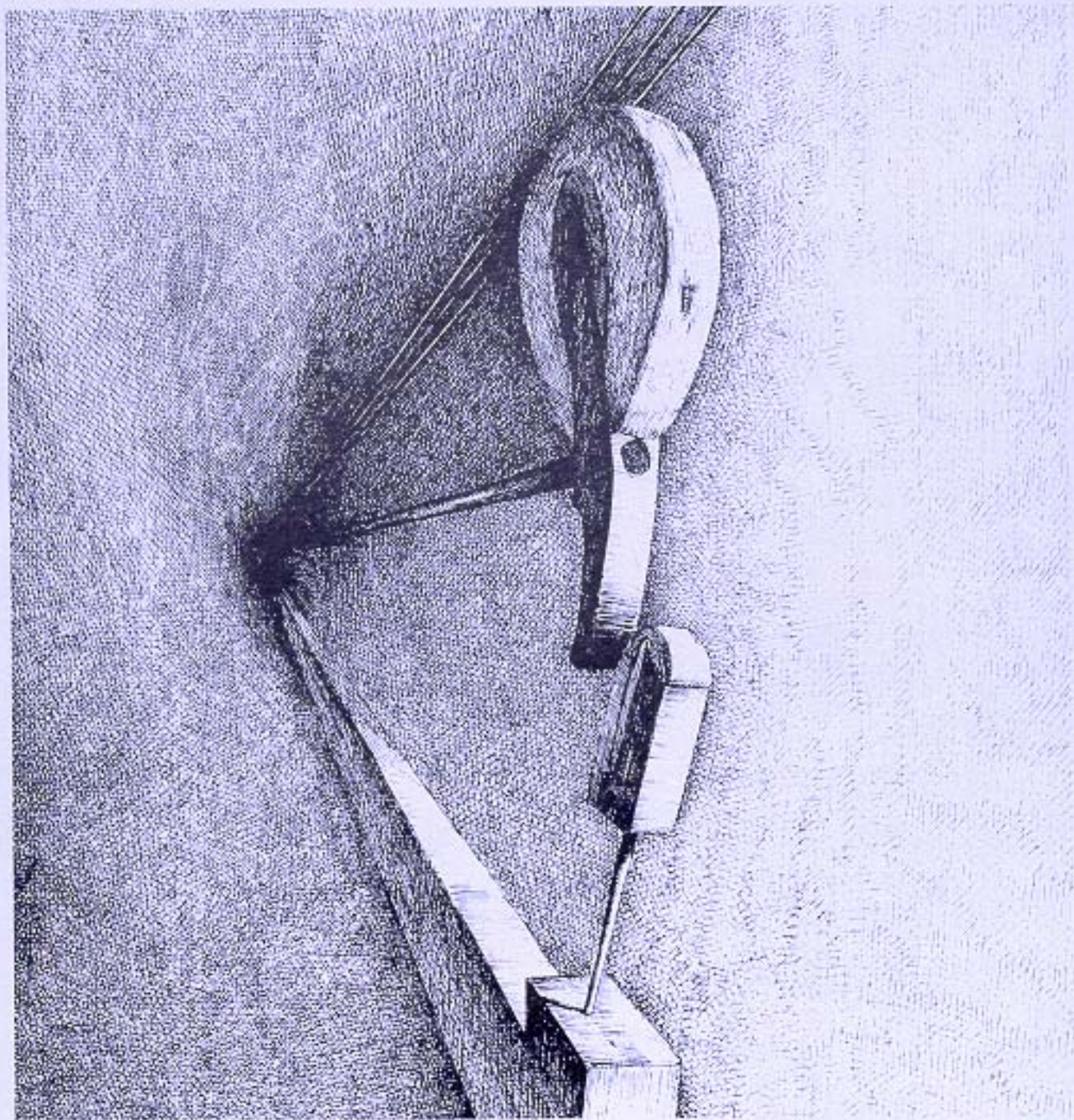


Piano Technicians Journal

March 1982



The Baldwin Piano...

