reading about it and thus, thanks to *Music Trades* we were able to get a picture of Frankfurt Fair and future trends in our business. Aside from overall statistics it was interesting to read that companies from 19 different countries displayed pianos, amongst them Baldwin and Wurlitzer. After the drop of the dollar they are again in a position to compete and hope to be quite successful in the overseas market. On the other hand, the rise of the yen is hurting Japanese manufactureres in the world market and some of the smaller factories in that country had to close down.

The currencies in Korea and Taiwan are tied to the dollar and thus they are unaffected by the weakening of our currency; on the contrary it is to their advantage. We can expect rising production in those countries with increasing exports to the U.S. and the rest of the world. A report sets the total production of pianos in Korea at 200,000 for the year 1986, with more expansion contemplated. We should also expect a rising number of pianos coming from Taiwan.

There is just a short hop, skip and jump to this year's PTG convention. If you have not made arrangements already to be there, do it right now; tomorrow may be too late! And do not forget that IAPBT will meet Friday afternoon and Saturday following the PTG convention. Attending will give you a chance to meet piano service people from other parts of the world and an opportunity to talk to them.

Do not forget "Friends of IAPBT." A year's membership is just $15.00. ■

TORONTO! Discover The Feeling!

The Piano Technicians Guild's 30th Annual Convention & Technical Institute
Constellation Hotel, Toronto, Ontario.....July 20-24, 1987

TORONTO INSTITUTE 1987

Dick Bittinger
Institute Director '87

Here in the following pages is the schedule of classes for the 1987 annual Institute to be held July 21-24 in the Constellation Hotel in Toronto, Ontario. This will be the 30th anniversary of the Piano Technicians Guild. In last month's Journal, you had class descriptions and also most of the instructors' pictures. Now you have the class schedule. All you have to do is take time to plan your week of learning in the many phases of piano technology being offered at the Toronto Institute.

If you haven't sent in your convention registration, please do it soon so we can save a seat for you. You must hurry to save yourself some money, because June 14 is the cutoff date for lower rates on pre-registrations. You will want to "Discover the Feeling!" in Toronto.

Toronto By Transit

John Lillico
Host Chapter Chairman

Public transportation was introduced to Toronto in 1849. The city was but 15 years old, boasting a population of 24,000. A local cabinetmaker saw the need for a route from the St. Lawrence Market, via King and Yonge Streets, to the village of Yorkville. He built four six-passenger horse- drawn omnibuses and added four 10-passenger vehicles the following year.

In 1861 the Toronto Street Railway Company was granted a 30- year franchise to operate horse-drawn streetcars along Yonge, Queen and King streets on a track gauge of 4'10 7/8". By 1891, trackage had been expanded from six to 68 miles with the number of cars increasing from 11 to 361. The company had a stable of 1,372 horses by 1991, carrying 55,000 passengers daily. A hundred sleighs were on hand for winter use.

Upon expiration of the franchise, the city purchased the system for $2.1 million but the citizens were not prepared for such an undertaking. In September 1891, a new 30-year deal was awarded the Toronto Railway Co. The agreement provided for the retention of a five-cent fare and the electrification of the system within three years. In 1894, the last horse-drawn car had been removed from service.

By 1910, the city's population had increased to 350,000 but expansion of the TRC had been severely restricted by the courts. By 1921, nine separate transportation companies were serving Torontonians' transportation requirements, creating chaos in both fares and scheduling. Where 30 years prior, the citizenry was against public ownership, it was now strongly in favor and the Toronto Transportation Commission was formed and assumed responsibility for

Tuesday, July 21, 1987

Room	Period 1 8-9:30 a.m.	Period 2 10:30 a.m.-noon	Period 3 1:30-3 p.m.	Period 4 4-5:30 p.m.
Aquarius Hall	A Look Inside: W. Snyder	History of North American Pianos: C. Huether	New Taxes in the USA: R. Potter	Chapter Presidents' Symposium
Jupiter I	Art & Science of Piano Sound: **Baldwin** — D. Fandrich, A. Vincent & R. Wheeler		Professional Service — the Yamaha Way: **Yamaha** — B. Brandom, L. Edwards, L. Whitcomb, M. Ito	
Jupiter II	Vertical Regulation: **Wurlitzer** — D. Long & R. Elrod	Gadgets & Tools: F. Mehaffey	Shop Work With Sharp Tools: J. & P. Rappaport	
Jupiter III	Pinblock Installation & Restringing: J. Krefting, S. Jameson		Glues and Piano Repair : A. Bolduc	Keytop & Sharp Replacement Made Easy: H. Jackson
Saturn I	Servicing the Steinway Grand: **Steinway & Sons** — F. Drasche & B. Garlick			
Saturn II	Grand Regulation: **Kimball** — D. Lassiter, J. Light & R. Weisensteiner		Schwander-Langer Action: **Herrburger Brooks** — D. Martin	
Saturn III	Influence of Design on Piano Quality: **Samick** — K. Fenner	The Art of 'Unsalesmanship': S. Graham	Voicing: **Schimmel** — L. Duricic	Young Chang's Piano Service: **Young Chang** — R. Chandler & P. Gilchrist
Conference A	Electronic Tuning with Aural Test: **Inventronics** — A. Sanderson	Computers: Boon or Bane: D. Thomas	Aural & Visual Tuning: **Superior Imports** — G. Defebaugh, J. Coleman	
Conference B	Installing Hammers: **A. Isaac Pianos** — A. & C. Isaac, S. Jackson		New Approach to Polyester Repair: **Bronte Piano Co.** — C. & D. Pile	
Conference C	Piano Touch-Up & Finishing: A. Mastagni	Soundboards & Bridges: **CA Geers Piano Co.** — C. & T. Geers	Key Bushing & Weighting: **Tadashi** — B. Russell	Piano Scaling: **Sohmer** — D. Campbell, B. Clark & G. Green
Conference D	Past Presidents' Mini-Classes	Bird-cage Actions: R. Long	Tuning Pianos in Russia: I. Sadigursky	Relationships In and Out of the Piano: O. Keyes
Conference E	Rebuilding the Player Piano: D. Gates & R. McCall		Vertical Reconditioning: S. Stone	
Conference F	Felt Facts: **Chas. W. House & Sons** — P. Van Stratum & T. Waters	In-Home Service of the New Piano: R. Mackie	College & University Technicians Roundtable	Technical Exam Class: B. Spurlock & E. Floyd (open only to RTT members)
Conference G	Visually Impaired Drop-in Center		Special Appliances For the Piano Technician: J. & P. Sprinkle	

all of the city's transportation.

The commission introduced the motor bus in 1921 with a fleet of four solid-tire, double-deck vehicles. A year later, they experimented with trackless trolley buses on Mt. Pleasant Road, but due to the need for increased capacity, converted the route to streetcars in 1925. The trolley bus would not be seen on Toronto streets for another 22 years.

Thus streetcars, affectionately dubbed "red rockets," formed the backbone for Toronto's transit routes, with motor buses serving the feeder lines.

A consulting firm had recommended a subway for the city as far back as 1910, but a proposal for a Yonge St. line was defeated in a municipal vote. Although the Yonge St. line was eventually opened in 1954, the first subway construction dates back to 1918 with the building of the Prince Edward Viaduct, a bridge across the Don Valley linking Bloor St. and Danforth Ave. During construction, allowance was made for a lower deck to carry a future rapid-transit line. This deck was utilized 47 years later with the opening of the Bloor/Danforth subway.

Toronto's two subway lines, 35.3 miles in total, eliminated many of the streetcar routes, but not all. Although there are 630 subway cars in operation, there remain 275 streetcars operating on nine routes. Trolley buses, too, having been reintroduced in 1947, number 150 vehicles operating on nine routes, including the aforementioned Mt. Pleasant route. Diesel buses, (1,525) operate on 123 of the 144 routes in metro Toronto, including the Malton (route 58) bus on Dixon Road past the Constellation Hotel.

The cost of subway construction has become prohibitive and the Toronto Transit Commission has set its sights on elevated transit. The Scarborough RT line was opened in 1985. Slightly more than four miles in length, this fully automated line of 28 cars runs from the Kennedy Station on the Bloor/Danforth subway to McCowan Road.

Of the TTC's 141 surface routes, 132 make connections with the subway/Scarborough RT system. From the Constellation Hotel, the Malton #58 provides service at 15-minute intervals to the Lawrence West subway station.

Explore Toronto on the TTC. The $1 cash fare with free transfer will prove to be the bargain of a lifetime.

If, however, you want to see Toronto by car, there are a few rules you should observe. Overtake streetcars only on the right-hand side. When a streetcar stops for passengers, stop and stay behind

Wednesday, July 22, 1987

Room	Period 1 8-9:30 a.m.	Period 2 10:30 a.m.-noon	Period 3 1:30-3 p.m.	Period 4 4-5:30 p.m.
Aquarius Hall	History of North American Pianos: C. Huether	Reduce Your Canadian Taxes: **Deloitte, Haskins & Sells**	Occupational Health Hazards: J. Harrison	Non-Member Orientation
Jupiter I	Professional Service — The Yamaha Way: **Yamaha** — B. Brandom, L. Edwards, L. Whitcomb, M. Ito		The Art of 'Unsalesmanship': S. Graham	Northeast Regional Awards Program
Jupiter II	Gadgets & Tools: F. Mehaffey	Vertical Regulation: **Wurlitzer**: D. Long & R. Elrod	Player Piano Service: **Wurlitzer** — R. Elrod	Southeast Regional Awards program
Jupiter III	Pinblock Installation & Restringing: J. Krefting & S. Jameson		Keytop & Sharp Replacement Made Easy: H. Jackson	South Central Regional Awards Program
Saturn I	Techniques For Downbearing: T. Lowell	Concert Preparation: **Steinway** — F. Mohr	Techniques For Downbearing: T. Lowell	Central East Regional Awards Program
Saturn II	Grand Regulation: **Kimball** — D. Lassiter, J. Light & R. Weisensteiner		Soundboards & Bridges: **C. A. Geers Piano Co.** — C. & T. Geers	Central West Regional Awards program
Saturn III	Voicing: **Schimmel** — L. Duricic	Influence of Design on Piano Quality: **Samick** — K. Fenner	Moving Pianos: J. Geiger & Crew	Western Regional Awards Program
Conference A	Aural & Visual Tuning: **Superior Imports** — G. Defebaugh & J. Coleman		Electronic Tuning With Aural Test: **Inventronics, Inc.** — A. Sanderson	
Conference B	Installing Hammers: **A. Isaac Pianos** — A. & C. Isaac, S. Jackson		Pedal Works: J. Zeiner	
Conference C	Between a Rock and a Hard Place: T. Cobble	What to Use — When and Where: Mohawk Fin. Prod. - T. Still, E. Lewis & T. Allen	Key Bushing & Weighting: **Tadashi** — R. Russell	
Conference D	Past Presidents' Mini-Classes	Relationships In and Out of the Piano: O. Keyes	Humidity in Rebuilding: **Dampp-Chaser Elec.** — W. Eaton & S. Smith	
Conference E	Rebuilding the Player Piano: D. Gates & R. McCall		Upright Dampers: Installation & Regulation: P. Koktan	
Conference F	Technical Exam Class: E. Floyd & B. Spurlock (RTT Guild Members only)	Pedal Works: J. Zeiner	In-Home Service of the New Piano: R. Mackie	
Conference G	Visually Impaired Drop-In Center		College -level Piano Service: D. Bowman, L. Buntemeyer & A. McCollom	

Toronto . . .

the streetcar's rear doors. Only when the vehicle's doors are closed can you proceed. If there is a concrete safety island for passengers, ignore the streetcar stop rule.

Yield to pedestrians when turning or at "cross-walks." These well-marked X-crossings are used by pedestrians "pointing" their intention to cross. But watch for those who just step out.

At traffic signals, you may turn right on a red light (or left if turning from a one-way to a one-way), provided you first come to a full stop and the way is clear. Watch for signs prohibiting turns. Flashing green urges you to advance. Arrows may be used as well. When parking, watch for tow-away zones — they mean it!

Both covered and outdoor parking is free at the Constellation hotel.

In Ontario, everyone traveling in a car must wear seatbelts, excepted only by medical certificates.

At the host chapter booth, we will have plenty of information for you on interesting things to see and do and how to get there. Advance registration has been really strong for Toronto with so many technicians wanting to "discover the feeling" and experience the uniqueness of this friendly Canadian city. It's not too late for *you*, but you must act now. Fill in that registration card and send it along to Kansas City today. We want to see you help celebrate the Guild's 30th anniversary. Next month we will present a "pictorial" on the host Toronto Chapter. We're a fun group (you'll see) and we're ready to give you a good time.

Visitors to Toronto's CN Tower can see as far as 100 miles on a clear day.

Thursday, July 23, 1987

Room	Period 1 8-9:30 a.m.	Period 2 10:30 a.m.-noon	Period 3 1:30-3 p.m.	Period 4 4-5:30 p.m.
Aquarius Hall	Occupational Health Hazards: J. Harrison	A Look Inside: W. Snyder	New Taxes in the U.S.A.: R. Potter	Rebuilders Classification Review
Jupiter I	Professional Service — the Yamaha Way: **Yamaha** — B. Brandom, L. Edwards, L. Whitcomb & M. Ito		Art & Science of Piano Sound: **Baldwin** — D. Fandrich, A. Vincent & R. Wheeler	
Jupiter II	Vertical Regulation: Wurlitzer — D. Long & R. Elrod	Gadgets & Tools: F. Mehaffey	Shop Work With Sharp Tools: J. & P. Rappaport	
Jupiter III	Pinblock Installation & Restringing: J. Krefting & S. Jameson		Keytop & Sharp Replacement Made Easy: H. Jackson	Glues & Piano Repair: A. Bolduc
Saturn I	Servicing the Steinway Grand: **Steinway & Sons** — F. Drasche & B. Garlick			
Saturn II	Grand Regulation: **Kimball** — D. Lassiter, J. Light & R. Weisensteiner		Schwander-Langer Action: **Herrburger Brooks** — D. Martin	
Saturn III	Influence of Design on Piano Quality: **Samick** — K. Fenner	Young Chang's Piano Service: **Young Chang** — R. Chandler & P. Gilchrist	Voicing: **Schimmel**: L. Duricic	The Art of 'Unsalesmanship': S. Graham
Conference A	Computers: Boon or Bane: D. Thomas	Electronic Tuning With Aural Test: **Inventronics** — A. Sanderson	Aural & Visual Tuning: **Superior Imports** — G. Defebaugh & J. Coleman	
Conference B	Installing Hammers: **A. Isaac Pianos** — A. & C. Isaac & S. Jackson		New Approach to Polyester Repair: **Bronte Piano Co.** — C. & D. Pile	
Conference C	Between a Rock & a Hard Place: T. Cobble	Piano Scaling: **Sohmer** — D. Campbell, B. Clark & G. Green	Key Bushing & Weighting: **Tadashi** — R. Russell	Piano Touch-up & Finishing: A. Mastagni
Conference D	Humidity in Rebuilding: **Dampp-Chaser Elec.** — W. Eaton & S. Smith	Past Presidents' Mini-Class	Tuning Pianos in Russia: I. Sadigursky	Bird-Cage Actions: R. Long
Conference E	Upright Dampers: Installation & Regulation — P. Koktan	Pedal Works: J. Zeiner	Vertical Reconditioning: S. Stone	
Conference F	Felt Facts: **Chas. W. House & Sons** — P. Van Stratum & T. Waters	In-Home Service of New Piano: R. Mackie	Advanced Player Piano Class: D. Gates	Player Piano Forum: R. McCall
Conference G	Visually Impaired Drop-In Center		Blind Tuners' Future: B. McGown, M. Nemecek & W. Vaisey	

Friday, July 24, 1987

Room	Period 1 8-9:30 a.m.	Period 2 10-11:30 a.m.
Aquarius Hall	Occupational Health Hazards: J. Harrison	Reduce Your Canadian Taxes — **Deloitte, Haskins & Sells**
Jupiter I	Art & Science of Piano Sound: **Baldwin** — D. Fandrich, A. Vincent & R. Wheeler	
Jupiter II	Shop Work With Sharp Tools: J. & P. Rappaport	
Jupiter III	Pinblock Installation & Restringing: J. Krefting & S. Jameson	
Saturn I	Techniques for Downbearing: T. Lowell	Concert Preparation: **Steinway & Sons** — F. Mohr
Saturn II	Schwander-Langer Action: **Herrburger Brooks** — D. Martin	
Saturn III	Young Chang's Piano Service: **Young Chang** — R. Chandler & P. Gilchrist	Influence of Design on Piano Quality: **Samick** — K. Fenner
Conference A	Aural & Visual Tuning: **Superior Imports** — G. Defebaugh & J. Coleman	
Conference B	New Approach to Polyester Repair: **Bronte Piano Co.** — C. & D. Pile	
Conference C	Piano Scaling: **Sohmer** — D. Campbell, B. Clark & G. Green	Soundboards & Bridges: **C.A. Geers Piano Co.** — C. & T. Geers
Conference D	Tuning Pianos In Russia: I. Sadigursky	Past Presidents' Mini-Classes
Conference E	Soundboards & Bridges: **C.A. Geers Piano Co.** — C. & T. Geers	Pedal Works: J. Zeiner
Conference F	Certified Tuning Examiners Class: R. Jordan	
Conference G	Visually Impaired Drop-In Center	

Toronto's magnificent glass-roofed Eaton Centre shopping galleria. Photos courtesy Metropolitan Toronto Convention & Visitors Association.

THE
TECHNICAL
FORUM

Upright Damper Regulation, Dumb Sales Claims, And Soundboard Press Construction

By Jack Krefting
Technical Editor

Once again we come to the time of year when we convene to discuss piano technology at our Piano Technicians Guild Annual Convention, to be held next month in Toronto. Those who have attended past Conventions will need no encouragement, but for those who haven't, I can only say that if you are making a career of piano technology you need to be there, period. Important social contacts will be made there, contacts which will help you immeasurably in the future, and you will receive the best technical advice the Guild has to offer. Some of us are going there to teach, but we will all learn. I hope that everyone, especially newer technicians intending to make a career of piano technology, will find a way to get there. It's unquestionably the best investment you could possibly make, believe me. End of commercial.

Upright Damper Regulation

Matt Grossman, RTT from Memphis and staff technician at Memphis State University, contributes the following discussion and photos of his method of regulating vertical dampers:

Damper adjustment is an essential but often overlooked part of upright piano regulation. No matter how well the keys and hammer action are regulated, incorrectly adjusted dampers can cause a number of problems for the pianist. Dampers that lift too fast can increase the key touch weight into an unacceptable range. Slow lifting dampers may prevent free vibration of the strings and limit the volume and tone production of the piano. If the damper lift is uneven from key to key the action may be unpredictable and difficult to control.

I have developed the following procedure over the years and it has worked well for me on various sizes and name-brand pianos and under varying circumstances. The bench method offers a quick way to achieve a rough damper regulation which may then be followed by making fine adjustments in the piano.

Like any new procedure, you may find that it will take several attempts at this method before you are able to master it.

1. Square all dampers to the strings

A. Action is in the piano.

B. Side to side adjustment.

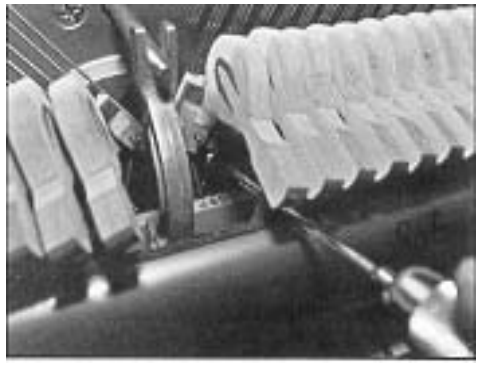
C. Use a straight damper bending tool.

D. Insert the bending tool from the front of the action between the hammer shanks so that the bending surfaces of the tool are perpendicular to the hammer rest rail.

E. Most damper wires will require two bends — one at the top

Tools needed

Steps 1D and E

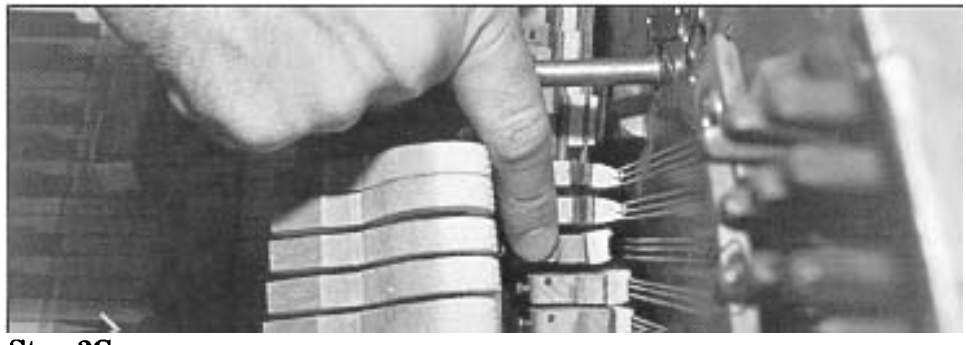


Steps 1D and E

Step 1D and E

Step 1D and E

Step 2C



Step 2C

near the damper head and one at the bottom near the damper lever.

F. Dampers should be parallel with and centered over their respective strings.

G. Hammer butt springs may become dislocated during the bending operation. They can be put back in place after the damper regulation is finished. Be careful not to damage them.

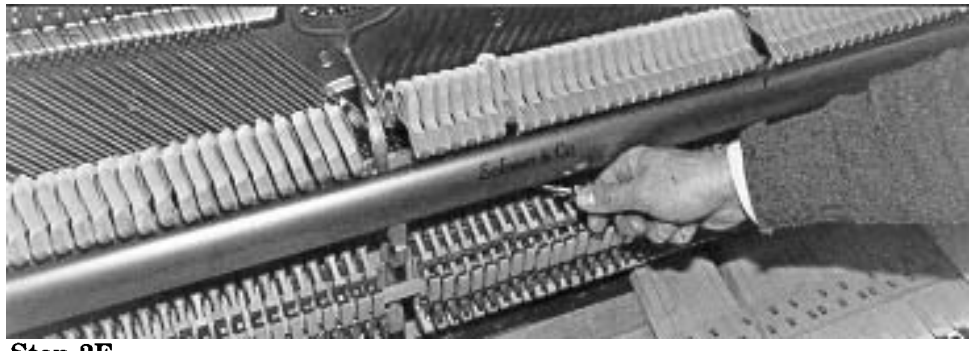
2. Set guide dampers for pedal lift in the piano

A. Remove bottom panel and disconnect pedal rods.

B. Remove keys.

C. The "first guide damper" to be adjusted should be the third or fourth damper on the treble side of the bass/tenor break. When adjusted correctly it will meet the following specifications: 1) With the damper at rest on the strings, the damper lever should be approximately parallel to the strings. 2) When the unison strings are pushed toward the soundboard the damper should follow (stay on) the strings as they are deflected. 3) When the damper is pulled back off the strings (with your finger) and pushed against the spring rail felt there should be at least 1/4" clearance between the bottom of the damper lever and the bass strings.

D. If adjustment is necessary, bend the damper wire near the bottom where it is inserted into the damper lever.



Step 2F

E. Use a 45-degree damper bending tool.

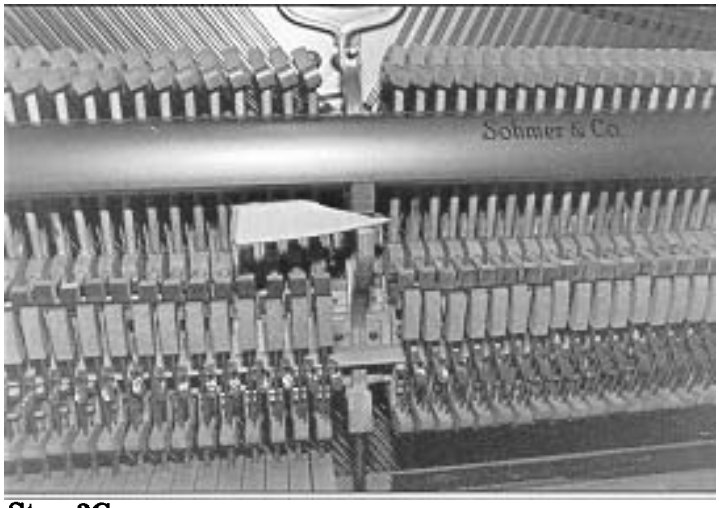
F. Insert the bending tool from the front of the action, between the hammer shanks at a 45-degree angle so that the bending surfaces of the tool are parallel with the hammer rest rail. This will ensure that the damper wire will only be bent forward or backward and will not cause any side to side misalignment of the damper head.

G. Bend the damper wire away from you to move the bottom of the damper lever closer to the strings — toward you to move the lever away from the strings.

H. Reconnect the right pedal rod and adjust it so that there is about 1/8" lost motion before the rod begins to lift the first guide damper.

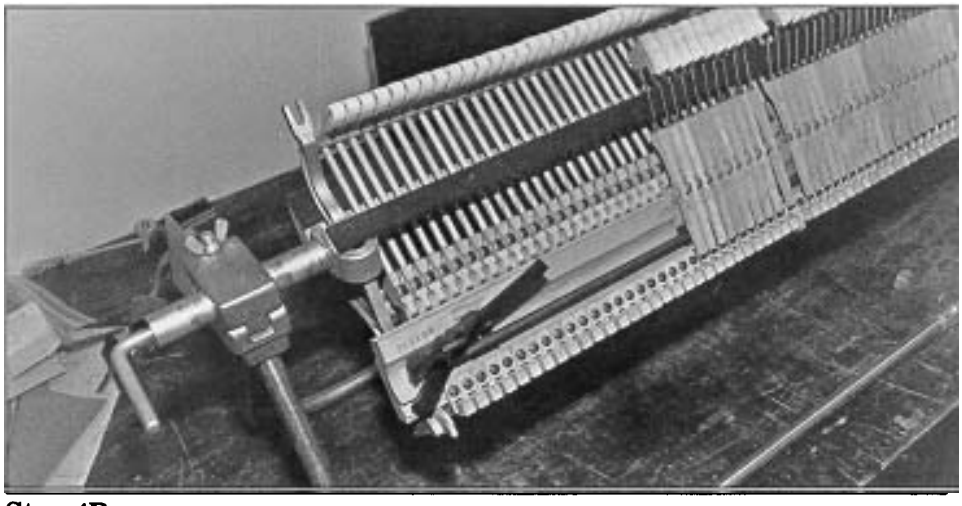
I. Adjust the dampers at the ends of each section and where the first flat treble damper occurs so that they lift simultaneously with

Step 2F



Step 3C

Step 3D



Step 4B

Step 4C

the first guide damper when the pedal is depressed. The bending procedure is the same as in step 2F above. Bend the damper wire away from you to slow the lift, toward you to speed up the lift.

J. To regulate the dampers in the piano, continue to adjust all dampers as outlined in step 2I above, so that all dampers lift simultaneously. For bench regulation continue to section 3.

3. Set guides for spoon lift in the piano.

A. Disconnect pedal rod.

B. Keys removed.

C. Prop the hammer rest rail at approximately half the hammer blow distance. It may be necessary to temporarily remove the soft pedal blocking felt from the hammer rest rail.

D. Adjust the spoon on the wippen corresponding to the first guide damper so that the damper starts to lift *just slightly* before its hammer when the wippen is lifted. Push up on the wippen cushion with your finger instead of using the key. The Yamaha upright spoon bender with a small tool handle is an excellent tool for this adjustment.

E. Install the key that corresponds to the first guide damper. The key should travel no less than 1/3 of the dip before the damper begins to lift. The hammer rest rail setting in step 3C may be varied in order to maintain this important specification. The closer the rail setting is to the strings the slower the damper lift; the farther away the rail setting the faster the damper lift, provided the spoon is adjusted as in step 3D.

F. Greater accuracy in the bench regulation may be achieved if the spoons for all the previously set guide dampers are adjusted as in step 3D.

G. To regulate the spoons in the piano, adjust all of the damper spoons as outlined in step 3D, then skip to section 6. For bench regulation continue to section 4.

4. Adjust the pedal lift on the bench

A. Remove action from the piano and place in an action cradle or similar device with the hammer rest rail on the side closest to you. Remove hammer rest rail prop.

B. Raise the damper lift rod (for the right pedal) until all damper levers are engaged by the rod. Block the rod at this point with a rubber mute.

C. Align all the damper heads and felts to the guide dampers previously set in the piano. Use 45-degree damper bender. Position the action so that you can look down on the top of the damper heads and reach over the hammers to insert the tool from the damper side to make your adjustment. Bend the damper wire near the bottom where it is inserted into the damper lever.

D. When properly adjusted, the damper heads and felts should form a straight line. Use a straight edge to guide your eye if necessary.

5. Adjust the spoons on the bench

A. Prop the hammer rests rail at approximately 1/2 the hammer

Step 5E

blow distance (the same setting as step 3C).

B. Adjust the damper lift rod (for the right pedal) up or down until the original guide damper moves *just slightly* before its corresponding hammer when lifting up on the wippen. Block rod at this point with a rubber mute.

C. If other guide dampers were set in the piano, they should also move *slightly* before their corresponding hammers the same as the first guide damper in step 5B. If they do not, recheck guides in the piano.

D. Adjust the spoons of all the other dampers so that they operate the same as the first guide damper in step 5B.

E. Use 45-degree damper bending tool. Reach over the hammers to insert the tool from the back of the action to bend the spoons.

6. Check damper regulation in the piano

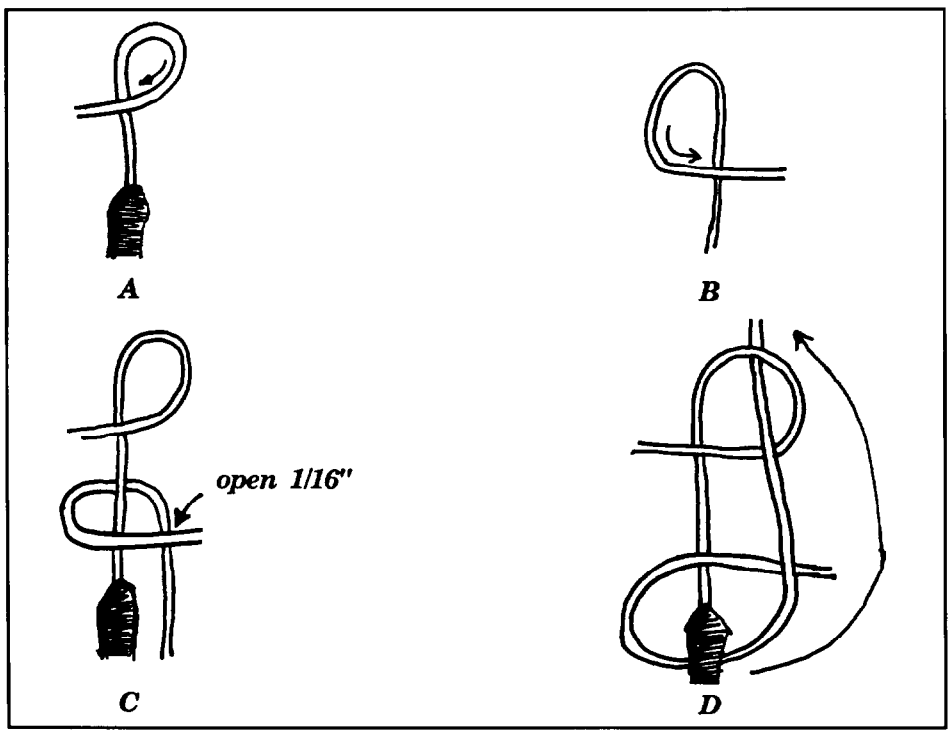
A. Keys removed.

B. Hook up sustain (right) pedal.

C. Check regulation of the lift of the dampers with the pedal. All dampers should lift simultaneously with the first guide damper. Adjust as necessary according to the steps in section 2.

D. Check regulation of damper spoons. All dampers should lift just slightly before its individual hammer when the hammer rest rail is set at half the hammer blow distance (or other setting determined to be correct; see step 3E). The key should travel at least a third of its dip before the dampers begins to lift. Adjust spoons as necessary according to the steps in section 3.

E. Relocate hammer butt springs to their proper position. Reglue soft pedal blocking felt to hammer rest rail. Replace keys, etc.



Dumb Sales Claim Contest

It seems that this contest may never end, because of the sheer abundance of silly things said about pianos. An example is the following newspaper ad, sent in by Art Reblitz of Colorado Springs, regarding an auction to be held in Marshalltown, Iowa. The ad has a photograph of a very ordinary-looking grand, with the following description: "Beautiful parlor grand piano, bench and music cabinet, made at the Schiller Factory from one black African walnut log (needs new strings)."

Reblitz notes dryly that he supposes that in order to match the bass strings perfectly, the new ones will have to be turned from a log with just the right grain pattern. Thanks, Art, we needed that.

Tuner's Knot

John B. Hess of San Antonio writes:

The old bugaboo of the broken string is still occurring and is a problem that many of us seem unable to cope with. The problem is that it does not happen often enough for us to remember from one time to the next how to do it. In past years we have seen many "how to" presentations on this subject but often they are not easy to remember when you are out there without the written explanation. Realizing that most older technicians have long ago encountered this problem and conquered it or gave it up for a lost cause we do not here claim to offer anything new, but possibly a reexamination of the subject may benefit

some of the younger technicians. Consistency of practice is the key to remembering how to do this job, perhaps with an approach to doing it as it is encountered. We offer a method we have used successfully and seem to be able to remember from one break to the next. We describe a common situation — a bass string, broken at the becket, requiring a knot between the pressure bar or agraffe and the tuning pin.

1. Leaving the string in the piano and using round-end nose pliers, turn a loop in the old string right to left and over the top of the standing part; Fig. A.

2. Using a new piece of wire exactly the same size as the old core wire make a loop exactly opposite, left to right but over *the top of the standing part with the loop at the top as you hold the piece; Fig. B.*

3. Open the new loop about 1/16 inch and slip the loop over the standing part of the old string, left to right, loop at the top; Fig. C.

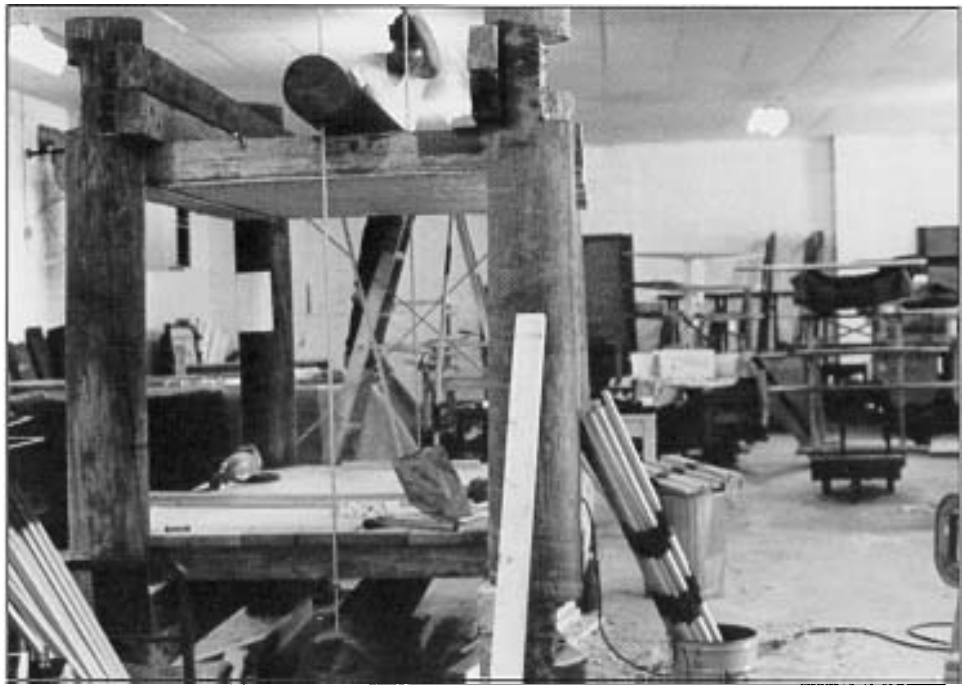
4. Invert the new loop and insert the long end into the top of the loop in the old string; Fig. D.

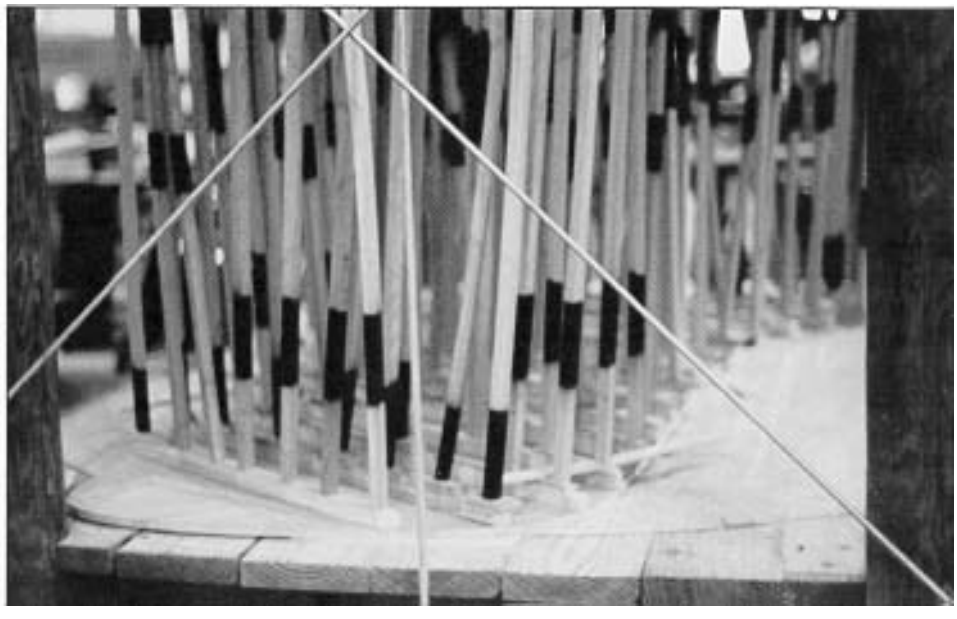
5. Cut the new piece four fingers above the loop, pull up, straighten, insert into pin, tighten and tune.

Grand Rebuilding

As promised, this month we present construction details of a soundboard press. This particular press is made entirely of softwoods so it is built more heavily than it would have to be if made of, say, maple. Other materials such as steel could be used also, which could result in a press that is just as strong and not as heavy or bulky as this one; we chose softwood because our shop has 6000 square feet and the softwood was readily available.

For corner posts we used four telephone poles, eight feet long and about 14 inches in diameter. As can be seen in the accompanying photos, we cut the ends of the poles like Lincoln Logs with a chain saw, so that we could bolt them to the trusses with half-inch diameter carriage bolts of reasonable length.





The corner posts are connected by doubled 4x6 timbers, each 10 feet in length, and cross-connected by additional 4x6 timbers laid on edge crosswise to form the basis for the upper and lower decks. In all, there are 56 timbers in the press in addition to the six telephone poles. It has been jokingly dubbed "Stonehenge" and "Fred Flinstone's bunk bed" because of its overbuilt look, but most of this was necessary in view of the 15,000-lb load placed on it when a concert grand board is bellied.

The lower deck is faced with ordinary nominal 2-inch planking, for easier cutting of the concave surface as discussed last month, and the lower surface of the upper deck is faced with plywood for better grip on the go-bars. Next month we will show the actual bellying process.

Please send all technical correspondence for publication to me:

Jack Krefting, Tech Ed
PO Box 16066
Ludlow, KY 41016

Letters

Rick Baldassin
Assistant Technical Editor

Letters

Our first letter comes from Owen Jorgensen, of East Lansing, MI. Owen writes:

After reading the April issue of the Journal, *I decided to write the following remarks...*

On page 19, there is (listed) the Corollary #1... This does not seem correct. Perhaps more information should be given before (printing such) comments.

Owen goes on to describe specific situations which cause him to question the above-mentioned material. First let me state that the information to which Owen refers was part of a paid advertisement and the opinions expressed therein are those of the purchaser. The publication of any advertisement does not in any way constitute an endorsement by the Piano Technicians Guild or its editorial staff.

I apologize that the words "paid advertisement" did not appear at the top, as is customary in publications where a paid advertisement appears as if it is part of the text of the publication. I will do my best to insure that this policy is adhered to in the future.

Owen continues by commenting on the chart of interval tests included in the April issue. He states:

In order to use the actual harmonic involved when possible, I use the P19-P12 test rather than your P12-P5 test for 6:3 octaves. In the same way, I use a M13-M6 test rather than your M6-m3 test for 10:5 octaves because the test intervals are closer to the harmonic being used. Also for 12:6 octaves, I use a P26-P19 test instead of your P19-P12 test.

As far as theory is concerned, your chart could be more complete if you included more testing pairs as follows: For 2:1 octaves, you could add a m14-m21 test and a P16-P23 test. For 4:2 octaves, a m7-m14 test and a P9-P16 test could be added. For 8:4 octaves a M2-m7 test could be added. For 10:5 octaves, a M24-M17 test and a M13-M6 test could be added. For 12:6 octaves, the P26-P19 test could be added. Also, there are tests for 14:7 octaves and 16:8 octaves, etc.