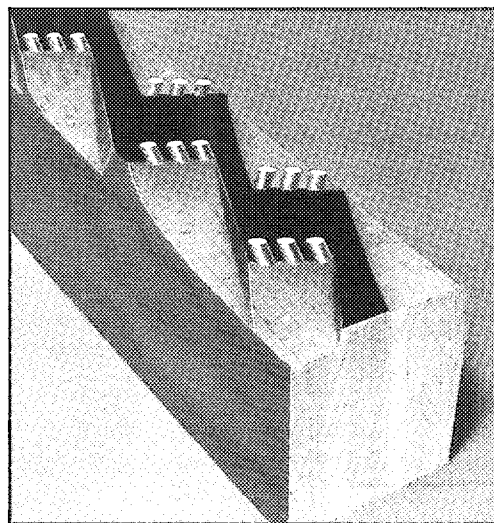
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Cover... This excellent illustration of piano tools was sent to us by Les Jorgenson, a Registered Technician from East Lansing, Michigan. For information on prints used on the cover of the *Piano Technicians Journal*, contact Mr. Jorgenson, at 1135 Sunset Lane, East Lansing, MI 48823.

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8:30 am-3:00 pm
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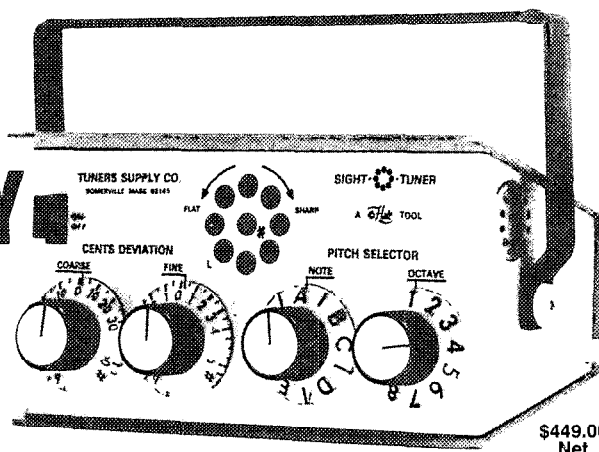
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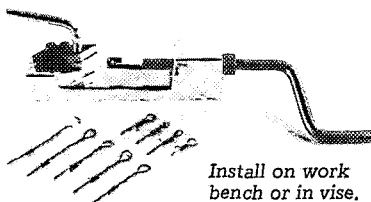
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EDITORIAL

Don L. Santy
Executive Editor

At a time when one NAMM (National Association of Music Merchants) show just finished in Chicago and the Summer Market Show is about to begin in Anaheim, one is thoroughly convinced that music is big business indeed. Past President Bob Russell is covering this huge enterprise for the Guild and sits on the Educational Advisory Board for the National Piano Foundation.

Bob is a great ambassador for the Guild and is thoroughly familiar with it's workings. His committee is bringing new meanings in terms of our public relations through their participation.

While we do not have spectacular displays with glamorous equipment, we do have reading material, displays and "hand-outs", and more importantly dedicated Guild members to spread the word about our organization. NAMM makes a booth available to us on a "complementary" basis, for which we are most grateful. It gives us an opportunity to interact with others in the Industry, and lets them know we are a moving, growing, progressing and concerned organization.

Just ten years ago this month **Charlie Huether**, *Secretary/Treasurer* wrote an article in the *PTM Piano Notes* along this same line, which I feel is worth reprinting.

In the March issue of PTM, George Littlefield, managing editor, wrote an editorial criticizing another periodical for referring to the music business as a "nickle and dime operation." His point of view was so right. The dollar volume of the music business is nothing to be sneezed at and surely it cannot be relegated to some rear drawer as a non-essential and non-critical part of our economic life.