Addressing the issue of using the actual harmonic or partial whenever possible, I can say that there is certainly nothing wrong with it. It does, however, limit you to the extent that you cannot hold down the test intervals and excite the beats by playing the strike note, because the test note is the strike note. You would have to rely on hearing the beats by playing the actual intervals, which can be somewhat difficult. In terms of the validity of the tests which Owen lists, for the P19-P12 test, the ratio of a P19 is 6:1, and the ratio of a P12 is 3:1, so the test *is* a test for a 6:3 octave (but no possibility of using a strike note). In the case of the M13-M6 test, the ratio of an M13 is 10:3, and the ratio of an M6 is 5:3, so the test *is* a test for a 10:5 octave. It is still possible to use a strike note with this test, and it is probably more technically correct than the M6-m3 test because it employs the first coincidence of all three notes, but the M13-M6 test using the strike note cannot be performed with two hands as the

M6-m3 test can. Concerning the P26-P19 test, the ratio for P26 is 12:1, and the ratio of a P19 is 6:1, so the test is a test for a 12:6 octave. As mentioned previously, no strike note can be used with this test, however.

As far as the other tests which Owen lists are concerned, they may, while being valid tests, not be practical to tune with. In fairness to Owen, he did begin his statement with, "As far as theory is concerned..." In the case of the m14-m21 test, the ratio of an m14 is 7:2, and the ratio of an m21 is 7:1, so the test *is* a test for a 2:1 octave. I calculated the approximate beat speed for the C6-C7 octave where this test might be used, and found it to be about 27 beats per second, which would not be useful in practice. In the case of the P16-P23 test (this should technically be called the M16-M23 test), the ratio of the M16 is 9:2, and the ratio of the M23 is 9:1, so the test *is* a test for a 2:1 octave. I calculated the approximate beat speed for the C6-C7 octave where this test might be used and found it to be about 22 beats per second, which would not be useful for tuning. In the case of the m7-m14 test, the ratio of the m7 is 7:4, and the ratio of the m14 is 7:2, so the test *is* a test for a 4:2 octave. I calculated the beat speed for the C4-C5 octave where this test might be used, and found it to be about 18 beats per second, which would not be useful for tuning. In the case of the P9-P16 test (this should technically be called the M9-M16 test), the ratio of the M9 is 9:4, and the ratio of the M16 is 9:2, so the test *is* a test for a 4:2 octave. I calculated the beat speed for the C4-C5 octave where this test might be used, and found it to be about five beats per second, which would be useful in tuning. I must interject a word of caution here. I just returned from a convention where a prominent Guild member was quoted as stating "There are a thousand things that we as piano tuners know, which are not true." One of these untruths is that in equal temperament, all of the Major intervals are expanded. I am here to tell you that the M9 and M16 are contracted intervals. Furthermore, the m7 and m14 are expanded intervals. The M2, on the other hand, is both. I will explain shortly. Making a long story short, the M9-M16 test appears to be a useful test for a 4:2 octave, but remember the M9 and M16 are contracted intervals. In the case of the M2-m7 test, the ratio of the M2 is 8:7, and the ratio of the m7 is 7:4, so the test is a test for an 8:4 octave. Looking at the test further, the ratio of the M2 is also 10:9, and the ratio of the m7 is also 9:5, so the test is also a test for a 10:5 octave. If these intervals were actually played (Heaven forbid), both sets of beats would happen at the same time. The tests would still be valid, and could be differentiated by playing a different strike note for each type of octave. If our octave were C1-C2, we would strike C4 to test for an 8:4 octave, and E4 to test for a 10:5 octave. Seems rather simple. The M2, however, is contracted at the 8:7 level, but expanded at the 10:9 level. In addition, the m7 is expanded at the 7:4 level, but contracted at the 9:5 level. All this means is that you need to file this in the back of your memory so that you will know how to manipulate the notes to get the desired result. By the way, the beat speeds calculated for the C1-C2 octave where the M2-m7 test might be used were around three beats per second, so the test could be useful in tuning. I have already commented on the other tests which Owen listed, so there is no need to go over them again. Many thanks to Owen for his observations and contributions.

Our next letter comes from Stuart Fischer, of Putnam Valley, New York. Stuart writes:

*Concerning the April 1987 "Tuning Up," I believe there is a mistake in the chart on page 22. For a 6:3 octave, shouldn't the test be m3-*M6*, not m3-*m6*?*

Also, I just don't understand what you are saying or doing with the Perfect, Augmented, and Diminished intervals. From where do you get these, and to what do they pertain?

As Stuart points out, the test for a 6:3 octave is indeed the m3-M6 test. In sympathy for the typesetter, I must say that having to typeset an article such as this, with so many numbers, formulas, and tables, I am amazed at how well we are doing. The thought of having to type something which may as well be in a foreign language is beyond comprehension to me. Anyway, the little "m" should have been a Big "M."

As to the terms Perfect, Augmented, and Diminished, they come from my training in music theory. They distinguish the type of an interval, just as Major and minor. They refer most generally to the intervals of Fourth, Fifth, and Octave, although the terms Augmented and Diminished also apply to other intervals. In music theory, an interval is named according to how far apart the two notes are on the musical staff. Let us say we are considering an interval comprising notes C and G. Counting up from C to G, counting C as one, we would find that C and G are five notes apart, and therefore make an interval of a fifth. In music theory, the interval comprising any C up to any G is some sort of fifth. If the notes are C♮ (natural) to G♮ (natural), we have a "perfect" fifth. However, if the notes are C♮ (natural) to G♯ (sharp), or C♭ (flat) to G♮ (natural), we have an "Augmented" fifth, which is one half step wider than a "perfect" fifth.— If the notes are C♮ (natural) to G♭ (flat), or C♯ (sharp) to G♮ (natural), we have a "Diminished" fifth, which is one half step narrower than the "Perfect" fifth. To us as piano tuners, the interval from C to G♭ (flat) is the same as the interval from C to F♯ (sharp), but not to students of music theory. The first is a diminished fifth, while the second is an Augmented fourth (because C and F are four notes apart).

When applied to the other intervals, the sequence goes: diminished, minor, Major, Augmented. For example, C♯ to E♭ would be a diminished third, C to E♭ would be a minor third, C to E would be a Major third, and C to E♯ would be an Augmented third. It is all very simple until you start writing piano tuning articles. It soon becomes apparent that there *is* a key for the sharp, but no key for the flat. It is therefore decided that on the piano there are only sharps, and no flats. This is why we so often read about C♯ — F Major third. According to the above definition, C♯ to F is no kind of third

at all but some kind of fourth, a diminished fourth actually. The whole concept, while not that difficult to understand, can be somewhat confusing when talking about piano tuning. The problem arises when at one instance a note must be C♯, and at another the same note must be D♭. For example, consider the following instructions: Tune three contiguous Major thirds, and test the octave. 1) Tune F3 to A3, Major 3rd. 2)Tune C♯ 4 to A3, Major 3rd. 3) Tune F4 to D♭ 4, Major third. 4) Test F3 to F4 Octave.

Now you are saying, "but we haven't tuned D♭ yet!" I agree. Change 3) to: Tune F4 to C♯4, diminished 4th. Now you are saying, "but now we haven't tuned contiguous Major Thirds, because we just tuned a diminished 4th!" I agree. Change 3) to: Tune E♯4 to C♯4, Major third. Now you are saying, "Well, we are indeed tuning contiguous Major thirds, but we can no longer test our octave!" I agree again. Change 4)to: Test F3 to E♯ 4, Augmented Seventh.

Well I am certainly glad we got that cleared up. Actually for piano tuning in "equal" temperament, C♯ and D♭ are the same note. They are called "enharmonics." Furthermore, I have taken the rather liberal viewpoint that any interval which is three semi-tones wide is a minor third, four semi-tones wide is a Major third, five semi-tones wide is a Fourth, six semi- tones wide is a Tri-tone, seven semi-tones wide is a Fifth, eight semi-tones wide is a minor sixth, and nine semi-tones wide is a Major sixth, *regardless* of the spelling. What really matters to us as tuners are the partial ratios the intervals create. They are as follows:

m3 - 6:5
M3 - 5:4
P4 - 4:3
P5 - 3:2
m6 - 8:5
M6 - 5:3

These ratios indicate where the beats are happening. As tuners, knowing the location of the beats is much more critical than the spelling of a specific interval. In fact, you might say that to us as tuners, an interval is defined by the ratio of the coincident partials, and not by the spelling of the fundamentals. Looking at it this way, any interval with a ratio of 5:4 would be a Major 3rd, even if it is spelled C♯ - F.

Perhaps this liberal viewpoint is not in my best interest. After all, think of the number of articles which could be written comprising the myriad of tests necessitated by a strict naming of intervals according to spelling. For instance, in the above instructions, it stated to test the F3-E♯4 Augmented seventh. No problem. Of course, we must first decide what type of Augmented seventh we desire to tune. If we decide 4:2, then the following tests could be employed: First compare the beat rate of the D♭3- F3 Major Third to the D♭3 - E♯4 Doubly Augmented Ninth. This would be known as the M3-AA9 Test for the 4:2 Augmented seventh. If we had chosen to call our test note C♯ rather than D♭, the same test would be known as the d4-M10 Test. The combinations could be endless. Think of it — 50 months of interval tests. I will take the matter under advisement. (For those of you who have not figured it out yet, the bulk of this has been written tongue-in-cheek). Our thanks to Stuart for catching the typo, and for his question clarifying the terminology of the chart in the April issue.

Our next letter comes from Gerald Wentworth, of Bedford, Texas. Gerald writes:

In the discussion of beat frequencies in the March issue, you developed a very useful relationship with regard to the fourths, but failed to apply it properly to the tuning procedure.

My intent in the March issue was to demonstrate that even in the simplest case, the beat rate table would not work. I did this by considering only two notes, and with the fundamental frequencies tuned to those of equal temperament, the beat rate did not match the theoretical beat rate. Of course, when considering all 13 notes in the temperament octave, the situation becomes extremely complex. Beside the fact that there are more notes, there are multiple intervals created with complex interrelationships. If we consider only one type

of interval (like Major thirds), the situation is rather easy. In fact, a temperament can be tuned on *any* piano with a *perfect* progression of beat rates for any *one* type of interval. They can even be the theoretical beat rates for that interval in equal temperament. If we were to listen to these intervals alone and no others, we would be quite proud of ourselves, until, of course, we listened to any of the other intervals. This is why it is so important to consider all of the intervals when setting a temperament. Unfortunately, they cannot all be given equal importance, but they must all be considered. Gerald also caught the errors in the tables for the fifth, which were corrected in the May issue. It assures me that at least one person read it. Our thanks to Gerald for his letter.

Our final contribution comes from Michael Travis of the Washington D.C. chapter:

I'll Take the Twelfth
by Michael Travis

Some of you more advanced "wah-wah" (aural) tuners may like to add a new "wah-wah" test for the twelfth (octave fifth) to your repertoire. It is related to the M6-M10 test for a perfect fifth; the main difference is that the upper member of the interval is transposed an octave higher so that the test for the Perfect Twelfth (P12) would be called the M6-M17 test. In both tests, the M6 below the lower member of the interval gets you to the test note; the 10th (or 17th) above the test note gets you to the upper member of the fifth (or twelfth) respectively. For the fifth, the M6-M10 test compares the third partial of the lower member to the second partial of the upper member. For the twelfth, the M6-M17 test compares the third partial of the lower member to the fundamental of the upper member. In either case, if you want to make the interval contracted, pure, or expanded, you make the M6 beat (respectively) faster, the same rate, or slower than the M10 (for a fifth), or the M17 (for a twelfth). In either case, the absolute pitch of the test note is not important, provided that the beat rate is appropriate and on the flat (wide) side of pure.

So what's this twelfth really good for? I've found that it's mainly useful in octave five (starting about C52); you can tune twelfth pure in that octave without hurting the single octaves, and usually (but not always) without hurting the double octaves. And all you do is carry out the M6-M17 test and match the beat rates.

Example: Tuning C5 pure to F3 (twelfth)

Listen to A♭2-F3 (M6)

Listen to A♭2-C5 (M17)

Adjust C5 to match the beat rate of the M17 to the M6

Try it! With so many key people taking the fifth these days, why not amaze your friends and take the twelfth?

Coming from our nation's capital, it must be good advice. Actually, I think Michael should have used G♯2 in his example, and called the test the diminished 7th - diminished 18th (d7-d18) test. Until next time... Send your questions and comments to me:

Rick Baldassin
2684 W. 220 North
Provo, UT 84601

TEMPERAMENT TESTS

An Encyclopedia Of Tests For Equal Temperament

Michael A. Kimbell
San Francisco Chapter

This article, the first in a series on aural temperament tests, evolved from my personal desire to assemble all of the temperament tests I had either heard or read about. The sources are many: *Journal* articles, seminars, chapter meetings, and conversations. Many of the tests are now "common knowledge" and tracing the history of their invention would double the length of this series! As even a long list of acknowledgements would inevitably leave several people out, I hope my fellow tuning- explorers will accept a general "thank you" with apologies for leaving them anonymous.

The fundamental unit of tuning is the interval, not the note. An F♯ or a B♭ in isolation is meaningless, both from a musical and from a tuning standpoint. What matters is the sound of the thirds, fifths, octaves, and unisons. The importance of intervals can be obscured in electronic tuning, where one "dials up" the notes. But as the end result should be a tuning which sounds good musically, aural tests (even if used to a more limited extent) are just as essential in a good electronic tuning to make sure that the tuning is appropriate to the scaling of the particular piano.

An interval is gauged aurally according to beats between the lowest matching partials of the two notes in question. Theoretically, a perfectly-tuned interval is beatless, but in practice the intervals in most keyboard tuning systems are purposely "mistuned" by expansion or contraction from the beatless state. A "mistuned" or tempered interval thus acquires a musical *color* which can be controlled by adjusting its beat rate. Although a system of tuning or temperament can be defined as a fixed set of frequencies or absolute beat speeds, it makes far better sense, from both a practical and a musical standpoint, to define the system as a *pattern* of intervallic colors and relative beat speeds.

In the modern tuning system known as equal temperament, the goal is for all intervals of the same class to have the same color. Apart from its pitch level, no third stands out among other thirds, no fifth sounds any different from any other fifth, and so forth. Since, in the case of equal temperament, pitch level is thus theoretically the sole determinant of the beat rate for each specific interval within a given class, beat speeds of like intervals accelerate smoothly as they progress chromatically up the keyboard. This even progression, especially of thirds and sixths, assures the uniformity of color which is the hallmark of equal temperament. Neither inharmonicity nor octave stretch affects this definition of equal temperament, for it is the overall pattern of beat rates across the piano that counts, not the beat rate of a particular interval taken in isolation. On a piano with "theoretically ideal" strings, the third F33-A37 (for example) would beat at a guaranteed rate of 6.9 beats per second. These same "ideal" strings would of course rob the piano of most of its charm and tonal color. In reality the most appropriate beat rate for any interval is determined through comparison on relative basis with the beat rates of other intervals, using one or more of the tests described in this series of articles. Under these conditions, setting a good equal temperament is possible on all but worn-out instruments, or ones with large inharmonicity factors or jumps in their scaling; moreover, an even temperament makes it a lot easier to tune the rest of the piano.

The tests that form the subject of this exploration fall into several categories. These include tests using untuned "test notes" for gauging the width of octaves, fourths and fifths, tests for comparison of intervals of the same class on a contiguous, chromatic, or "whole step" basis, tests for direct cross-comparison between thirds and sixths, and special extensions of the contiguous and chromatic tests.

The example shows the octave tests together with the fork test. Notes being tuned are shown in bold-faced; untuned "test notes" are shown in normal print. The beat rates are approximate, since the beat rate for a given interval will vary slightly from piano to piano due to inharmonicity. Throughout this series, "3rd" means major third, "m3rd" means minor third.

When the very first octaves (or fourths or fifths) are being tuned, no other similar intervals are available for comparison. Establishing a "test note" in effect creates two test intervals, which are

Test:	Test 0 **Fork-17th**	Test 1 **8ves & double 8ve**	Test 2 **3rd-10th (4-2 octave)**	Test 3 **3rd-10th-17th**
Comments:	(exactly the same)	(stretched yet clean)	(10th not slower)	(10th intermediate)
Upper note:	fork **A49**	**A49 A37 A49**	**A25 A37** **A37 A49**	**A25 A37 A49**
Lower note:	F21 F21	A37 A25 A25	F21 F21 F33 F33	F21 F21 F21
Beats/sec.:	(4) (4)	(0) (0) (0)	3½ 4 7 7¼	3½ 4 4½

Test 4	Test 5	Test 6	Test 7	Test 8
3rd-10th-6th	**m3rd-6th (6-3 octave)**	**3rd-m3rd-6th**	**4th-5th**	**5th-4th**
(10th intermediate)	(6th not slower)	(minor 3rd intermediate)	(5th not noisier)	(1:2 beat ratio)
E32 E44 A37	C28 **A37**	**C♯29 C28 A37**	D42 **A49**	E44 **A49**
C28 C28 C28	**A25** C28	**A25 A25 C28**	**A37** D42	**A37** E44
5 5+ 6	6- 6	4½ 6- 6	1 1	¾ 1½

This example shows the octave tests together with the fork test. Notes being tuned are shown in bold face; untuned "test notes" are shown in normal print. The beat rates are approximate. "3rd" means major third, "m3rd" means minor third.

compared with each other in order to diagnose accurately the state of the octave (or fourth or fifth) being tuned. The test note itself need not be set accurately, in fact it may be raised or lowered temporarily to make the beats of the test intervals (thirds, sixths, or 10ths) easier to hear.

Strictly speaking, the 17th-fork test is neither a "temperament test" nor an "octave test," but I have included it because it is a vital first step in tuning the piano. It should be emphasized that the first piano note to be tuned should be at the same pitch as the fork, not an octave lower. A49 or C52, not A37 or C40, must be set to the fork, otherwise it is the second partial of A37, and not the fundamental of A49, that will be at 440. *(As a result, the fundamental of A49 will be sharp of 440 — Editor.)* The check note must be the 17th below the fork, not the 10th, otherwise beats will be tested against the second partial of the fork instead of its fundamental. *(As a result, the fundamental of A49 will be flat of 440 — Editor.)* All of this, of course, presupposes that the fork has been accurately calibrated (preferably at least once a year), or that an accurate electronic fork is used.

Although one might be tempted to think of octaves only as what one tunes and checks after the temperament has been set, the octave is in fact an essential part of the temperament itself. Indeed, after A49 or C52 has been set to the fork, the very first interval to be tuned is the octave! Since octave stretch will affect not only the absolute beat speeds of individual thirds and sixths in the temperament, but also the correlation between the colors of fourths and fifths, stretch must be dealt with from the start. In addition, establishing sufficient stretch for the middle range at the outset obviates overstretched upper octaves.

Setting the temperament in a lower range (where beats are slower and easier to gauge), or using a two-octave temperament, necessitates tuning a second octave down from the fork note. A two-octave temperament scheme offers better control over the midrange stretch, letting one accommodate the temperament to the overall stretch and to the scaling "break," and (unlike a one-octave scheme) enables one to test all of the thirds and sixths.

Stretch also affects the relative beat speeds of test intervals in the octave tests. The overriding principle here is that regardless of how the tests may work out, all octaves and double octaves in the midrange should be beatless or very close to beatless on the wide side. Smaller pianos usually sound best when exact 4-2 octaves are tuned in the midrange down to about F33 or D30; this means that the thirds and 10ths in Test 2 will beat at exactly the same rate. For these pianos, exact 6-3 octaves can be tuned across the break into the bass; the m3rds and sixths in Test 5 will have identical beat rates. Only on poorly-scaled spinets will the third-10th test work out "backwards" with the third slower than the 10th. On large grand pianos the 10th can be a trifle faster in Test 2, and the sixth faster in Test 5, but if more than a very slow roll is present in the octaves they are overstretched. I keep stretch to a minimum on most home pianos, and even on concert pianos I aim for relatively clean octaves in the midrange unless the music to be played contains chords and arpeggios ranging over the entire keyboard. Not only are clean octaves more suitable for earlier classical music, but the resulting slower 10ths and 17ths in the upper register sound better, too.

Next month I shall discuss tests for assuring the accuracy of fourths and fifths. ■

Soundboard Thickness

Nick Gravagne
New Mexico Chapter

The March 1987 *Journal* in this series stated that further attention would be given to certain aspects of soundboard technology. To say that the treatment of soundboard thickness, mounting and downbearing is crucial in determining the quality of tone is not an overstatement. The handling, adjustment and setting of these items either in piano building or rebuilding can mark the difference between a superior and a lackluster job. This article is about soundboard thickness, the basic views held as to its function in tone control; and briefly, how rebuilders relate to it.

As mentioned in a previous article, perhaps no single piano component has received more experimental attention than the soundboard. The March 1987 *Journal* in this series pointed out the fact that soundboard thickness is an important factor in determining the tonal quality and quantity of a piano. Beyond the requirements of mechanical strength, there is almost infinite leeway for perimetrical shape, thickness, tapering, rib placement and crown of the piano soundboard. All of these factors have, for the most part, been experimentally determined over many years of piano building.

Regarding the thickness of soundboards, there are essentially three schools of thought which, although overlapped, are distinct. The first, which was predominant from the late 1800s to, say, 1930, could be referred to as the "resonant wood theory." Basically, this theory concedes that the soundboard cannot originate any tones but it can affect, magnify and modify their relative intensities. In light of this concept, the tone quality could be experimentally determined by matching just the right volume of wood at a particular place in the scale with the string frequencies. Of course, this approach requires building many pianos and altering the soundboard thickness in each until a decision is made that the tone quality has acquired some predetermined concept. It was long thought that the soundboard should be stiffer in the treble area than the bass. This belief prompted the customary practice of planing the board thicker in the treble (3/8") and gradually tapering toward the bass (1/4") and lower portions of the soundboard since short, stiff wood naturally vibrates at higher frequencies than does longer, thinner wood. Said another way, an increase in density and rigidity tends to produce a wave form which naturally manifests the higher harmonics. Furthermore, a too-heavy soundboard cannot vibrate fully with light playing while a too-light board will be

"

It was long thought that the soundboard should be stiffer in the treble area than the bass. This belief prompted the customary practice of planing the board thicker in the treble and gradually tapering toward the bass and lower portions of the soundboard since short, stiff wood naturally vibrates at higher frequencies than does longer, thinner wood.

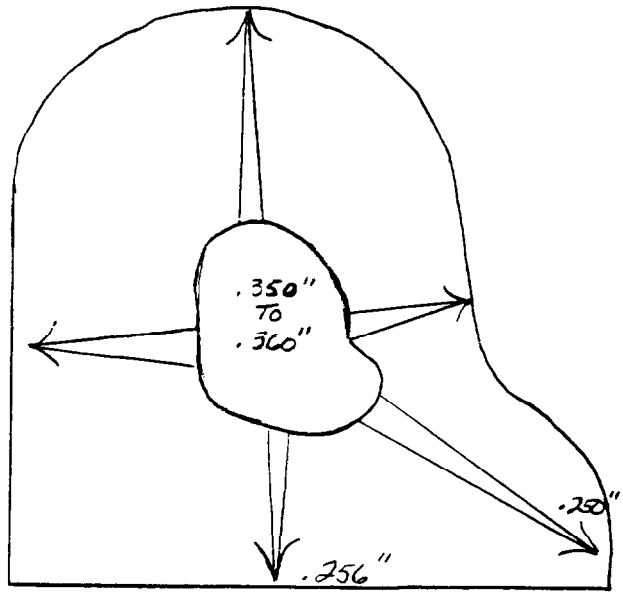
"

overpowered upon heavy playing. Again, a compromise in thickness grading seemed the only practical answer. Virtually all old upright soundboards have a soundboard based on this concept. See Figure 1 for a comparison of the diaphragmatic soundboard with an actual Knabe board from 1911.

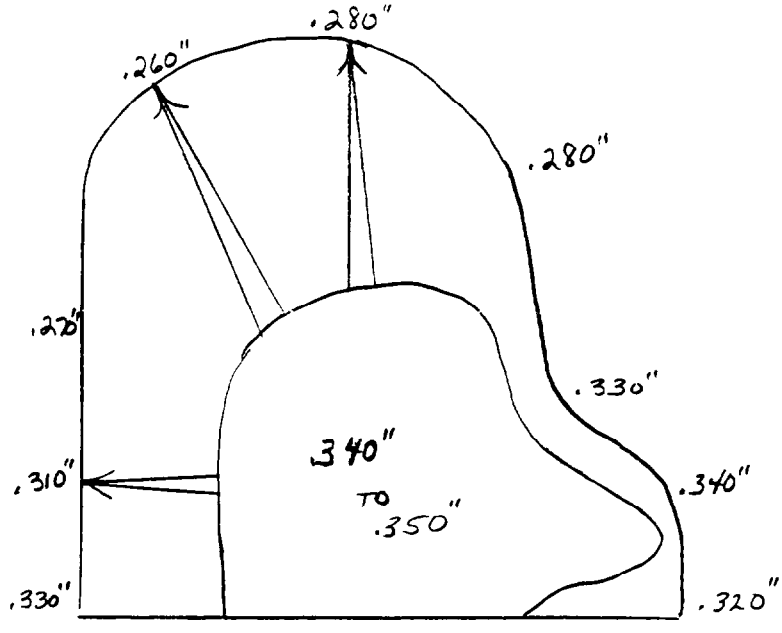
Although the general practice of the time, not everyone agreed that it was based on anything more than mere shop custom. Samuel Wolfenden in *A Treatise on the Art of Pianoforte Construction* says regarding the usual practice of his day, "...it might be proved that a much larger difference in thickness, and therefore in stiffness would be an advantage." The last statement, written in 1927, would be proved correct 10 years later (strictly speaking) in the diaphragmatic soundboard tests (see March 1987 *Journal*).

The educated hunch of Sam Wolfenden turned out to be the basis of the second school of thought, that, although spruce is a particularly resonant wood, good tone quality is more a function of a freely moving and essentially unimpeded soundboard. Such an approach aims to taper the board so as to allow maximum but controlled board movement rather than to match string frequencies to wood volume. The Steinway diaphragmatic soundboard is the fulfillment of this concept and, since it was covered in some detail in the March *Journal*, it will not be repeated here. An interesting additional comment can be added, though, by considering the piano's distant cousin, the violin.

Violin makers have proved that there is such a thing as a too thin soundboard. "Tuning the plates" (top spruce and maple back) of a violin involves adjusting their resonant frequencies to a semitone apart by thinning and contouring the plates. All materials have a resonant frequency; that is, they can be set into vibrational motion sympathetically when a tone generated from another source is coincidental. For example, a church organ tone could set some of the pews into vibration when the tone matches the resonant frequency of the pews. The violin back is usually made before the top soundboard. Thinning the top by gouging and planing lowers the resonant frequency of that plate and, if gone too far (below D♯ 310.55 Hz) the little soundboard has a weak tone which is hollow and booming in spots and shallow in others.



Diaphragmatic type (not to scale), thickest at center, thin edges



Knabe 5'8" from 1911

Piano soundboards are usually considered for convenience of discussion in an isolated fashion, that is that they are supposed to vibrate independently of other components such as the case, the plate and even, theoretically at least, the volume of air which exists between the top of the soundboard and the underside of the plate. In actuality they don't. The entire piano is thrown into a resultant vibratory mode upon playing, the net of all the individual modes set up by the many moving bodies. The object of soundboard design, then, becomes

an all encompassing problem, to take advantage of the resonant frequency of the soundboard (100 Hz, some think in the average size), the plate and case taken together, maintaining the relative importance of each, without any one becoming unduly prominent — an acoustical engineering high wire act! So, like the little violin soundboard, thin may be better but too thin may be worse.

As interesting as these facts may be, they are of little practical importance to general-practice technicians. To the soundboard replacers they do, however, raise some inescapable questions, the most obvious being, should the soundboard thickness be exactly duplicated or not? After discussing this topic with top-notch rebuilders (some with extensive factory experience in celebrated companies) there appears to be two points of view and, although this article doesn't seek to endorse either one, the differing views are briefly presented as food for thought.

One view holds that duplicating the original scale is the only option. The most important of the many reasons boil down to a few ideas. To arbitrarily alter the thickness could seriously jeopardize the mechanical strength of the board. Further, the manufacturer must have had a good reason for that particular thickness scale and changing it will certainly change the inherent tone quality of the instrument, maybe for the worse, prompting a complaint from the owner (if a contract job) who placed the instrument in good faith, in good hands for responsible rebuilding. And considering the many elusive acoustical factors which ultimately govern piano tone, such as the resonant frequency of the various components, such a decision could be flirting with disappointment. From a practical standpoint, certain other dimensions will impact, the primary one being the bridge height.

"Piano technicians are a rare breed of people living and working daily in the paradox of the piano. They seek definite answers in a sometimes indefinite medium and, in lieu of a concrete ruling on some aspect of piano technology, must form a responsible opinion all the while knowing that a respected colleague doesn't altogether agree."

The other point of view counters by stating that many old soundboards are too thick at the edges, especially in the high treble, and could stand some thinning. For support of this position they state that Steinway does so and that many grands have similar rib dimensions and string tensions as the Steinway. They will also state that they have done this on occasion and that the positive experience encourages them to continue to consider it. Naturally, this group considers many more technical and aesthetic points before deciding to replace a board of a different thickness/taper. It is a foregone conclusion, however, that if the 1934 Steinway (pre- diaphragmatic) needs a new soundboard it is going to get a diaphragmatic type. In light of Steinway's published material on this subject, they would argue that to replace the board with anything less would be a missed opportunity.

But these are subjective matters which could be more fully explored in another context. Certainly, those involved in such work not only possess a comprehensive knowledge of piano technology, but a consumate skill as well. Both groups heartily agree that any kind of rescaling is not a trifling matter but does have its place where an improvement seems likely or even possible. Piano technicians are a rare breed of people living and working daily in the paradox of the piano. They seek definite answers in a sometimes indefinite medium and, in lieu of a concrete ruling on some aspect of piano technology, must form a responsible opinion all the while knowing that a respected colleague doesn't altogether agree. Soundboard thickness is a perfect case in point and the wiser, more experienced craftsmen will say that the answer is not yet in. A very experienced rebuilder once remarked that he thought he knew more five years ago than he does today. The popular folk song/poet concurs in song, "...I was older then, I'm younger than that now."■

Early Viennese Pianos

Jack Greenfield
Chicago Chapter

Piano Building In Vienna Increases

As the piano swiftly rose in popularity in Austria and Germany after the introduction of an escapement action by Johann Andreas Stein, the business of piano building began to grow at a corresponding rate, just barely keeping pace with the rising demands. Much of this activity was taking place in Vienna where in addition to the shops of established Viennese builders, the number of businesses was constantly increased by the arrival of instrument makers from other areas coming to take advantage of the expanding Viennese market. Builders who remained in other areas of Austria and Germany also found enough regional business to prosper.

Construction of Early Viennese Pianos

The typical Viennese piano of the late 18th century was wing-shaped and narrow in width with a compass of five to five and a half octaves. Judging from the numbers still in existence, the Viennese builders made few square pianos. Casework was elegant with walnut, mahogany, oak and cherry wood most popular. Cases were decorated by carving, patterned wood inlays or painted scenes on the underside of the lid. The keys were cut carefully usually with ebony for naturals and bone or other light material covering for sharps. The Viennese pianos contained "bumping" actions or *Prellmechanik,* either copies of the 1773 Stein escapement action or the Walter modification introduced about ten years later. Some German builders, however, used actions of other design.

"

The typical Viennese piano of the late 18th century was wing-shaped and narrow in width with a compass of five to five and a half octaves. Judging from the numbers still in existence, the Viennese builders made few square pianos. Casework was elegant with walnut, mahogany, oak and cherry wood most popular.

"

The usual stops included mechanisms for raising the dampers — often divided so that the dampers in the treble and bass could be lifted separately — and mechanisms for sliding the action laterally so that only one string of a bichord and two strings of a trichord were struck as in modern pianos. Mechanisms for interposing strips of leather between the hammer and the strings or arrangements for bringing other materials into contact with the vibrating strings to change the tone were popular well into the 19th century.

Hammers were not much different than those of Cristofori's pianos. Some pianos had round hollow heads with soft leather pads on the striking surface on wooden instead of Cristofori's parchment cylinders. Solid wooden hammer heads, either covered with soft leather or uncovered, also were used.

Comparison of Music Wire
Diameters (Inches)

Octave	"Mozart" Fortepiano	Cristofori 1726 Piano	Modern Piano
C6-F6	.012	—	.035-.036
C5-B5	.0135-.0145	.011	.036-.038
C4-B4	.0145-.018	.013	.038-.041
C3-B3	.018-.022	.013-.016	.041-.044
C2-B2	.022-.030	.016-.020	.045-.047
F1-B1	.032-.034	—	—

Wire material: Brass for sizes over .020 in "Mozart" fortepiano and for sizes over .018 in Cristofori piano; steel or iron for others.

Scaling

While iron wire was available from German sources, British steel wire was preferred because of its greater strength and better tone. The treble was strung with steel or iron wire, the bass with steel or brass. The use of wound bass strings became more common late in the century. String length scaling was similar to the patterns in harpsichords. In the earliest pianos, in which it was desired to produce a harpsichord tone, strings were kept as thin as possible. In later pianos where a bigger sound was preferred, string diameter was increased. The table "Comparison of Music Wire" shows figures based on data from *Stimmbuch* by Nachersberg, published in Leipzig, 1804 and included in Appendix D in Harding's *The Pianoforte*. For comparison the table also contains wire sizes in the 1726 Cristofori piano and in a typical modern grand piano (*Journal*, April 1986, p. 25). The piano identified only as a "Mozart" instrument in *Stimmbuch* was evidently a Walter piano or a copy. *Stimmbuch* did not identify the builder of the harpsichord. The string sizes of two other "Forte-Pianos" of unknown make listed in *Stimmbuch* were smaller than in the "Mozart" piano and almost the same as in the harpsichord.

Prestige of Stein Pianos

Although there were improvements in some of the competitive pianos, Stein's instruments carried considerable prestige. Stein pianos were expensive and difficult to obtain. Stein, working in a small shop with several assistants, produced about 18 to 24 instruments per year, the average for most other instrument makers. The practice of patent protection had not yet come into existence, therefore there was nothing to prevent others from copying Stein's design. Stein was a good businessman and he was able to benefit financially from his outstanding enterprise by setting high prices for his instruments, about 33 to 50 percent higher than for similar instruments sold by competitors. False labeling with Stein's signature in instruments made by others was not at all unusual.

Walter Modifies Stein Action

Another builder who also exerted considerable influence on Viennese piano building was Anton Walter (1752-1826). Walter came from the Swabia region in South Central Germany where he had been born. He married a Viennese widow in 1780 after establishing a shop in Vienna. His stepson, Joseph Schoffstoss, later became a partner in the business.

Walter's modification of the basic Stein action provided more rapid hammer return and improved hammer check. In the Walter action, the escapement levers, tilted forward at an angle which can be adjusted, require less spring tension to be held in place. This allows the hammer to drop more rapidly into position for the next hammer blow. Walter's hammers were longer and larger. Instead of the rest post Stein used to absorb the hammer drop, Walter placed a check rail in front of the hammerheads to catch them after they dropped from the strings and hold them as long as the keys were held down. Pfeiffer's drawings "German action" shows the basic Stein action and "Viennese action" shows an action based on Walter's principles (*Journal*, January 1979, p. 13-16).

Walter installed thicker sound boards and heavier bridges than Stein. Stein's instruments were clearer in tone and more responsive but not as loud.

Among the examples of Walter pianos still in existence, except for one or two earlier ones with hand-operated levers, the dampers are raised by knee levers. The pianos, double-strung up to the top octave or slightly lower, and triple-strung above, have a compass of five octaves F1 to F6 or two notes higher to G6. Since Walter did not sign and date all of his instruments, the chronological order of the slight design changes he made and existence of unidentified unsigned Walter pianos are uncertain.

Mozart's Walter Piano

Besides the high regard for the merits of the instruments he built, Walter also gained prestige from Mozart's purchase of a Walter piano after settling in Vienna in 1781. Earlier keyboard instruments owned and played by members of the Mozart family included the small portable clavichord bought from Stein in 1763 and several larger instruments from Friederici. Records show Leopold Mozart ordered a Friederici harpsichord in 1770. Two clavichords still in existence are believed to have been made by Friederici and owned by the Mozarts. One of these clavichords, unsigned, is on display in the Mozarteum, the museum in the former Mozart family residence in Salzburg. The other clavichord,

Figure 1: German "Bumping Action" — Johann Andreas Stein — 1773

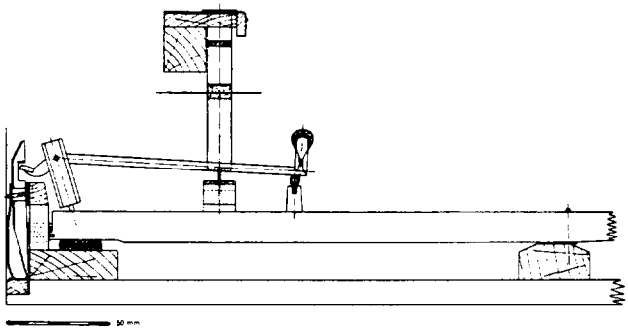
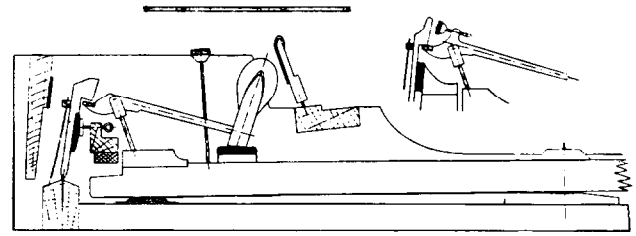


Figure 2: Later Viennese "Bumping Action" with Walter modifications.



dated 1772 and once owned by Franz Liszt, is on display in the Kunsthistorisches Museum, Vienna. Mozart family correspondence discussing the purchase of instruments from Friederici mentions the professional jealousy between Stein and Friederici. Before he played the Stein pianos he praised, Mozart is known to have been familiar with Spath instruments and a square piano made by Christian Baumann, a builder in West Germany. The Baumann piano was purchased in 1779 by Mozart's employer, the Prince Archbishop of Salzburg.

It is ironic that when Mozart decided to buy a piano for himself in Vienna, one reason he did not get one from Stein may have been Stein's high price. Mozart's correspondence with his father before the purchase shows his high esteem for Stein pianos but indicates his father disapproved because they were too expensive. Regardless of whether cost played part in the decision, another factor may have been the availability of service from Walter in Vienna. Mozart had Walter attach a specially built foot-pedal damper system. At that time Viennese pianos still used knee lever systems.

Even though the aristocrats for whom Mozart played private engagements may have had pianos in their big houses, Mozart usually brought his own. The long narrow all-wood instrument was not too difficult to transport around Vienna.

It is believed Mozart's Walter piano remained with his wife after his death and was passed on to their son Carl Thomas (1784-1858). Carl Thomas studied piano with Dussek and is supposed to have shown talent. He became an Austrian government official instead of professional musician, however. A younger son, Franz Xavier Wolfgang (1791-1844), had limited success as a pianist and composer. In 1856, Carl Thomas donated the unsigned, undated piano on display in the Mozarteum, Salzburg. The piano, restored to playable condition in 1936 by a technician, Ruck, in Nuremberg, serves as a model for builders of copies of historic instruments.

Haydn's Choice And Criticism Of The Walter Piano

Haydn did not share Mozart's high regard for Walter pianos. In 1788 he bought a piano from another prominent Viennese builder, Wenzel Schantz. Wenzel was in partnership with his brother Johann who continued the business after Wenzel's death in 1791. Soon after acquiring his piano, in response to a friend's request for advice, Haydn recommended a Schantz piano. He also commented, "It is true that my friend Mr. Walter is very celebrated and that every year I receive the greatest respect from that gentleman but...speaking frankly, sometimes there is not one instrument in ten of his that you could describe as really good." Haydn's primary objection was the heavy touch of the Walter action, he considered the Walter piano excellent in some other respects.

The *Yearbook of Music in Vienna and Prague* published in 1796 in Vienna also had praise and criticism stating that the Walter "forte pianos have a full bell-like tone... and strong full bass." However, comments on variations in tone quality in different pianos were "with some the bass is too full for the treble, with others it is too strong and with still other it is metallic." It was also noted that a sharp metallic tone developed after a great deal of playing. This could be corrected by replacing the leather coverings of the hammers.

Haydn sold his piano for a good price a few years before his death. What happened to it later is not known. There are no surviving Wenzel Schantz pianos but some built by his brother Johann are owned by collectors and are used in early piano performance of Haydn compositions.■

ECONOMIC AFFAIRS

What is Your Real Profit?

Janet Leary
Economic Affairs Committee

What is your yearly income? How much money do you earn an hour after expenses? How do you determine a price increase is needed? For the small businessman, the answers to these questions can be clouded by the fact that at the end of each week's work to help determine those answers. Instead, revenue is received, expenses are paid — and what's left is weekly income or profit. Depending on incoming expenses, this "profit" figure changes from week to week.

If you have not come to grips with determining your actual expenses you may find that you are operating in a situation of "crisis management" — having to make do with inefficient tools, inadequate inventory on hand for repairs, borrowing tools or supplies from other technicians, no retirement plan, no disability plan, and financially not quite making ends meet. Operating in this uncertain environment can be extremely frustrating and limiting.

How can we resolve this problem? By creating a *target budget* based on your past expenses and your desired goals. A budget is especially critical in our profession. Without an idea of your costs, how in the world can you formulate prices for your service? It is understood that the market and your competition will generally put a ceiling on your pricing. What you as the technician have to determine is what pricing policy you need in order to show a profit and pay your expenses. Like anything else, however, you have to invest some time, determination and patience. The result will be a more realistic comprehension of your actual income and expenses, resulting in less stress in the long run.

"What you as the technician have to determine is what pricing policy you need in order to show a profit and pay your expenses. Like anything else, however, you have to invest some time, determination and patience."