However, there is an aspect of the music business which could make it appear small time to a casual viewer. It is that the music business is not a business of giant industries, of gigantic mercantile structures. It is not a business which shows its strength and importance by smoking factory chimneys, by railroad carloadings, by acres of dumps full of discarded and used up models of last year and the year before. To the modern, philosophy of total consumption and built-in obsolescence, the music business must, indeed, make a poor impression.

Where I Stand

Rather, the music business is a multitude of small operations, many of them one-man operations. A musician is a self employed businessman. So is a private music teacher. So too are most of the piano technicians. And how many music retailers and small operations are there with only a couple of employees? One would be hard pressed to find a company who can dominate the music business as General Motors and IBM do their respective fields of operation.

This kind of situation, however, is just fine with me because it makes us all equal. When I speak, as sole owner of my small part of this great industry, I have a strong feeling that people are listening, all the way up to the top executives in the largest of our related manufacturers. When NAMM works to put over "Discover Music" they need me as well as the big city

dealer with the branch stores.

True, in some ways, this freewheeling and independent-minded way of operating is frustrating to those who hope to find progress through efficient organization. Here, in this business, and it is a business as much as it is an "art," you will find the free spirit, the opposite of the organization man. You will find more self-starting and self-motivated people, doing what they find most rewarding than in just about any other solvent business operation.

It is all these little people, teachers, musicians, technicians, wholesalers, retailers and manufacturers who give our music business this look of disorganization and confusion. But the cement is there, the cement of dedication, self-achievement and growth, the thrill of being "in the arts" even though not an artist, which binds all of us together into the music field.

Answer To Problems

The major problems facing our nation today are the energy crisis and the depletion of our natural resources, unemployment and the basic human relationships of getting along with one another. Since in the music business, our products are not discarded after use, we in no way waste our natural resources. Because its basic source of power is human energy and genius, it in no way depletes our precious power reserves. Because it requires people doing things and thrives only when people are making music, it is the direct opposite of unemployment. And because music speaks to basic human feelings and emotions, the common tie that binds us all, it draws us together in harmony and understanding.

Nickle and dime? Maybe - but only if you consider things more important than people. I'll take the people and the frustrations, you can have the factories and the automation!

The values which make music the great business it is do not show up in the Gross National Product. They are real, nevertheless, and their importance surpasses those factors which can be conveniently measured and made into statistics.

Charles P. Huether

MARCH 1982 PIANO TECHNICIANS JOURNAL

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Reader Feedback

Dear Board Members,

May I suggest that your organization and the National Piano Manufacturers Association of America co-sponsor a massive drive to glorify and sell acoustic pianos, possibly under the acronym S.H.A.R.P. -- Society to Honor and Advance Real Pianos.

We pianists are sick of entering a job only to find no piano or a bad one, then having to lug in our heavy and inadequate electric pianos while the manager saves money.

And most people with any sensitivity are sick of how guitars dominate, leaving an entire generation with little or no taste for piano at all.

A massive ad campaign is needed. Perhaps your agency could create an animated character -- perhaps "Kitten On The Keys" who would beg owners to take care of their pianos -- it might create more work for your members and more appreciation of pianos.

I'm mad as hell, and I'm not going to take it any more.

Are you?

Sincerely,
Eric Stevens

Dear Mr. Santy,

Should any Piano Technician or any person hear of the whereabouts of a Steinway Piano Model M-Ebony - serial number 472727, could the person or persons please contact us immediately, this piano has been reported as stolen.

Thank you, for your time in this matter.

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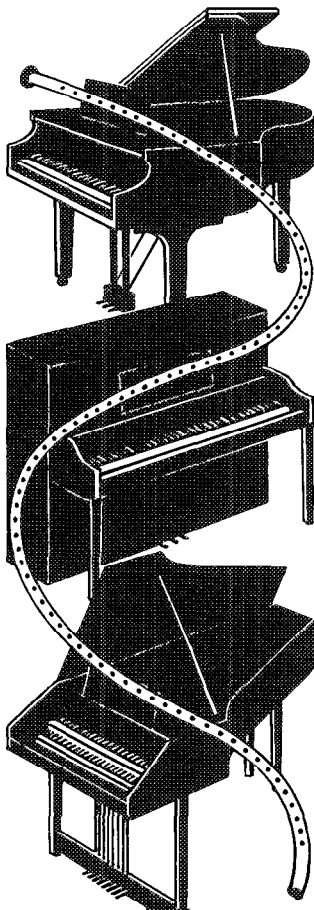
If you were a cardiac surgeon and someone invited you to a meeting with the top cardiac experts in the country where the surgeons would be more than happy to discuss their theories and methods with you, would you go?

If you were a lawyer with a small practice here in town and you had a chance to go spend a week with F. Lee Bailey, justices from the Supreme Court, Marvin Mitchellson and other well-known attorneys, would you go?

If you were a piano technician and you had a chance to spend a week with the most talented technicians in the country, people who have developed innovative theories and techniques, people who have written books on the subject, people who have serviced pianos for the best musicians in the world, would you go? Would you go if you knew all the major suppliers to the industry would be exhibiting there so you could meet them and talk to them on an individual basis? Would you go if you knew the people there would all be eager to discuss the pianos you know and love... and the occasional ones which exasperate you...as you are eager to talk about these pianos and to learn more about them? Would you go if you knew that people at this gathering could advise you about ways to make your business run more efficiently and bring you more satisfaction?

Surgeons are not so fortunate... they rarely have the chance to work closely with the top cardiac surgeons because there are so many others in their field who would like to have the same opportunity.

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many lawyers afoot that most state organizations have more members than the entire Piano Technicians Guild.

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PRESIDENT'S MESSAGE



Sid Stone, President

This month's message is being written ten days before SUPER BOWL XVI and three days before my deadline to get it to the Home Office. San Francisco's slogan is "Everybody's Favorite City", and now it has produced a football team that has won the admiration of everyone -- and for those living in the San Francisco Bay area it is "49-er Fever".

Unfortunately I will not be able to watch or listen to my favorite team play in the Super Bowl because the mid-term Piano Technicians Guild

Executive Board meeting will be in session at that particular time. Nevertheless, I learned a few things in my limited experience in high school football, and by watching professional football, which can be related to my experience in the Piano Technicians Guild.

Two necessary elements in making a winning team are; (1) coaching, and (2) teamwork. You may be surprised to learn that I was actually "coached" for the office I now hold. My predecessor felt a responsibility in this area. However, at the closing luncheon in San Francisco last July, I was handed the ball and was expected to run, not knowing whether I would run forward, sideways, or backwards. On a few occasions, I have passed the ball to other members of the Board team, and a time or two I have fumbled the ball. I called time out for three weeks to go to China. Fortunately, as of this point I have not done much kicking. I have been on both offense and defense, and only time will tell what the score is.

A football team may have the best coach in the world, but without TEAMWORK there is no victory. We sometimes hear of dissension and

fightings among players off the field, but all that is put aside when they are actually faced with the goal they are paid to accomplish. This requires TEAMWORK. The team of officers you elect each year are paid no money to work for the Piano Technicians Guild. They are like football players in the respect that there is not always harmony and agreement among themselves; this comes out in letters, over the phone, or at Board meetings. Yet, when faced with the goal of bettering the Piano Technicians Guild, we must put aside any personal feelings for the good of the whole.

TEAMWORK in the Piano Technicians Guild involves not only your elected officers and the Home Office staff, but also YOU as a member of our organization. It means being more than a spectator in the stands. It means more than being a Monday-morning quarterback. It means getting the team spirit -- the "Piano Technicians Guild Fever", and being active in your local chapter, the grass roots of our Guild. Your chapter may not be as active as the Washington, D.C. Chapter with the 25th Anniversary Convention coming up, but you do have a part in the total "game".



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Book Review

Alfred Publishes New Well-Tempered Clavier

Alfred Publishing Company, Inc., announces the publication of a new edition of Johann Sebastian Bach's *THE WELL-TEMPERED CLAVIER*, Volume 1. Edited by Willard A. Palmer, this 220-page volume is the latest addition to Alfred's expanding Piano Masterworks series.