First of all, in this article, I will explain your primary goals as a manager — planning and control — and explain how the budget (as a cost accounting tool) fits into this process. We will then review an actual budget. As you read the article it would be helpful to take out a sheet of paper and create your own budget based on this model. In order to come up with expense targets, your 1986 tax return may provide you with much of the information you need. Keep in mind that this budget is a target budget, a target is something we make happen, not simply an estimate of what we expect to happen. The difference between target and estimate incorporates strategic planning, or career goal planning into the budget.

There are basically two major management functions, planning and control. *Planning* is the process of realizing your organization's external opportunities and threats, creating objectives accordingly, and deploying resources to match the objectives. *Control* is the force that guides you in achieving objectives by comparing performance with the predetermined goals and decisions. Without planning there is

no basis for the control function, and without thorough cost analysis the planning function is invalid since planning is based on facts collected and analyzed pertinent to each individual business.

Cost accounting furnishes you with the necessary accounting information to plan and control business activities. In the planning phase, cost accounting is future oriented, it helps in the process of budgeting for the future. This is called strategic planning. In the control phase, cost accounting deals with the present by comparing current results with predetermined standards and budgets. More specifically, cost accounting:

1. Establishes cost methods and procedures.
2. Aids in planning profit by means of budgets.
3. Creates pricing in relation to inventory.
4. Measures revenue and expenses, profit or loss.
5. Provides cost information to help choose between decision alternatives.
6. Assists in establishing overall pricing policy.
7. Helps in controlling costs.

What are *budgets?* A budget is a plan that:

1. Sets targets for revenues and expenses.
2. Increases the likelihood that goals will be reached.
3. Provides opportunities to formulate and evaluate options when obstacles arise.

Operating expenses should be divided into two categories:

1. Controllable
2. Uncontrollable — expenses you have no control over such as unexpected auto repairs, repairs or replacement of a costly tool, hospital bills, etc. If you know which areas of your budget include uncontrollable expenses, you can allocate more money to that area.

Let's now look at a sample budget. The following budget is for a sole proprietor. Of his income, 67.5 percent is from piano tuning, while the remaining 32.5 percent is from rebuilding and action restoration. Included in "cost of goods sold" is subcontract soundboard replacement, key recovering and miscellaneous materials costs. Salaries to employees include paying part time office help $6.50 an hour, 15 hours a week. Mr. X puts 20,000 miles a year on his business vehicle, and buys a new auto every four years. In order for him to attain this income level, the average weekly work week is 60 hours. No vacation pay allowance is paid. When he works, income is earned; when he doesn't work, no income is earned. This model is purely hypothetical, merely for the sake of example, and is not meant to be a recommended pattern of expenses or revenues.

Net sales	**$50,000**
-Cost of Goods Sold	**(5,500)**
Gross Profit	**$44.500**
Operating Expenses:	
Salaries to employees	5,000
Utility costs	1,000
Telephone	1,000
Automobile expenses*	6,000
Advertising	1,500
Legal or Accounting	200
Insurance	3,000
Rent	2,000
Interest Expense	0
Office Supplies	300
Professional Dues & Fees	150
Pension*	200
Tools & Equipment	2,000
Seminar & Meeting*	1,500
Inventory Expense	500
Contingency Fund (Included in * accounts)	
(Total Operating Expenses)	(26,850)
Net Income before taxes	17,650
(Taxes)	(3,500)
Net Income after taxes	**14,150**

Let's go over some of the categories listed in the budget for futher clarification.

Net Sales — All sales minus any returns, allowances or applicable discounts such as two percent net 10 days.

Cost of Goods Sold — This category includes:
1. Indirect materials, shop supplies such as sandpaper, lacquer, glue, etc.
2. Direct materials, pinblocks, strings, hammers, etc.
3. Other indirect costs, overhead to keep your shop running such as heating, lighting, maintenance and repairs, etc.

If you have a shop with employees you would also include:
1. Indirect labor, secretary or bookkeeper.
2. Direct labor, employees working on pianos.

Gross Profit is Net Sales minus Cost of Goods Sold.

Operating Expenses generally include marketing and administrative expenses. Whatever you did not include in the Cost of Goods Sold category you will include under operating expenses. If your business does not have a significant shop you may decide to completely forego with the Cost of Goods Sold category and simply include all your costs under Operating Expenses. Some of the categories under Operating Expenses may be repetitive because of this difference in business types. Decide which portions of this model work best for you. Your budget system must be easy to use and tailored to your specific needs, otherwise it's useless.

Automobile Expense includes maintenance of vehicle, gasoline expense, auto insurance, parking, tolls, and a contingency fund for replacement and repair of the auto. I am patterning this expense category after the way we handle our auto expense. In our business the auto expense is a rather large category that needs to be watched. As the vehicle gets older there are always unexpected repairs which can be costly. We set aside a separate bank account for auto expense. Every week a set sum is deposited to that account as if it is a bill that must be paid. The amount deposited is determined by the following formula:

(Annual repair costs) x (Years of use) + Total cost to replace auto)

If annual repair costs equal $2,000, you wish to replace your auto in four years and your next auto will cost $15,000, you will need to accumulate $23,000.

Four years x 52 weeks per year = 208 weeks of total auto life $23,000 divided by 208 = $110 per week deposited in the contingency account.

You may not want to pay cash for your auto. You must then include your monthly auto payment or lease cost into this expense account, because this is the account where all auto expenses will be drawn from.

Advertising
1. Phone
2. Other

I separate Yellow Pages advertising costs from the phone bill. Why? Because I ask all clients who wish to schedule an appointment, "Who referred you to us?" I then total all Yellow Pages referral income for the year, and divide the total by phone advertising costs to see if the return warrants the expense. This helps me choose the size of ad for the upcoming year.

Insurance
1. Life
2. Disability
3. Tool
4. Liability
5. Health

Many self-employed people mistakenly think that their insurance costs are personal costs, not business expenses. If you work for any reputable company that is concerned about keeping their employees, you will find that a limited life insurance policy, disability insurance and partial or total health insurance is provided. When those employees take home their paycheck they do not have to pay these costs.

Also, many novice piano technicians think they're making a bundle when they take home their tuning checks. Many times, they neglect to provide themselves with proper insurance because it's costly. There comes a time when parents are no longer there to provide for catastrophic upsets, and you are on your own — that's where insurance and hospitalization comes in. Insurance is a business expense. You are entitled to make an income level to cover this expense, if you are not, it's time to review your pricing policy.

Office Supplies
1. Postage
2. Miscellaneous paper, pens, etc.
3. Large purchases, copier, computer, software

Pension

Just as many insurance expenses are paid by the employer, so are many pension plans. Often, employer-paid plans are not sufficient, so the employee supplements the plan. You have to determine a reasonable and steady yearly amount to put into a pension fund.

This is another area where you may want to set up a separate bank account and put aside a weekly budgeted amount for pension costs. At the end of the year the funds can then be transferred into an IRA or appropriate pension fund. Below you will find some guidelines. In the following charts there are six plans, a 10-year plan, 20-year plan and a 30-year plan with contributions of $1,200 or $2,500 a year. All the plans are based on compounding quarterly and depositing into your pension plan four times a year. You will notice the interest rates range from six percent to 12 percent. Besides market interest, the vehicle you place your IRA in will help determine your average long-run interest rate. The choice is yours from mutual funds to bank certificates of deposit.

10 Year Plan — Yearly Contribution = $1,200

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	300	300	300	300	300	300	300
Future Value	16,280	17,710	18,120	19,135	20,220	21,380	22,620

10 Year Plan — Yearly Contribution = $2,500

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	625	625	625	625	625	625	625
Future Value	33,917	35,771	37,751	39,866	42,126	44,542	47,125

20 Year Plan — Yearly Contribution = $1,200

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	300	300	300	300	300	300	300
Future Value	45,813	51,538	58,131	65,735	74,514	84,663	96,408

20 Year Plan — Yearly Contribution = $2,500

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	625	625	625	625	625	625	625
Future Value	95,444	107,371	121,107	136,948	155,239	176,333	200,851

30 Year Plan — Yearly Contribution = $1,200

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	300	300	300	300	300	300	300
Future Value	99,386	120,328	146,477	179,213	220,297	271,974	337,109

30 Year Plan — Yearly Contribution = $2,500

Interest Rate	6%	7%	8%	9%	10%	11%	12%
Qrtly. Payment	300	300	300	300	300	300	300
Future Value	207,055	250,685	305,151	373,361	458,953	566,614	702,312

Tools and Equipment
1. New small tools ($35 or less)
2. New large depreciable items (drill press, etc.)
3. Replacement or repair of worn or broken tools

As mentioned earlier, do not double-count these expenses if you are placing them already under Cost of Goods Sold. Regardless of where you place the expense, I feel you should set up a contingency fund for tools and equipment. The amount will depend on your particular situation; ie. if you are planning to expand your services and need new equipment, in contrast with setting aside funds to occasionally buy a new tool at the next seminar or replace worn small tools.

Seminars and Meetings
1. Registration costs
2. Food & Lodging

Attending seminars is a cost of doing business. You must continue to learn in order to give your clientele the value they deserve and expect. Since Guild seminars are

the only way to obtain this information you should set aside a reasonable amount of funds per year so you can attend these functions.

Inventory Expense
1. Ordering Cost
2. Carrying Cost — how much it costs you to carry inventory.
3. Cost of replenishing items taken out of inventory and used in work in process.

Contingency Fund

You can choose to set aside one account for contingencies or have a separate account for each area of contingency as we do. The advantage to separate accounts are well defined totals for each expense area. If you know the amount per week that must be earned to pay all bills, and deposit the proper amounts in your contingency accounts to meet your targeted goals, your bookkeeping is very limited, and you are alerted to problems with your budget whenever those deposits can't be made. In our example the accounts with asterisks are accounts that include contingency funds.

NIAT

Total all Operating Expenses and deduct them from Gross Profit. This is NIBT, or Net Income Before Taxes. You now can deduct any taxes levied on your business such as applicable property taxes or sales tax. Deduct these taxes from NIBT and you now have NIAT or Net Income After Taxes.

The final computations for our example are as follows:

60 hrs. x 50 work weeks per year = 3000 hrs.
$14,150 divided by 3000 hrs. = $4.71 per hour

After drawing up a budget model, it may take a year or two to finally pinpoint all your contingency areas and get the budget running smoothly. Make sure you set realistic targets. If you don't, you'll never adhere to the targets and blame the budget instead of your own incorrect planning and forecasting. I hope this article has been of some assistance to you. For those of you who try out the budget system, let me know your results. See you in Toronto! ■

AT LARGE

The Group

Donna R. Byrd
Eugene, OR, Chapter

During the 1986 summer convention in Las Vegas people were seeking ways of keeping people interested in using their home pianos — if for no other reason than continuing their interest in having them properly maintained. I'd like to tell you about an informal group of piano players in Eugene, OR, who fit that description because piano technicians are in an advantageous position to spark interest in similar groups.

Several years ago, four or five women were talking over coffee about their piano lessons; their fear of playing for others — whether family, friends, or teacher; the fact that they were spending a fair amount of money for lessons; spending hours of practice time and not seeming to get anywhere. While they were all playing "for their own enjoyment," none were certain they were enjoying it. And of course, they all "knew" they played better at home than at their lesson.

The upshot of the conversation was a decision to get together, have lunch and play for each other. I was not in the original group so I don't know how the first sessions went, but they were apparently successful enough that one of the players seeing me in the grocery store asked me to come and join in their misery — the only condition being that if you come you must play.

It took three months to get the courage to attend one of these musicales. Finally, one very memorable day I headed out with ears ringing, sweat dripping, and hands shaking, to play a Joplin Rag. I was met by a jovial group and a glass of wine. Three hours and several glasses of wine later I made my way to the piano. Unlike Victor Borge, I can't say "they laughed when I sat down to play." No one could possibly have recognized that it was even a rag that I was playing but I was determined to make it all the way through every last repeat. After all, if I ever play again, improvement would be immeasurable.

And I did go back. My playing improved and my interest in music increased. Over several years the group has grown, the group has no name, no dues, no officers, no official meeting schedule, no fixed membership — just regulars. The group has defied all attempts at organization. We do

refer to it as "the group," and facetiously as "Piano Players Anonymous." But not all the players are unknown. One comes when she's preparing a recital and wants a critical warm-up audience. A couple of the men are graduate music performance majors. Some have played for years but remained anxious in spite of obvious accomplishment. And there are beginners.

While we have no officers, an instinctive historian among us has kept a program journal. What hasn't always been recorded are the numbers by people who feel most comfortable playing "when no one is really supposed to be listening," i.e., "Before everyone gets here I'll just try out my piece on this piano," or "You all go get coffee and I'll play while you're moving about."

A few have assumed that we would want only classical music — not so. The important point is that everyone plays. We're a large enough group now that we no longer say you must play everytime. But we do want participants — that's what puts everyone on equal footing. Our most recent participant described the group as one with an underlying feeling of striving for excellence in an atmosphere where it's all right to make mistakes.

The fact that we have regulars demonstrates that people are really enjoying the music that they are making. Anxiety has been reduced by simply playing, by playing duets, two-piano numbers and accompanying another instrument upon occasion. To get over the feeling of playing best on your own piano in your own private area we trade off hosting each other. A couple have teaching studios. Once in a while I have two pianos in the same room that are both in playing condition at the same time. We have also met at local piano dealers and were welcomed back. And one member has been asked to host more than her share of the time because everyone wants to play her Steinway B.

"The group has defied all attempts at organization. We refer to it as 'the group' and facetiously as 'piano players anonymous'...One recent participant described the group as one with an underlying feeling of striving for excellence in an atmosphere where it's all right to make mistakes."

Socially this group is great. It's also a boost to the music community. My involvement meant earned income for a couple piano teachers, precipitated my career choice, created a desire for a finer instrument, led to purchase of a grand piano and provided me with an immediate outlet for sale of my upright. It also meant that several people who might have had a lax attitude about having their pianos tuned actually enjoy playing their pianos well enough that they are interested in keeping them maintained.

While I did not initiate this group I have helped them keep it alive by bringing in new members I've met while tuning. They in turn have brought friends. Obviously I can't invite everyone that I work for to participate in this group but I do talk about its existence when I am asked how to keep someone's interest in piano playing. And I am beginning to put people in contact with each other who might enjoy playing together. Variations of the musicale idea are used by many teachers but one of the strengths of our group is tht none of the players' instructors are present. Some are teachers but they are simply playing participants there "for their own enjoyment" and to allay their own fears.

You as a technician may not be a virtuoso pianist, nor do you need to be to host such a group as this. It's less inhibiting if you're not a gifted pianist. Just get the people together and have fun.■

Calendar Of Coming Events

Date	Event
* July 20-25, 1987	**30th Annual Piano Technicians Guild Convention & Institute** Constellation Hotel, Toronto, Ontario, Canada Home Office; 9140 Ward Parkway; Kansas City, MO 64114; (816) 444-3500
July 24-26, 1987	**International Association of Piano Builders and Technicians Biannual Conference** Constellation Hotel, Toronto, Ontario, Canada Home Office; 9140 Ward Parkway, Kansas City, MO 64114; (816) 444-3500
Sept. 19, 1987	**Connecticut One-Day Seminar** Sohmer Piano Co., Ivoryton, CT Vivian Brooks, 376 Shore Road, Old Lyme, CT 06371 (203) 434-0287
Oct. 2-4, 1987	**Florida State Assembly of the Piano Technicians Guild** Orlando, FL David G. Taylor; 1909 Mae St.; Orlando, FL 32806; (305) 898-9266
Oct. 9-11, 1987	**Ohio State Conference** Greater Cincinnati area Jack Krefting; P.O. Box 16066; Ludlow, KY 41016; (606) 261-1643
Oct. 16-18, 1987	**Texas State Seminar** Hilton Hotel, Wichita Falls, TX Jimmy Gold; 2101 Walnut; Duncan, OK 73533; (405) 255-5804
Nov. 6-8, 1987	**North Carolina Conference** Black Mountain, NC Jeff Owens; P.O. Box 903; Shelby, NC 28150; (704) 482-7119

Associate With The Guild!

Democracy In Action!

Ron Berry
Vice President

With the Toronto Convention and the Council meeting approaching, I am reminded of our duty and right to participate in the running of PTG. PTG is one of the most democratic organizations I have ever been associated with, sometimes even to the detriment of efficient operation. In our dealings in the past with management companies, we have found that they are always surprised at how much the average member of PTG wants to participate in running the organization. Typically associations hire a management company to take over running the whole organization so the officers and members don't have to bother with it. You can imagine the surprise of a staff used to dealing with that kind of organization when they came to their first Council meeting.

But just as in any democracy, members must participate in the decision-making process. The Council session is one of the places to do this. But where do items for Council discussion come from? They come from chapters. The chapters are truly the heart of this organization and the ideas that come from them become bylaws amendments or other proposals for Council. This means that your participation in your chapter is important. Your ideas can carry much more weight with the whole organization than you think they do. Sometimes it's easy to just let someone else take care of business, but the Guild will be better for having input from all its members. Be sure that your chapter will be represented by a delegate in Toronto. Last year in Las Vegas 67 percent of the chapters were represented. We should see at least that representation this year.

Be sure that you discuss the Council issues in your chapter and inform your delegate of your chapter's wishes. The bylaws amendments appear in the May *Journal* and your chapter will receive one agenda book for the delegate. Many chapters circulate this agenda book before leaving it with the delegate. Extra copies of the agenda book are available from the Home Office at a fee to cover printing costs.

A healthy democracy depends on active participation and informed decisions. Make sure that you and your chapter can provide both so that the Guild will be the best organization that it can be.

NEW ASSOCIATE MEMBERS DURING APRIL, 1987

REGION 1

Boston #21
Joseph Tompkins
8 Lucy St.
Stoneham, MA 02180

Richard Friedman
570 Grand Street
New York, NY 10002

Raymond Davies
123 Orchard St. Apt. #43
Somerville, MA 02144

Rhode Island #29
Karin Butler
17 Cononchet Trail
E Greenwich, RI 02818

Connecticut #64

Ross Anderson
12 Edgewood Rd.
Monroe, CT 06468

Robert Morss
2580 Main St. Apt A14
Stratford, CT 06497

New York City #101

Frank Martenez
2 Grace Court Apt 2V
Brooklyn, NY 11201

Lehigh Valley #180

David Godiska
Box 412C Rd. #2
Northampton, PA 18067

Mark Leitzel
217 1/2 N. Fulton Apt 3
Allentown, PA 18102

Philadelphia #191

Donald Roberts
617 N. Monroe St.
Media, PA 19063

REGION 2

Baltimore #212

Barry Sidle
236 E 25th ST
Baltimore, MD 21218

Charlotte #282

William Baker, Jr.
P O Box 254
Kershaw, SC 29067

SW Florida #337

Albert Hirsch, Jr.
805 SO Rome AV
Tampa, FL 33606

REGION 3

Oklahoma #731

David Bonham
8104 N Brookside DR
Oklahoma City, OK 73132

Texarkana #755

Joe Starr
302 S. Pine
Nashville, AR 71852

Austin, TX #787

Bernard Mollberg
508-C East St. Elmo Rd.
Austin, TX 78745

REGION 4

Indianapolis #461

Clyde Robertson
325 W. Jefferson ST
Winamac, IN 46996

Robert Eichhorn
426 W. Howard
Muncie, IN 47305

Western Michigan #493

Robert Hurd
230 W. Main
P O Box 405
Spring Arbor, MI 49283

Chicago #601

Michael C. Gutowski
37 Rockford Ave. Apt 1
Forest Park, IL 60130

Terence Boyle
1871 W. 108th Pl.

Chicago, IL 60643

John Beardsley
415 Elm Ave.

Geneva, IL 60134

William Carpenter
1350 N. Central Ave.
Chicago, IL 60652

REGION 5

Siouxland #511

Mildred Hensch
RR2 Box 128
George, IA 51237

Kansas City #641

Michelle Goodson
2209 Granite Ct.
Blue Springs, MO 64015

Ozark, MO #653

Bonnie Presley
Rt. 1, Box 95
Willard, MO 65781

Boulder #803

Kurt Blumberg
2300 W. Horsetooth Rd.
#202
FT Collins, CO 80526

REGION 6

Santa Barbara #931

Robert Ballenger
4855 Kodiak Ave.
Santa Barbara, CA 93111

Monterey Bay #950

Larry W. Leeder
PO Box 614
Santa Cruz, CA 95061

NEW AFFILIATE MEMBER

Roger Bumpus
Viale Piave 41
Brescia, Italy 25123
(Affiliate)

RECLASSIFICATIONS

REGION 2

Charlotte #282
William Alexander
10075 Hickory Ridge Rd.
Harrisburg, NC 28075

REGION 3

Oklahoma City #731
David Bonham
8104 N Brookside Dr.
Oklahoma City, OK 73132

Dallas, TX #752
Richard Brown
6647 Hunters Ridge Dr.
Dallas, TX 75248

Northwest Texas #791
Charles W. Robinson
1141 Elmore
Borger, TX 79007

REGION 5

Calgary, AB #001
John A. Musselwhite
3820 12 Street SW.
Calgary, AB
Canada T2T 3P2

REGION 6

Montana #594
Bruce Waller
Box 752
Lewiston, MT 59457

Howard Zuidema
Box 594
Conrad, MT 59425

Santa Barbara #931
Blake Richardson
1639 Nipomo St.
San Luis Obispo, CA 93401

Seattle #981
Susan Proctor Willanger
3823 54th SW.
Seattle, WA 98116

The Auxiliary Exchange

President's Message

I covered most of next month's program for the Toronto Convention in previous issues, but one of the most important to PTGA members and non-members alike will be the program to be held at 10:00 a.m. Thursday, July 24. This program, to be moderated by **Julie Berry,** has been labeled "Reorganizational Class." Given more time for reflection, I think a more appropriate title might be "Revitalizing PTGA." That describes more accurately what the purpose of this meeting is: a discussion of ways and means of developing a more efficient organization and increasing membership and participation.