Dr. Palmer's new edition is the most authoritative and useful *WELL-TEMPERED CLAVIER* ever published. In preparing the volume, Dr. Palmer used not only Bach's original autograph manuscript, but also every other important source known to exist. Also, for the first time in any published edition, the original and alternate forms of certain preludes and fugues are included.

A 27-page forward explains in detail the origin of *THE WELL-TEMPERED CLAVIER*, the sources upon which this edition is based, the various compositional devices used, ornamentation and performance practices, phrasing and articulation, and other pertinent topics.

Suggestions are given for every or-

namment, with all important variants explained either in the text or in footnotes. Tables indicating the various metronome tempos used by recording artists and suggested by previous editors are included, and a special section shows the many different articulations that have been applied to the fugue subjects.

As in all Alfred Masterwork editions, the original notation is presented in black print. All editorial markings -- including discrepancies between Bach's autograph and other published editions -- are printed in gray. The music engraving is openly spaced for easier reading, and with due consideration to page-turning problems.

Alfred is offering *THE WELL-TEMPERED CLAVIER* IN TWO VERSIONS. A softcover version is priced at \$15.00 and is available at music dealers everywhere. A very special leather-bound limited edition of 1500 copies is also available at \$50.00 each.

The limited edition features gold-trimmed pages, bound in bonded leather with the title stamped in gold. Further, each copy is personally signed by the editor, Willard A. Palmer. This limited edition is available *only* through the publisher.

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Coming Events

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Note: All seminar dates must be approved by the Conference Seminar Committee. Please submit the appropriate information on the Request for Seminar Approval Form **which may be obtained from the Home Office.**

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University of Los Angeles

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Marina del Rey, CA 90291
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New Orleans, LA 70115

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Kalamazoo, MI 49002
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THE TECHNICAL FORUM

Jack Krefting,
Technical Editor

TRAVELING HAMMERS

QUESTION: "...I read something recently about traveling hammers that seems to cover new ground. The gist of the article was that the commonly accepted method of traveling might not be good because it only offers a comparison instead of absolute reference. If all the flanges were machined on the same equipment, they could all be off to one side or the other, and lifting the groups of shanks with a screwdriver wouldn't show this. All it would show is whether they are traveling parallel to each other, not whether they are correct. The suggestion was made that a vertical line in the background be used as a point of reference when watching a hammer rise, and to travel every fifth or tenth hammer to the line. These would then become reference points, and all the rest would be traveled to match. It sounds good to me...what do you think?..."

ANSWER: If we are talking only about the upper half of the scale, this would be fine -- admirable, in fact -- but it won't work wherever the hammers are hung at an angle. In the tenor and bass, the hammers actually describe a compound arc as they move toward the strings. **Figure 1** shows the movement of a treble hammer, with its noticeable deflection from a straight line when viewed from the side, and with its perfectly straight upward motion when viewed from the front.

Figure 2 illustrates the compound arc of the tenor hammer as viewed from the front. This hammer also moves in its primary arc around the fulcrum of the action center, of course, so that is not illustrated here; it would be the same as that of the treble hammer in **Figure 1**. The important point is that the angled hammer takes a curving path in two planes instead of one because of the angle of the boring.

Ideally, we want the hammer to strike the strings squarely, so when it is touching them it must be straight up and down in both planes. **Figure 3** shows that, at rest, the bass hammer

must lean toward the tail and toward the bass side slightly if it is to be straight when it strikes the strings.

One thing we must always keep in mind is that we do not travel hammers. We align hammers, but when hammer traveling is discussed, we mean to say that we are traveling shanks; or, if we want to really get nit-picking about it, we are *de-traveling* them, or preventing them from traveling sideways. The terminology gets a little silly sometimes, sort of like going to the supermarket and buying "boned chicken", which of course is really *de-boned*, the opposite of the way it sounds.