If we are to continue justifying our existence, the steadily decreasing membership **must be reversed.** We need to get a handle on what it is that we are doing, or failing to do, that seems to make membership in PTGA so unattractive to so many people. It certainly can't be the cost! If you are coming to Toronto and are among the many who are not PTGA members, come and give us your input. We need to know just what kind of organization **you both want.**

Since the distribution of the March *Journal* (this being written March 28) I have received three letters from spouses, living in remote areas of the country. Their spouses belong to PTG but because of the traveling distance, attend very few meetings. Each one admitted they had never attended and therefore had no connection or contact with any Auxiliary members. After reading the March President's Message, where I offered to send brochures to anyone interested, they contacted me and I sent both brochure and membership application to each. This may be only three new members, but two are planning to attend the Toronto convention and they will go home with positive reports to pass on to other non-members and many new friends. Somehow, we must find a way to reach the other non-members and to encourage them to see for themselves what a viable and worthwhile organization we have.

In Las Vegas last year, we had 54 non-members registered. If each spouse registered would plan to attend Julie's meeting maybe some of these questions can and will be answered. Once we are aware of what you want, we will as a board and council be more able to implement them.

— Ginger Bryant

The **Nominating Committee** *has completed their assignment and the following slate of officers has been submitted and recommended for your consideration in the 1987-1988 election of officers to the Piano Technicians Guild Auxiliary:*

President: **Ginger Bryant**
Vice President: **Deanna Zeringue**
Recording Secretary: **Helena Thomas**
Corresponding Secretary: **Bert Sierota**
Treasurer: **Kathryn Snyder**
— Editor

From Our Mailbag...

From Houston, TX, a little note arrived with greetings to all from **Ruth Pollard.** It had been her intention to send the following verse to each member of the Auxiliary, but her budget did not allow, so we are having it printed on our page:

Ode to PTGA

The sun now lengthens
Our daylight each day,
It makes our work lighter
More time to display-
Our Auxiliary's value
To each "piano man"
So, let us work gladly
For success of our band.

Many thanks to you Ruth, our regional Sunshine Committee coordinator.

It was good to receive a little note from **Marge Evans,** herself, recounting her full recovery from surgery done last February. Marge is looking forward to seeing everyone in Toronto!

A friend sent an amusing piece which recounts another aspect of the world of music. From the mouths of babes, these items were taken from essay and test questions written by elementary students, reprinted courtesy of *Crescendo,* the Newsletter of the Kodaly Association of Southern California.

Baroque Music is music written by needy musicians.

A *tuba* is much larger than its name sounds.

Encore is what the audience gets if they are unruly.

Agnus Dei was a woman composer famous for her church music.

Virtuoso is a musician with real high morals.

My best liked piece is the *Bronze Lullaby.*

Dirges are music written to be played at sad occasions, such as funerals, weddings and the like.

Refrain means don't do it! A refrain in music is the part you better not try to sing.

You should never go past *Fine* more than once. When anybody gets to a good stopping place like *Fine,* he should know enough to stop there and end.

Frederic Chopin had many fast friends. Among the fastest was Miss Sand. Soon his reputation grew as long as his arm, stretching all the way from Warsaw to Paris.

WELCOME

New members to the Piano Technicians Guild Auxiliary:

Suzanna Vandervalk (Alexander)
13 Willis Court
Robina Parks, Queensland
Australia 4226

Kathleen Booth (Clare)
Box 158
Spiritwood, SK,
Canada S0J 2M0

Sandra Wilson (Harry)
2519 Thrasher Road
Buford, GA 30518

Leigh Ann Hale
13 E. Imboden
Decatur, IL 62521

Juanita Melton (Eddie)
4525 W. Quail Hollow
Lake Charles, LA 70605

Dorothy Neie
P. O. Box 3058
Pineville, LA 71361

Laurie Snitchler (Charles)
21770 Cunningham
Warren, MI 48091

Sharon Champine (Calvin)
2145 Dalesford Drive
Troy, MI 48098

Pansy Wildman (John)
242 Robin Hood Lane
Troy, OH 45373

Jean Carraher (Thomas)
1502 Mill Road
Elizabethtown, PA 17022

Mildred Goetsch (Lawrence)
4301 S. Kelley,#6
Denison, TX 75020

Dolores Falconi (Richard)
154 Coach Road
Houston, TX 77060

Brenda Hallmark
1401 Beverly Drive
Richmond, VA 23229

Exchange Editor:

AGNES HUETHER
34 Jacklin Court
Clifton, New Jersey 07012

"What is a Cajun?"

It is without question that every time we are away from South Louisiana to attend a meeting or seminar, we will be asked, "what is a Cajun?" We live in and are a part of the culture, but it is hard to give a short definition of just what a Cajun is, because it encompasses so many heritages, ethnic backgrounds and religious beliefs.

The term "Cajuns" is a corruption of the word Acadians. Acadians from Nova Scotia, Canada were not welcome in many of the ports in which they landed in the 1750s after being banished from their homes by the English. Expelled from Nova Scotia, they finally settled in the frontier land of South Louisiana. Here they were free to start a new life.

It was not an easy life in the undeveloped frontier land of Louisiana, and those who settled here had to work hand in hand. The French, Spanish, German, Indian and Acadian all played a major part in the development of the culture we have now, that is called "Cajun." As Zeringues, we are Cajun, but the Zeringue name is not Acadian, it is German. Michael Zeringue came to New Orleans on a ship in 1726, as a carpenter, to help build New Orleans.

The Cajun language for the most part today is English, though some from other parts of the United States might not agree, and unfortunately the French language which was spoken widely in the Cajun culture is being lost. Not many young people today still speak the French/Acadian language. All of the native languages which were brought here changed as new words were created for plants, trees and animals which were not familiar to the new settlers. Words and terms of the various languages were learned by the settlers and sometimes mispronounced or misspelled, thus resulting in the Cajun language we have today.

Even family names were mispronounced and sometimes misspelled. Many of the early Cajuns did not know how to read or write, and in marriages the priests would write down the name phonetically which resulted in variations of the names of the people who settled in South Louisiana. For example, Zeringue is spelled five different ways, and all the Zeringues are descendents of one individual. There is some evidence that the Zeringue name is not the correct spelling, but should have been spelled with an "S," possibly 'Sheringe.' The name Zeringue was written by hand on a marriage license in French by the priest at St. Louis Cathedral in New Orleans, who officiated at the wedding of Michael Zeringue in 1728.

It is written, and it is very true, that Cajuns like plenty of pepper and seasoning in their food, shrimp in their nets, neighborliness in their neighbors, and love in their homes. Cajuns like to dance, laugh and sing, and are very proud of their heritage. They are very tolerant people and will let the world go on by, if the world will let them go on their way. A Cajun will give you the shirt off his back, but do not cross a Cajun unless you want trouble. A Cajun will work as long and as hard as anyone, but when the work is done, it's time to let the good times roll.

Cajun country has produced some of the best food in the world. An abundance of seafood is available year round in South Louisiana to enhance the Cajun recipes, and Cajun food has become known throughout the country. People who have visited our Cajun country talk about many things, but the good food seems to top the list.

If you have a chance to visit Cajun country, I can assure you that you will be treated like family, always welcome, have a good time, and eat well. That's the way of the Cajuns: good, hard working, down to earth people, not pretentious.

To sum up the Cajuns in just a few words is difficult. Just as shrimp and file are necessary ingredients in our native "gumbo," so was faith in God and living a good life important to our forefathers. They never forgot for a moment — just as we don't today — that as rice is the crowning touch in jambalaya, so too is a double helping of "enjoyment" necessary in a truly happy life.

Deanna Zeringue

Piano Technicians Guild Foundation

To contribute, complete this form and mail to: Piano Technicians Guild 9140 Ward Parkway, Kansas City, MO 64114.

The PianoTechnicians Guild Foundation is a separate, non-profit entity with its own board of directors. Contributions to the Foundation's Steve Jellen Memorial Fund for Research and Education are used to promote thepiano and the professional technician. Most recently, the Foundation endowed a $500 annual scholarship for advanced piano study for a certified member of the Music Teachers National Assn.

YES!

I WANT TO CONTRIBUTE TO MY PROFESSION!

I wish to contribute $_____._____ in memory of____ to honor____

Honoree's name: _____

Chapter/State: _____

Acknowledge to: _____

Address: _____

Your Name: _____

Address: _____

Signature: _____

Classified Advertising

Classified advertising rates are 25 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 first of the month of publication.

Send check or money order (U.S. funds, please) made payable to Piano Technicians Journal, 9140 Ward Parkway, Kansas City, MO 64114.

Box numbers and zip codes count as one word. Telephone numbers count as two words. Names of cities and states are counted separately.

For Sale

SUPERB RESULTS-MINIMUM EFFORT. A. Isaac VIP hammers deliver warmth, power & brilliance without a lot of voicing. Best of all, you can always be sure your reputation is in safe hands. In our effort to offer "the Best" in service, we are now making available shanks and flanges for the complete job. Also available is a NEW TUNGSTEN CARBIDE sanding file that virtually never wears out in a combination 60/120 grit. The file sells for $7 + postage and our Wood Formula super glue for those instant key repairs is $3.25 + postage. Calif residents add 6%. We offer complete boring, etc. on hammers. At A Isaac, we value your time...and your reputation. **STEVE PEARSON PIANO SERVICE, 831 BENNETT AVE., LONG BEACH, CA 90804, (213) 433-7873.**

Index of Display Advertisers

GRAHAM ANDERSON, Piano Rebuilding and Repair, **3632 Fernway Drive, Montgomery, AL 36111.** 20 years' experience with Steinway - London. Specializing in replacement of action rails. Also available GENUINE IVORY KEY TOPS replaced. Call or write for free estimates. **(205) 284-0197.**

SIGHT-O-TUNER SERVICE. Improve the accuracy of your tunings with a correctly calibrated SOT. Also do repairs and modifications. **Richard Weinberger, 18818 — 142nd Drive, Sun City West, AZ 85375. (602) 583-0083.**

VICTOR A. BENVENUTO VIDEOTAPES. PIANO TUNING AURAL/ELECTRONIC...$175. The most accurate approach in fine tuning. KEY MAKING...$124.75. GRAND REBUILDING (2 tapes)...$225.75. Preparation, pinblock replacement, damper installation, restringing. GRAND REGULATING...$175.75. SOUNDBOARD REPLACEMENT...$94.75. Ship old board - new board comes to you ready for installation. Please specify VHS or Beta. All prices include shipping. **THE PIANO SHOPPE, INC. 6825 GERMANTOWN AVE., PHILADELPHIA, PA 19119. (215) 438-7038.**

THE GUIDE. $10. The Piano Technicians Guide. A job time study and work guide. Revised and printed to fit a pocket. **Newton J. Hunt, 3253 Lockmoor, Dallas, TX 75220. (214) 352-6846.** TX residents add appropriate sales tax.

KORG AT-12 AUTOCHROMATIC TUNER, Play instrument; tuner shows note, octave, cents sharp or flat for seven octaves: C = 32.70 Hz to B = 3951.07 Hz. Plays four octaves: C = 65.41 Hz to B = 987.77 Hz. Calibrate A = 430-450 Hz. Batteries, AC adaptor, earphone, case, year warranty, 1 lb. Introductory offer: $135 postpaid ($190 list). **Song of the Sea, 47 West Street, Bar Harbor, Maine 04609, (207) 288-5653.**

KEY BUSHING SUPPLY COMPANY — take the guesswork out of rebushing keys. "BRASS-CAULS" are accurately machined in six standard sizes to handle most instruments. "BRASS-CAULS" are $52.50 plus $2.50 shipping. Call or write for complete price and application list. Also available — 4-page instructions "A Factory Method For Rebushing Keys". Lifetime investment. **PETER W. GREY RTT, PO BOX 56 KINGSTON, NH 03848. Tel. (603) 642-3633.**

COMPLETE HOME STUDY COURSE in Piano Tuning, Regulating, and Repairing. Write or call for free brochure. **Aubrey Willis School 301 W. Indian School Road, #B-111 Phoenis, AZ 85014, Phone: (305) 299-3690 or (602) 266-1640.**

NEW SOUNDBOARDS MADE FOR YOU. Ship old board. New board comes to you ready for installation. Send for instruction on: **Victor Video Tape, $94.75. Victor A. Benvenuto, 6825 Germantown Avenue, Philadelphia, PA 19119. (215) 438-7038.**

A CAREER in Band Instrument Repair or Piano Tuning and Repair can be yours! Enroll in Western Iowa Tech Community College's programs and develop skills from tuning to rebuilding pianos, or overhauling and repairing brass and woodwind instruments. Specially designed facilties include individual work stations and up to date equipment. In state tuition is $270.00 per quarter; out of state tuition is $540.00 per quarter. Most students qualify for in state tuition by the second quater. Employers: contact our placement office about availability of graduates. For more information, contact **Admissions Office, PO Box 265, Sioux City, IA 51102 or call (712) 276-0380 collect.**

KEY RECOVERING MACHINES. Send stamped S.A.E. for current prices and description. **SOLENBERGER PIANO SERVICE, 1551 LYNN CT., SANTA ROSA, CA 95405. (707) 542-1756.**

OPPORTUNITY FOR BUSINESS ENTERPRENEUR. Wise Investment in an established tuning and repair business with over 1,000 clients will yield a lucrative profit. Servicing Rochester, MI, and surrounding Oakland County areas which have the highest growth rate in the Detroit Metropolitan area. Only qualified buyers need contact **Rose Winstanely, 3323 Brookshear Circle, Auburn Hills, MI 48057; phone (313) 373-3206.**

HARPSICHORD AND FORTEPIANO PARTS and kits, original factory materials from the finest early keyboard suppliers in the world. Also Troubleshooting and assistance to fellow RTT's on harpsichord problems. Authorized Zuckermann Agent. Lowest Factory Direct Prices - buy from the source. Catalogs, price lists free. **Yves A. Feder RTT, Harpsichord Workshops, 2 North Chestnut Hill, Killingworth, CT 06417 (203) 663-1811.**

NILES BRYANT OFFERS TWO HOME STUDY COURSES: Electronic Organ Servicing: Newly revised. Covers all makes and models - digital, analogue, LCI'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.)**

KNIGHT PIANOS from $3950.00 (NEW). THE ORIGINAL. HANDCRAFTED IN LONDON. Respected internationally as one of the finest pianos made. These pianos RETAIL in the $6,000.00 range. Special prices for quantity purchases quoted upon request. **WARFIELD PIANO SALES & SERVICE. 821 KENT AVE. BALTO., MD 21228, (301) 377-8880. Call collect.**

STROBO-TUNER ST-11 Six years old. Never abused. Used little $235.00. Schaff rosewood extension lever $30.00. Grand action model from Apsco. Like new $175.00. Player actions & parts. SASE with needs to: **Resurrection Piano Service, RD #1, Box 48A1, Johnsonville, NY 12094, (518) 663-8842.**

JOHN TRAVIS PUBLICATIONS going out of business. *"A Guide To Restringing"* for sale by the book or by the dozen. Paperbacks each $16.50 postpaid, hardbacks each $21.50 postpaid. Order now. No COD. Make check or money order payable to: **JOHN W. TRAVIS, 8012 Carroll Ave., Takoma Park, MD 20912.**

JOHN TRAVIS PUBLICATIONS going out of business. *"Let's Tune Up"* for sale by the book or by the dozen. Paperbacks each $17.50 postpaid, hardbacks each $20.00 postpaid. Order NOW. No COD. Make check or money order payable to: **John W. Travis, 8012 Carroll Ave., Takoma Park, MD 20912.** "A Guide To Restringing" still available. See this month's CLASSIFIED.

CUSTOM REBUILDING of fine grands. Soundboards, pinblocks, action restoration or replacement, refinishing, etc. **J. Krefting Pianos, PO Box 16066, Ludlow, KY 41016. (606) 261-1643.**

FOR SALE — P.T. JOURNALS. 1968 up to present. Any reasonable price. Shipping weight 70 pounds. **Robert B. Shaw, R.T.T., Box 1323, Foley, AL. Phone (205) 943-2600.**

PETERSON "450" STROBE TUNER perfect condition $200.00. Hale professional extension tuning hammer $25.00. Robert Roll impact tuning hammer "Beautiful" $35.00. Gooseneck and student levers $5.00 and $10.00. Mehaffey beat simulator $35.00. **(503) 469-2837.**

52 Piano keys recovered — .050 — $40.00. .060 — $45.00. .075 with fronts — $65.00. New sharps — $30.00. Sharps refinished — $15.00. Keys rebushed — $45.00. New fronts — $20.00. Return freight paid with prepaid order. **Charles Wilson, 1841 Kit Carson, Dyersburg, Tenn. 38024.**

FOR QUICK SALE: Downtown store in downtown Palo Alto Calif. near Stanford University in the Heart of the Electronics, a low rent lease, by retiring (after stroke) German master piano maker, established here since 1961. Call **(415) 321-6166.**

Modified Sight-O-Tuner w/case plus $40.00 manual. Tuner used about 20 times. Cost $600.00 asking $500.00 nego: **Leonard Childs, 7867 Lark Ridge, San Antonio, TX 78250, (512) 647-3648.**

FOR SALE: MASON & HAMLIN, STEINWAY, BALDWIN, 6′ — 9′ Grands. Superb quality, excellent prices. **PIANO FINDERS ADVICE HOTLINE, P.O. BOX 25814, PLEASANT HILL, CA 94523 (415) 676-3355.** Call or write.

FIVE WILL GET YA TEN! I'm selling at 1/2 price a lot of 12 refinished, rekeyed uprights with benches (new). All action part replaced or repaired — action hammers sanded — bridle taped — great bargains. Your price $395. — oak, walnut, mahogany. Also grands for sale. **IRWIN JACOBY, JAYMART WHOLESALE, POB 21148, CLEVELAND, OH 44121.**

FOR SALE: Marshall and Wendell Model A Ampico player piano (grand) 1926. Case & action meticulously restored by Piano Systems of Addison, Ill. The player was rebuilt by Pedals, Pumpers and Rolls of Elmhurst, Ill. Piano is now in storage, Bozeman, Montana. Asking price $10,000.00. Beautiful mahogany with gold trim. Double legs with artwork in between. Contact **John S. Otto, RTT, (312) 246-6443, Chicago, IL.**

Wanted

KEYBOARD TECHNICIAN POSITION, 1-2 year appointment with possible renewal. Half time position providing tuning and maintenance for over twenty performance and practice pianos for the arts at Dartmouth. Further opportunity to service pianos on campus and develop regional keyboard maintenance business. Documented completion of appropriate Bachelor degree or equivalent training; minimum five years of active experience in tuning, routine repair; experience in maintenance of concert instruments, minor and major rebuilding (including soundboard repair). Deadline extended to June 30. Send resume, references and salary requirements to: **Professor Sally Pinkas, Music Department, Dartmouth College, Hanover, NH 03755.**

I NEED PIANOS — grands, small verticals, players, mechanical devices, coin-oper. Bonus paid on art-case types. Call or write now. Put us on file. **1568 South Green Rd., Box 21148, Cleveland, OH 44121. (216) 382-7600.**

Revised Position Announcement: Supervisor of Piano Technology and Assistant Professor (Piano Technology), September, 1987 (or before, if possible). RESPONSIBILITIES: Assume responsibility for maintenance, deployment, and purchase recommendations for School inventory of pianos (approximately 250, including 100 "grands"). Supervise technology staff. Concert tuning/regulation/voicing will require some weekend and evening work and travel between various University buildings. Teach courses in piano technology. QUALIFICATIONS: Required: Bachelor of music degree; "Craftsman" level membership in Piano Technicians Guild; at least ten years of experience in piano technology, including preparation for major professional concerts. Preferred: Degree in piano performance; advanced degrees in music; Certified Tuning Examiner ("C.T.E.") status in Piano Technicians Guild; employment as tuner-technician at a school/department of music, including supervisory responsibility. RANK AND SALARY: This is a hybrid appointment as staff (Supervisor of Piano Technology, approximately 70%) and faculty (Assistant Professor, approximately 30%). Salary will be determined by the education and experience of the candidate chosen, and will be supplemented by excellent fringe benefits (various insurances; retirement program; etc.) amounting to a University contribution of 24% beyond the base salary. TO APPLY: Send resume and recommendations to: **Morris Risenhoover, Assistant to the Dean, School of Music, University of Michigan, Ann Arbor, Michigan 48109-2085.** DEADLINE: June 22, 1987

PIANO TECHNICIAN — Full time staff position is anticipated at the University of Georgia. Salary negotiable, excellent benefits. For more information call **Joan Benca (404) 542-2711, School of Music. An EEO/AA Institution.**

MASON & HAMLIN GRAND WANTED. Will purchase used Mason & Hamlin Grands, any age or condition, for re-building in our factory. Contact: **GARY GREEN, SOHMER & COMPANY, IVORYTON, CT 06442. (203) 767-2675.**

Up To $1000.00 Finder's Fee will be paid for successful purchase of a Mason and Hamlin Ex-Player. I have mechanism to install. Pls call collect **(317) 259-4307 or evenings (317) 849-1469. Jim Brady 4609 Cranbrook Dr., Indpls., IN 46250.**

DEALERS WANTED. Attention PTG members. Sounds Alive Systems, Inc. continues to seek your support for the Pomber Memory Replay Organ. Featuring stretch tuning to promote artistic creativity and keyboard dexterity, the organ features the fastest key replay system on the market. Write to **Sounds Alive Systems, Inc., P.O. Box 5540, Sault Ste. Marie, MI 49783.**

Miscellaneous

THE RANDY POTTER SCHOOL OF PIANO TECHNOLOGY — a complete course for beginning and intermediate students, in piano tuning, repairing, regulating, voicing and 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.

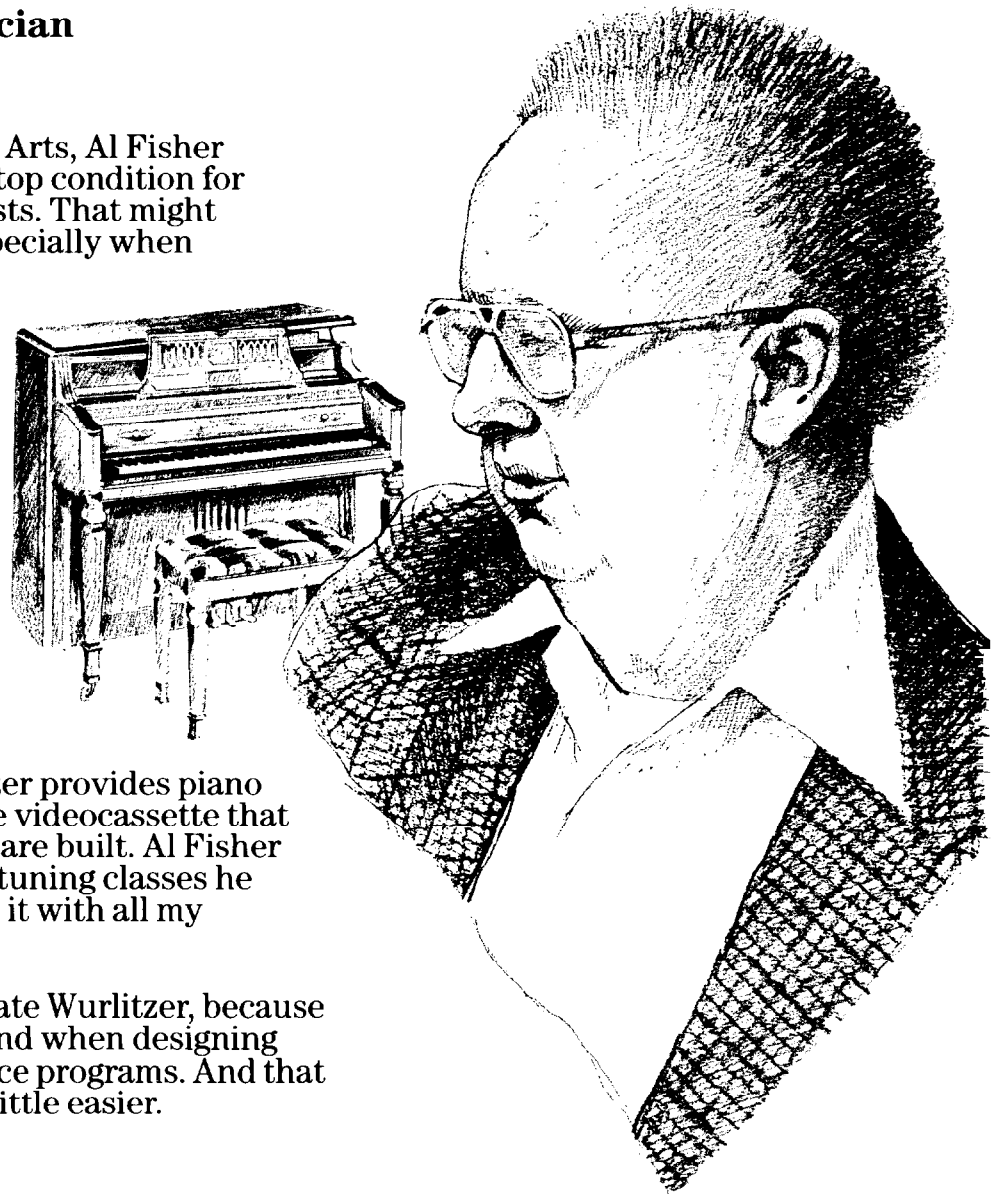
SIGHT-O-TUNER MODIFICATION. Bourns Knobpots are not enough. Exclusive Internal Error Compensation is necessary for truly accurate modification. Factory re-calibration and repair procedures available. Sales — modified or stock, new or used. Work endorsed by the inventor of the Sight-O-Tuner, Albert Sanderson. Also, **SANDERSON ACCU-TUNERS** from Authorized Distributor. The most accurate and advanced tuning aid available. Tuning lever note switch for Accu-Tuner $20. Sight-O-Tuner service still available to Accu-Tuner and previous Sight-O-Tuner customers. Repairs to new customers by appointment only, please. **Rick Baldassin, 2684 W. 220 North, Provo, UT 84601, (801) 374-2887.** Solving your pitch problems since 1981.

At Kawai, the tuner's hands and ears alone can determine the final "rightness" of a piano in the final tuning process.

KAWAI
The Master Builder.

"We don't have problems with sticking actions on Wurlitzer Pianos."

Al Fisher—piano technician and teacher.



At Interlochen Center for the Arts, Al Fisher makes sure the pianos are in top condition for students and performing artists. That might look like a formidable job, especially when you consider that most of the pianos used during the famous National Music Camp are in lakeside buildings where temperature and humidity change constantly. But Al Fisher will tell you that it's "easier than you might think" with Wurlitzer pianos... because Wurlitzer actions are manufactured with uncommon precision.

Naturally, he appreciates that. But he also appreciates the extra service that Wurlitzer provides piano technicians. For example, the videocassette that shows how Wurlizter pianos are built. Al Fisher uses it regularly in the piano tuning classes he teaches at Interlochen. "I use it with all my students. It's well done."

People like Al Fisher appreciate Wurlitzer, because we keep the technician in mind when designing pianos and establishing service programs. And that makes the technician's job a little easier.

WURLITZER®

DeKalb, Illinois 60115

June **UPDATE** 1987

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

Dick Bittinger Receives First Sierota Award

There were few dry eyes at the Pennsylvania State Convention banquet as Pat Sierota presented Dick Bittinger with the first Walt Sierota Commemorative Award.

Why would Dick be the recipient of the award?

Many times these two argued with a passion. I remember once when they were going at it, someone made the statement "How can they say these things to each other?" Bert Sierota just looked at me and winked, and we explained that this would all blow over and everything would be back to normal.

How could this relationship exist? Walt and Dick shared a common love, the Piano Technicians Guild. They respected each other's dedication to the Guild and could look beyond their differences.

Maybe there's a lesson in there for the rest of us. You only get out of something as much as you give. Walt and Dick had a friendship few can equal. Why not get involved with the Guild and see what can happen to you? It gave Dick great pleasure to receive the award. It occupies a prominent place in our office, just as Walt occupied a prominent place in our hearts. Thanks to the Philadelphia Chapter and the Sierota family for the privilege of receiving this award given for outstanding service.

— Celia Bittinger

Class Planned For Toronto Teachers

Fern Henry
Teacher Relations Committee

Music teachers in Toronto will be invited to attend a day of classes designed especially for them at our annual convention in July. The Toronto Chapter and the Teacher Relations Committe are jointly sponsoring the program, which will be offered on Wesdnesday, July 22, and repeated on Thursday, July 23.

The program will be in two parts: in the morning (9-11:15 a.m.) Pauline Fox and Fred Fornwalt of the Pennsylvania State Teacher Relations Committee will give a three-part class. First, the effects of regulation on performance are demonstrated by pianist-technician Pauline Fox. Then, a slideshow of a factory tour will show the construction of a piano from start to finish. The conclusion of the morning seminar is a discussion and examination of piano parts and action models. After the lunch break and a look at the exhibit, teachers will hear Ray Anderson of Toronto present a program on "Historical Temperaments" using a local artist as featured performer (1:30-2:30 p.m.)

The class content is aimed at teachers, and teachers will be given priority in seating. However, because so many technicians have requested ideas for teacher-oriented programs, we will welcome PTG technicians to attend on a space-available basis.

Dick Bittinger receives the first Walt Sierota Commemorative Award from Pat Sierota at the recent Pennsylvania State Converence.

A Word About 'The Film'

Ben McKlveen
Member, Film Committee

Last year at the Council meeting in Las Vegas, the Cincinnati Chapter proposed the development of a publicity film for PTG. Council voted in favor of producing this film and at the close of last year's convention, hopes were high that the film could be shown at the convention this year in Toronto.

This will not be possible. Various factors have conspired to keep this project nailed down on the drawing board. While many of the members are in favor of this project and are enthusiastically awaiting its completion, there is enough negative feedback to cause the committee to feel that a new vote of confidence from Council is advisable.

For those who have not been following the project, I will review the purposes of this film. It will replace (or augment) the film "The Music of Sound," which the Guild produced 15 or 20 years ago. That film is dated and says little about our organization and its work today.

The new film will attempt to address the public with the message of what I call the three I's — *Image, Information* and *Invitation.*

Image: When I was approached first to consider a career in piano technology, I declined, in spite of the fact that the education that I was to have received was free, through the courtesy of the U.S. Army. My image of the profession was "only drunks and very old men were piano tuners." When I actually did enter the field nearly 40 years ago, I still wasn't convinced that my image was wrong! Today, we have hundreds of highly trained, college-educated, articulate, knowledgeable people in our craft. We have a "Guild," in the true sense of the word. It helps train and test its members and the members are concerned about the level and caliber of craftsmanship in their ranks. This message needs to be promoted.

Information: The film will be informative about pianos, how they work and why they need service. It is necessary that the piano-owning public be aware of other needs besides tuning and that tuning does not solve all the problems.

Invitation: Toward the end of the film, the public will be invited to remember who we are, why we exist, and they will be encouraged to seek out our members to service their pianos and to have confidence in our skills and integrity.

We have a committee of talented and dedicated people who have given a great deal of time to this project so far. We have been working hard to find just the right way to present these ideas on film. We have tried and rejected dozens of ideas and combinations of ideas that have proved unworkable. We are now at a point where we think that we have a format that will achieve our goals.

In July, at this year's Council meeting, we will resubmit our proposal for your consideration. If we are successful, we hope to have for you a film and a companion video which TV stations can show and which chapters and individual members can obtain for a reasonable price. Then, we can spread the word about who we are and why we exist.

Proposal For Piano Technicians Film

History

In the spring of 1985, the Cincinnati Chapter became aware of the need for a film to promote PTG. A committee was appointed to investigate the idea. The proposal was presented to Council in July of 1986. It was voted upon and passed. The goals were as follows:

Goals

1. The primary goal of the film will be to promote the Piano Technicians Guild and its members.
2. The secondary goal of the film will be to educate and encourage piano owners and future owners in the care and maintenance of their pianos.
3. The underlying focus will be *quality sound comes from a quality product with quality maintenance.*

Benefits to PTG Members

1. Customers will have a more positive attitude toward establishing a regular maintenance schedule. They will welcome and appreciate entertaining information.
2. It will be an excellent visual aid in speaking before groups of teachers, students, new piano purchasers, the public in general and/or public-access channels of cable TV, customers in their homes, NAMM shows, as a joint educational program with dealers in stores and outside exposure such as fairs and home and garden shows, etc.
3. It will present a positive image of PTG

Since last July the committee has worked on developing an outline for such a film. The following would be produced as a film and/or video of about 18-22 minutes in length. A shorter version could also be made.

The Unseen Artist
The Cast

The technician/narrator; a young student and two parents; a concert pianist; a seminar/class of piano teachers; and a seminar/class of piano technicians (possible).
The Basic Concept

There would be four (possibly five) basic settings, one of which would be seen twice, at the beginning and the end. In each scene, the technician will cover some aspect of the role of the technician and/or the inner workings of the piano. The technician would sometimes talk directly to the audience. The technician should appear trustworthy and knowledgeable but not condescending. The settings would be the technician at a piano introducing himself and the Guild and discussing the complexity of the piano and its need for care. The second setting would be in the home with child and parents with information about placement and maintenance. The third would be pre-concert work discussing more subtle aspects such as voicing. A fourth setting would show the technician conducting a seminar for teachers, presenting additional information and a fifth could show the technician in a Guild ongoing education setting. Then it would return to the original setting for closure.

The committee would appreciate any additional input concerning the film. Comments can be given to Regional Vice Presidents and/or the committee. We do thank you for your responses and look forward to hearing from you.

-Ben McKlveen, Committee member

Chair: Ellen Sewell
Co-Chair: Tom Jones
Ronald L. Berry, Barry Heismann, David Jackson and Joe Lerant

Certified Tuning Examiners List Revised

From the Examination and Test Standards Committee comes this updated list of Certified Tuning Examiners. This list replaces the one which was published in the recent membership directory.

Northeast Region

010 — Western Massachusetts,
Richard Loomis
John E. Stebbins

021 — Boston, MA
Christine Lovgren
Albert E. Sanderson

031 — New Hampshire, NH
Peter W. Grey

060 — Montreal, PQ
Marcel Carey

061 — Ottawa, ON
David H. Morgan
Robert Smit

062 — Toronto, ON
John E. Lillico

064 — Connecticut
Charles P. Hubert
Bruce A. MacLeod
Kenneth L. Strick
Christine S. Towne
Ray E. Zeiner

078 — New Jersey, NJ
Charles P. Willis

101 — New York, NY
Michael Miccio

111 — Long Island, Nassau, NY
Stuart I. Fischer

117 — Long Island, Suffolk, NY
Eli Lee Dobrins
Edward D. Dowling

122 — Capitol Area, NY
Evan Tublitz

131 — Syracuse, NY
Paul J. Simkin
Kenneth A. Williams

139 — Southern Tier, NY
Kenneth R. Walkup

142 — Buffalo, NY
Charles R. Erbsmehl

151 — Pittsburgh, PA
Robert W. Wagner

166 — Central Pennsylvania,
William A. Hocherl

191 — Philadelphia, PA
Hilbert S. Felton Jr.

195 — Reading-Lancaster, PA
William H. Keller
Shawn L. Peck

Southeast Region

201 — Washington, D.C.
Ruth A. Jordan
Michael R. Travis

212 — Baltimore, MD
Patrick L. Stone

223 — Northern Virginia, VA
David H. Frease

240 — Roanoke, VA
Ernest B. Bremner

274 — Central North Carolina,
Ralph L. Caskey

301 — Atlanta, GA
Larry B. Crabb Jr.
Donald A. Strong

327 — Central Florida, FL
Robert V. Carr

331 — South Florida, FL
Larry J. Wicksell

335 — Sarasota-Ft. Myers, FL
Roberta D. Jacobs

337 — Southwest Florida, FL
John C. Phillips

381 — Memphis, TN
Matthew R. Grossman
Asa Wilkerson

South Central Region

701 — New Orleans, LA
Lloyd T. Cotten
Joe R. Helmer
Nolan P. Zeringue

713 — North Central Louisiana
Elizabeth E. Ward

752 — Dallas, TX
W. Jesse Lyons
Kerry M. Symes

761 — Fort Worth, TX
Terry S. Randolph
Gary R. Shulze

763 — Texoma, TX
Jimmy C. Gold
Bruce D. Hale

767 — Heart of Texas, TX
Danny L. Boone

771 — Houston, TX
James B. Geiger
Robert W. Lee
Lee A. Manschreck
Vernon P. Williams

784 — South Texas, TX
Lawrence T. Goetsch

787 — Austin, TX
Karla Pfennig

791 — Northwest Texas
Herman Boone

799 — El Paso, TX
W. Dean Baker

Central East Region

401 — Louisville, KY
Stephen J. Presley

405 — Blue Grass, KY
Clair L. Davies
Nevin E. Essex

441 — Cleveland, OH
Kevin M. Leary

445 — Youngstown, OH
Clarke M. Houser

452 — Cincinnati, OH
Michael J. Wathen

461 — Indianapolis, IN
Ronald L. Berry
C. Guy McKay

481 — Detroit-Windsor, MI
Hugh B. Gulledge

Continued on next page

CTEs...

Steven E. Hornbeck

486 — Midland, MI
Paul R. Schoelles

489 — Lansing, MI
Dale E. Heikkinen
Les O. Jorgenson
Thomas McNeil

600 — Waukegan, IL
Richard B. Quint

601 — Chicago, IL
Mark E. Foss

625 — Central Illinois, IL
John H. Baird

Central West Region

001 — Calgary, AB
Ray Hopland
Alfred E. Jeschke
Otto R. Keyes

511 — Siouxland, IA
Gracie L. Wagoner

553 — Twin Cities, MN
Mark E. Bunker
Robert M. Humphrey
Ralph W. Kratzer
Jonathan C. Nye
Richard G. Raskob
William C. Sadler

631 — St. Louis, MO
Elizabeth A. Baker-Goddard
Ray T. Bentley
Willem Blees

641 — Kansas City, MO
Stephen D. Berg
H. Dean Garten

671 — Wichita, KS
Marty A. Hess
Kent E. Swafford

683 — Nebraska, NE
Robert W. Erlandson
Clarence P. Stout
Richard E. West

803 — Boulder, CO
Christian Finger

Western Region

011 — Vancouver, BC
T.C. Halleran
Karl Verhnjak

013 — B.C. Coast and Inland
Allan J. Laity

841 — Salt Lake City, UT
Walter L. Winters

846 — Utah Valley, UT
Rick L. Baldassin
M. Jack Reeves

851 — Phoenix, AZ
James W. Coleman

857 — Tucson, AZ
Robert A. Anderson

901 — Los Angeles, CA
Allan O. Cate
Teri L. Powell

921 — San Diego, CA
Mark Adams
Brian S. DeTar

926 — Orange County, CA
Steven F. Sherlock
Randall C. Woltz

931 — Santa Barbara, CA
John B. DuBois

941 — San Francisco, CA
Michael A. Kimbell

945 — Golden Gate, CA
Sidney O. Stone

951 — Santa Clara Valley, CA
Thomas J. Gorley

955 — Redwood, CA
Daniel S. Gurnee

956 — Sacramento Valley, CA
Kirk G. Burgett
Peter M. Clark
Paul R. Magee

971 — Portland, OR
R. T. MacKinnon
Donald A. Person
Richard K. Wheeler

981 — Seattle, WA
Edward J. McMorrow

985 — Puget Sound, WA
Wayne O. Matley
Michael D. Reiter

992 — Eastern Washington, WA
Thomas A. Kuntz

In Respectful Memory...

Robert A. Burton

Paul Graeber of the Santa Clara Valley, CA, chapter, sent in additional information to supplement the hurriedly prepared material which appeared in last month's *Journal*. "He was a generous and kind man. I, for one, will miss him," wrote Graeber.

"Mr. Burton learned piano tuning from his father in Cody, WY, where Mr. Burton was born. But he started out in a different career teaching mathematics and manual arts in public schools. He later was school principal and a band and choir leader in a number of Nebraska and Kansas towns.

"During World War II, Mr. Burton lived in Kirkland, WA, where he worked as a shipwright, building destroyers for the U.S. Navy.

"Besides his wife, Mr. Burton is survived by a son, Robert D. Burton of Bellevue, WA; a stepson, Michael S. Otis of Renton, WA; a stepdaughter, Patrice J. Burnett, of Redmond, WA, six grandchildren and one great-grandchild.

"Surviving brothers and sisters include James Burton, of Cle Elum, WA; Riley Paul Burton, of Los Angeles; Hazel Trotter, of Port Townsend, WA; Esther Staley, of Kirkland, WA; Mary Douglas, of Manhattan, KS; and Nicky Coulter, of Albany, OR."

Chapter Mailing

The May mailing to chapter presidents included a Council Agenda Book, information on convention and council activities, notification that chapter dues reimbursements have been mailed, listings of chapter officers and a message from Chapter Management and Achievement Committee Chairman Dale Heikkinen.

Chapter News And Notes

Dale Heikkkinen
Chairman, Chapter Management And Achievement Committee

Ottawa

The March technical was an interesting presentation on upright dampers given by Paul Koktan. Convention-goers will have a chance to hear the same prepared program this year in Toronto. A record number of non-members and visitors attended this meeting.

Washington, D.C.

Pity the poor Steinway in the auditorium of the Hirshorn Museum. It had (quite understandably) a minor breakdown Saturday afternoon, midway through the 41 minutes of Richard Wernick's stormy, brilliant sonata "Reflections of a Dark Light."

Lambert Orkis, the resident pianist of the 20th Century Consort, looked up from the keyboard and asked, "Is Dave Lamoreaux here?" As the piano technician of that name got up from his seat in the audience and rushed backstage for his kit of tools, Orkis explained that two strings in his piano had snapped. "That totally incapacitated one note," he explained, "so...I'll be back." Twenty-odd minutes of emergency service got the piano (through Nicholas Maw's three "Personae") shakily to intermission, when it received intensive care. Then it had to endure a four-handed assault from Stravinsky's "Rite of Spring" in the second half. (Joseph McLellan, Washington Post, 3/2/87)

Richmond

Piano service," George C. Johnston

"The statement has been made that the public should be told to take care of their pianos, but were not told who was to tell them..." That has been my experience from working in the country, and, of course, we get all kinds of pianos out there, principally mail order pianos. But, many salesmen will tell a customer that once in five years is enough. A woman told me that she had her piano for five years — a very ordinary piano; she had been told that it would not need tuning for five years. When it was six years old, it sounded just as good as when it was five years old and she did not think it needed tuning. She also said that a friend of hers had her piano for eight years and never had it tuned, and that if she commenced, she would have to have it tuned every year or two. People purchasing a piano should be told how to take care of them and what is necessary to keep them in good condition and that unless they do take care of them, they will not give satisfaction. (Excerpt from *Piano Tone Building*, April 3, 1918)

Western North Carolina

Jeff Owens, along with his wife, teamed to create very distinctive and attractive stationery and envelopes for use by the chapter. The masthead is in very pretty blue using the outline of the state with the Piano Technicians logo in the center.

The May technical was at the site of Dampp-Chaser Electronics. Bob Mair was in charge of the technical and discussed the research results of their product lines.

Southwest Florida

Under "Afinacion y Reparacion," only one tuner-technician is listed. Zara Smith, editor of the chapter newsletter, spent a week in Merida, Yucatan, Mexico. Merida is a very large city, the capitol of Yucatan, lying in the north west corner of the Yucatan peninsula. The temperature runs above 100 degrees most of the time, day and night. The humidity is unbelievable; very few places are air-conditioned. He visited all of the music stores in the city and there was not one visible piano; one store did carry Yamaha electric CLP 30 for 2,495.00; it was unclear whether that was pesos or dollars.

Did you ever have a string fly across the altar as you were preparing a harpsichord for a concert? This might have been prevented if you had attended a demonstration on loop making and winding strings on a harpsichord tuning pin. Knowing how to prepare and replace the plectrum could also be very helpful. In fact, you may have missed an excellent technical on harpsichord repairing and tuning by Ferdinand Pointer. He brought his own double manual instrument which he built and uses as a rental instrument in the area. He has built several harpsichords and clavichords for sale and does rebuilding for patrons. His knowledge of the history of the instrument and its construction is "impeccable" writes Artie Smith. "His instruments are beautifully constructed and exemplify to the nth degree the original sound of early harpsichords. A name to keep in mind in the harpsichord world.

Northwest Arkansas

The March meeting was held at Pitts Piano Shop in Fayetteville, AR. Mike Tocquigny presented a demonstration on string splicing and Ted Pankey demonstrated temperament setting. Denele Campbell gave a report on the recent South Central Regional Spring Seminar in Oklahoma City. The eight-member chapter voted in favor of hosting the next Spring Seminar (1988) in Fayetteville.

Dallas

Aspects of operating a business," Thom Tomko

Learning to operate our business both professionally and ethically actually takes more time than the time spent learning to tune, writes Thom Tomko, Chapter President.

If you find a good instructor, have a good ear, and eagerness to do good work, you can learn to tune within a few years. But how many of us seek out professional help on how to run our business? We are all independent business-people trying to make a living and therefore, need to know as much about running our business as possible. Let's start with the first step in building a business, customer calls.

Your telephone response must not be overlooked. When a call is left inquiring about your service, a prompt callback should be your first order of business. I make my calls as soon as I come home. Do remember to be relaxed and pleasant. If you are uptight after working hard all day, then waiting until evening to call back may be better.

Find out the needs and requirements of the customer and their piano. Give your standard tuning fee and introduce all information in a clear and concise way.

Your basic tuning fee is for a piano in good working order that has been tuned on a regular basis.

If it is a piano that has not been regularly serviced at least once or twice a year, then there is the possibility of additional tuning work and therefore a higher fee. Most people understand that if they were negligent of proper service, their instrument may need more than the usual simple tuning. I tell my customers that this can only be evaluated at the piano and we can discuss the matter when I arrive on the scene.

Don't argue with customers who are only willing to spend the price of a standard tuning. If you feel that you can't ethically do the proper job needed on their piano with such monetary restrictions, then refer them to someone else. Remember, not everybody's budget can meet their needs.

"Shop notes," Walt Connell

Do you use sandpaper strips for sanding hammers?

Continued on next page

News And Notes...

If so, I'm sure that you've had a problem with your hands cramping after 20 or 30 hammers. Holding the strips between the thumb and forefinger gets to you, no matter how strong your hands are. I get around this problem with a simple tool that is always around, our old friend the visegrip pliers. The standard size is a little large and heavy for the job, but the small four-inch grips are just right. Clamp your sandpaper strip between the jaws and you have a handle large enough to get a good grip without cramping your hands. Yes, the strip will break occasionally, but if you back the sandpaper with tape, it will not happen often enough to be irritating.

There are times when one is obliged to remove a great deal of felt from hammers because: a. they are badly damaged from wear, or b. they are new and fluffy from the press. I like to avoid using a mototool and guide whenever I can, but removing a lot of felt with standard 80-grit papers can take forever; 60-grit paper tears and fluffs the felt more than I like. I find that 80- and 100-grit floor sanding paper removes a lot of felt in a hurry. Once the hammer is close to the size and shape I want, I can start filing with 80-grit garnet or silicon dioxide paper as I normally would. Floor sanding paper is available in rolls at most hardware stores and lumber yards, usually sold by the foot and by the roll.

Columbus

"For inquiring minds," by Thomas Harr

Why were so many upright piano actions made in the 'teens and twenties by Strauck Bros., Sterling, Seaverns, and others so often prominently labeled "French repeating action" on the hammer rail?

The upright piano action, as we now have it, was invented by an Englishman, John Wornum, about 1820 and was known as the "tape-check action" (because the back-catch was rather rudimentary). As it happened, vertical pianos failed to develop much in Britain for several decades thereafter. In France, however, a small vertical piano was just what was needed for the available space in the urban apartment dwellings then being constructed. There being too little room for massive square pianos or grands, the production of "pianinos" and "cottage pianos" took off and Wornum's action was developed and refined to its present-day form by French piano makers. Meanwhile, back in Blighty, the makers of uprights wasted their efforts on such lost causes as the "sticker" and "loop-and- spring" actions that we find in the occasional imported "bird-cage" piano (actually the term "bird-cage" refers to overdampers and not to the piano action itself.

When American manufacturers finally gave up on the square piano as a mass-market instrument and began to produce uprights, they sensibly ignored the English vertical actions and either imported (from Herrburger in Paris) or directly copied the French version of Wornum's action, including the "tape-check." Hence, "French (patent) Repeating Action."

Cincinnati

"An interesting event," by Ben McKlveen

It happened in December. A pianist came into town to play a Christmas concert and he knew exactly what he wanted in the piano he was to play. Let me explain. On December 20, George Winston, a jazz-folk-pop-rock-gospel fusion player, came to Cincinnati to play a concert at the Taft Theater. He is a good pianist and a knowledgeable one as well.

What was amazing was the fact that I received a 2 1/2 page directive called "The George Winston Concert Piano Information Sheet." It stated the place and date of the concert, the date the piano was to be delivered, sound check time, and show time. It specified tunings at 3 p.m., 6 p.m., and 9 p.m. The piano to be used was to be a Steinway D and was to have an "adjustable" artist bench with it. The desired piano was described as "best available and in top condition." All necessary work to put the piano in top condition should be done the day before the concert.

There followed two pages of outlined instructions about every possible detail and requirement for the concert:

1. Position of the piano on stage and its arrangement (top up, music desk out, etc.)
2. A paragraph devoted to the bench (sits level, no seat or floor wobble, no creaks — any problems: replace the bench!).
3. A paragraph on tuning.
4. A sentence on pedal workability stressing noise elimination.
5. A special mention of soft pedal adjustment assuring that no hammer would hit the next note above.
6. Voicing requirements, no buzzy notes.
7. Action should be neither too light nor too heavy.
8. A long paragraph on specific voicing requirements, stressing voicing evenness when soft pedal is engaged.
9. Request for maximum repetition in top half of keyboard.
10. A reminder for a tuning check (especially unisons) one-half-hour before house opens.
11. Stated requirement that the technician was to stay until intermission and do a tuning check at that time, and check with the artist for any other corrections that may be necessary.
12. A statement that the artist will leave a note concerning any necessary changes after his rehearsal, and the promoter will be in touch with the technician on the day of the concert to see that these requests are implemented.

I write about this information sheet for several reasons. Aside from the fact that the artist was "blowing smoke" about a couple of items (for example, the request for key weight "not too heavy or too light"), the requests were reasonable and catered to the specific desires of George Winston. He got local management's attention with the request sheet. While it was not written by a technician in precise technical language, it was specific enough to get the job done and was comprehensive.

I am sure that if the artist was playing in Podunk, he might have to accept the local high school auditorium grand, whatever it may be, but the piano information sheet and the producer's attention to detail would lend a lot of clout toward getting that piano in good shape for a concert by George Winston.

Finally, if the specifically personal voicing requests were removed, the sheet made a good check list for the service requirements of any piano. Who of us would be unhappy if we had a solid, level bench to sit on and a piano that was well tuned, voiced evenly, whose pedals worked (noiselessly), and the action was adjusted to give wonderful repetition? Not me! I enjoyed preparing the piano for this artist and I carried away a general outline to use for any piano that I service.

Detroit

"On playing the piano," Hugh Gulledge

I am sure that many of you have found, as I have, that customers often ask the question, "Do you play the piano?" Many times, when I answer that I do, the customer expresses great relief saying, "the last guy only knew a few chords!" Even though I always try to smooth things over by saying that there are many very fine technicians who do not play the piano, still I feel that, as professionals, we need to understand our instrument from a player's perspective as well as from a technician's perspective.

Continued on next page

News And Notes...

First of all, the better we are able to play the piano, the more easily we are able to understand what our customers are trying to tell us when they are trying to describe some problem. In addition, being able to play the piano enables us to feel and hear how a piano actually performs under playing conditions. This "performance testing" will help us in working with a particular piano to evaluate tone, evenness of touch, and balance. It may even show up problems which might otherwise have been undetected.

In light of this, I myself have begun to once again take piano lessons, and I am really enjoying it. Not only does being able to play the piano well help us in our work, but it also serves to build our customers' confidence in our abilities. We technicians are always looking for ways to improve our technical skills — we attend seminars on bending damper wires, bushing keys, regulating actions, etc. I think that improving in proficiency as a pianist should be added to the list. So, if you are not already doing so, start practicing on a regular basis, maybe even start taking piano lessons and be serious about it. You will be glad you did. The piano is a marvelous instrument and can be a source not only of our livelihood but also of great enjoyment and satisfaction.

Chicago

"Axioms," by Brian Mott

The tool you have inadvertently left on your workbench will be absolutely required on your first outside call of the day.

Traffic congestion increases proportionally to how far behind schedule you are.

You will encounter a cabinet design you have never seen before, and will not able to open. The customer will then ask if you mind if they watch while you work.

If there is only one loose screw making noise on a drop action, it will be a wippen screw.

The worse the condition of a night club piano, the greater the likelihood you will not be paid.

And finally, since it's that time of year, if you have any money left over, you have underpaid your quarterly estimated taxes, and will be penalized.

Central Illinois

On January 30 and 31st, the chapter had a booth in the exhibit hall at the Illinois State Convention in Peoria. Seven members contributed their time and felt that the experience was useful, enjoyable, and not really all that much trouble, writes Cindy Strehlow. The chapter spent about 260.00. The handouts of RTTs in Illinois was used extensively.

"We handed out pamphlets to people who murmured `yes' to `do you have a piano?' she wrote. "that was a good question, as you don't have time to ask anything else of people who are moving from one booth to another.

Many of the convention-goers were certain that the chapter's mission was to promote the profession. Probably half of the questions that were fielded were about how to get into piano tuning.

There were several areas which could benefit from either more coaching or more experience. For example, one has to be careful of the ones who assume that piano tuning is a hobby rather than a profession. Another area that would need refinement is resisting the temptation of talking too much among each other in thed booth since it distracts from the general impression of a professional organization.

Quad Cities, II

For the first time in several years, the chapter is undertaking an in-depth technical project, the restoration of a Steinway grand. Enthusiasm is running high and much was accomplished at the first work session at Northwest Music Shop, Davenport, IA.

Central Iowa

The secretary of the chapter, Maurice Roseburrough, reported that the chapter grand, a project recently finished, was sold to folks in Ames, IA. As it was noted that the money had been collected, it was hard for those present to abstain from voicing sheer delight over the happy occasion. Much credit belonged to Dan Malloy. A Bush & Lane upright was taken as a trade-in on the sale and is available to interested parties.

Twin Cities

In looking for some ideas on shop planning, Chuck White in his column "The Temperament Strip" in *Soundboard Buttons* came up with some ideas submitted by Yvonne Ashmore, Grass Valley, CA.

Windows: Yvonne uses a translucent material made of fiberglass/plastic, used in greenhouses. She installs this as a glazing on both the inside and outside of 6" wall and fills the cavity in between with regular fiberglass insulation batts. This produces a light-transmitting wall with a R-value almost equal to a regular 6" insulated wall. Her "windows" encircle her shop on three sides, starting at the ceiling and extend down two feet to the top of the upper cabinets.

Cabinets: She prefers the kitchen-type because the doors and drawers keep things free from dust and the hand tools can be put out of sight so they don't "walk off."

Woodworking machines and buffing wheels: It is a good idea to keep these tools at one end of the shop because it keeps all of the dust at one end. A plastic curtain may keep dirt from the piano action area.

Dust collecting units and compressors: To cut down on noise, it would be helpful to have these units in a garage away from the work area. PVC pipe can be used to bring air into the shop.

"How to increase your fees without losing customers," William Mears.

The best things in life aren't fees. The thought of discussing fees with a customer can turn a competent, well-trained, highly qualified technician into a red-faced, stammering mumbler who is afraid to make eye contact.

Almost all technicians are uncomfortable discussing fees face to face with a customer. It's important that you appear positive and self-confident. if you can't sell yourself, you won't be able to sell your services. You have to convince the customer that the work you are going to do is worth what is being charged. Technicians who have trouble in this area may want to consult with other technicians to see how they handle their fee presentations. When you attend meetings and seminars, question the instructors and other technicians and make notes of the resulting discussions. You also can read books concerning self-esteem and positive thinking.

The question of how you feel about fees really comes down to another question: "How do you feel about yourself?"

The problem with handling fees is based on a poor self-image. Many technicians lack self-confidence. They are afraid to communicate to the customer what their skills are justifiably worth and why they are vitally needed. Easily 90 percent of technicians are scared to death of fees, and they are scared because they lack self-confidence. Technicians must master the art of discussing fees and learn how to present their case.

How are fees determined? Basically, fees are determined both by your costs and what the competition is charging. You must consider such factors as overhead, how much time it takes to do a certain job, the cost of materials, and so on.

In your piano service business, fees should be reviewed once a year. This

Continued on next page

News And Notes...

should include a complete analysis of your fees for major services. Raise your fees annually be a percentage that is at least in line with increases in the Consumer Price Index. If other factors have affected your cost of doing business such as increases in the cost of parts, liability and tool insurance, or vehicle costs, these should be reflected in your charges for services. Explain to the customer that bread for 97 cents a year ago now sells for $1.18, and your piano service expenses are no different.

If you find yourself in a situation where your fee profile is low and that you are charging less than other area technicians, you should raise your fees gradually. You don't have to raise all of your fees at once. You can raise certain fees and accomplish the same overall results because of weighting. If you rarely do restringing, for example, you can leave that charge alone. Instead, increase those more frequently performed services.

If you feel that competition from other technicians is forcing you to keep your fees down, fight back. The only way the quality technician has to offset other technicians' lower fees is to stress years of experience and work quality.

This comes down to marketing and salesmanship. Unfortunately, most technicians aren't trained in these areas...and what in life isn't sold?

One way to demonstrate the quality of your work is to show before and after photos of keyboards you have recovered or refinishing work. Refer your customer to others for whom you have done work similiar to what you are asking to do on the customer's piano. Guarantee the work you do. Personalized, quality service is the greatest asset a piano technician has. Make sure you maximize it. Get the message across that you care.

Chapter News

Los Angeles

President Claudia Ellison opened the meeting by having almost no business. She did ask how many were going to attend our chapter's seminar. It looked like nearly all members would be there.

Our inspirational message was given by Francis Mehaffey on broken plates. When a plate needs to be brazed, the whole plate must be heated before the brazing. Use boiler plate on the underside of the plate when it is broken. Drill the holes, thread the boiler plate and put in machine screws. Metal-type epoxy helps strengthen it, too (metal epoxy is what NASA uses to hold the outer skin on the space capsules).

On the strut bars, cut out a portion of the top of the bar, perhaps 1/4" or 3/16" deep. Then fit a piece of cold roll steel into this opening. Drill holes in both pieces, countersink heads always, thread strut bar, epoxy and screw on the piece. Smooth boler plate under the web and forward from tuning pin holes, epoxy and screw on as described above. Cut out the pin block to allow space for the additional piece on the underside of the plate.

Our regular lecture was given by Lloyd Whitcomb. He had spent five weeks in Japan at the Yamaha factory living in their dorm. He showed slide pictures of their rooms, washrooms, etc., which were interesting to us since they are quite different from our bathrooms. Working in the academy like other students, they were taught by doing each job three times: installing three sets of hammers, butts, dampers, etc. Each time they were to do the job in less time than before, so pressure was put on them to learn and do the job well and rapidly. The last was tuning and voicing. He spoke of their fine machines, clean factory and good working conditions.

This was another great meeting for our chapter. Thanks to both men.

-Harry Berg

Reading-Lancaster

The technical program following the April 14 business meeting of the Reading-Lancaster Chapter was a demonstration of the actual welding process on our current chapter project piano. The piano, an Estey spinet with a cracked plate, was willed to the chapter and we decided to experiment on it and see if it could be welded successfully since we had nothing to lose except our time if it failed.

Dick Bittinger, who was a welder before getting into piano work, explained how the plate had been prepared by getting it back into proper position and grinding a U-shape into the cast iron along the crack so the weld would penetrate the whole way through the plate. The welding rod is 1/8-inch nickel (NICI) as was described in the June 1986 Journal. A very small section will be welded at a time to avoid heating up the plate because too much heat will cause it to crack again beside the weld. The members then watched through welding hoods as a small section was welded.

By the May meeting we hope to have the welding finished and the piano ready to be taken up to pitch. No one seemed anxious to do that job but finally Leavitt Keener bravely volunteered to raise the piano to pitch at the next meeting.

For June, the chapter is planning our annual tool and supply auction followed by a dinner. All technicians from surrounding chapters will be invited as there are many items to be auctioned off and we hope to have a big turnout.

-Jim Bittinger

Recent Film, Tape Usage Listed

Piano Technicians Guild films and tapes used in recent chapter programs include:

"Action Centers," Southeast Massachusetts (Walter Woitasek); "Bridge Repair," Baltimore (Donald Pahl); "Casualties of Stress," Sarasota/Ft. Myers (Walter Kerber) and Baltimore (Donald Pahl); "Creation of Sounds," Redwood Chapter (Gay Ornellas); "Grand Action Regulation from A-Z," Sarasota/Ft. Myers (Walter Kerber) and Roanoke (Ernest Bremner); "Invitation to a Grand,," Reno (Don Harris) and Rogue Valley (Tom Lowell); "Music of Sound," St. Louis (Delores Schaefer) and Memphis (Monica Hern); "Piano Teacher/Technician Forum," New Orleans (Daniel Skelly); "Troubleshooting," South Florida (Barry Weiss); and "Upright Action Restoration," San Antonio (Leonard Childs).