In any case, the general idea of having a background of vertical lines on a contrasting field is good as a general point of reference, so long as it isn't used to align bass and tenor hammers in the rest position. It would be chancy even at the striking height, because of the tapering of hammer tails, if the technician were trying to sight along one edge of the hammer to align it to a vertical line. It is really better to use a hammer square down through the strings, in my opinion, if we are talking about aligning hammers. If we are *traveling*, then we are altering the plane of the centerpin so the shanks move straight and parallel, regardless of what that does to hammer alignment.

TIGHT TUNING PINS

QUESTION: "I recently tuned a grand that had been rebuilt in Los Angeles and then moved to San Francisco.

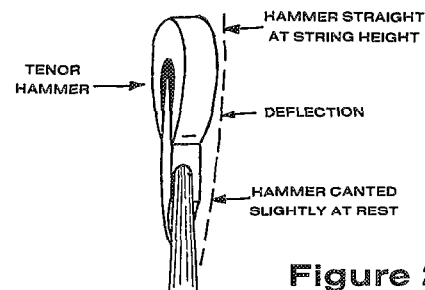


Figure 2

The tuning pins are extremely tight and 'jump', especially in the treble section. Accurate setting of the pins is virtually impossible. I'm sure most tuners encounter this problem from time to time. Can anything simple be done to alleviate the problem, or is removing the offending pins and reaming the pin holes the only answer?" -- Tom Solinger, San Francisco, California

ANSWER: Obviously the rebuilder failed to check the torque before drilling all the holes, and the problem would have been easier to solve at that stage. Tight pins can be caused by using the incorrect drill bit for the particular block material, or by drilling at the wrong RPM or feed rate, or by using pins that are longer than necessary, etc. The simple act of using rosin on the hands while stringing, for example, can add up to eighty inch pounds or so to the initial torque readings, which can be disastrous if the torque was already fairly high.

Tuning pin diameter varies also, and there is no pin manufacturer that can guarantee uniformity from one pin to the next, even in one set. I have

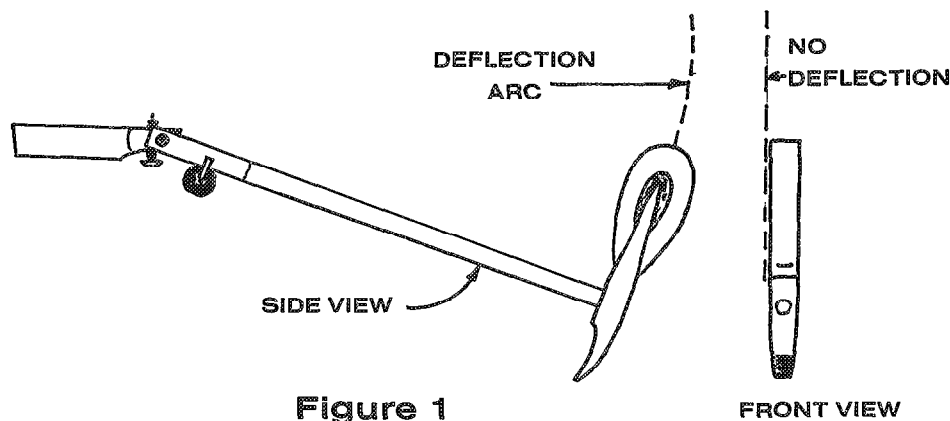


Figure 1

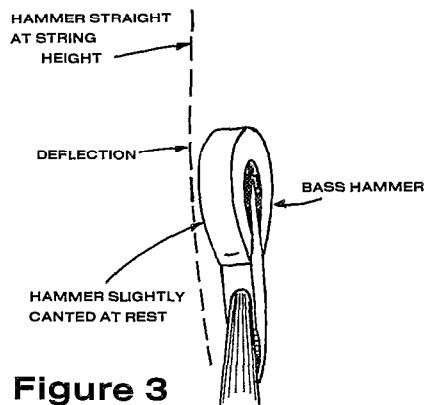
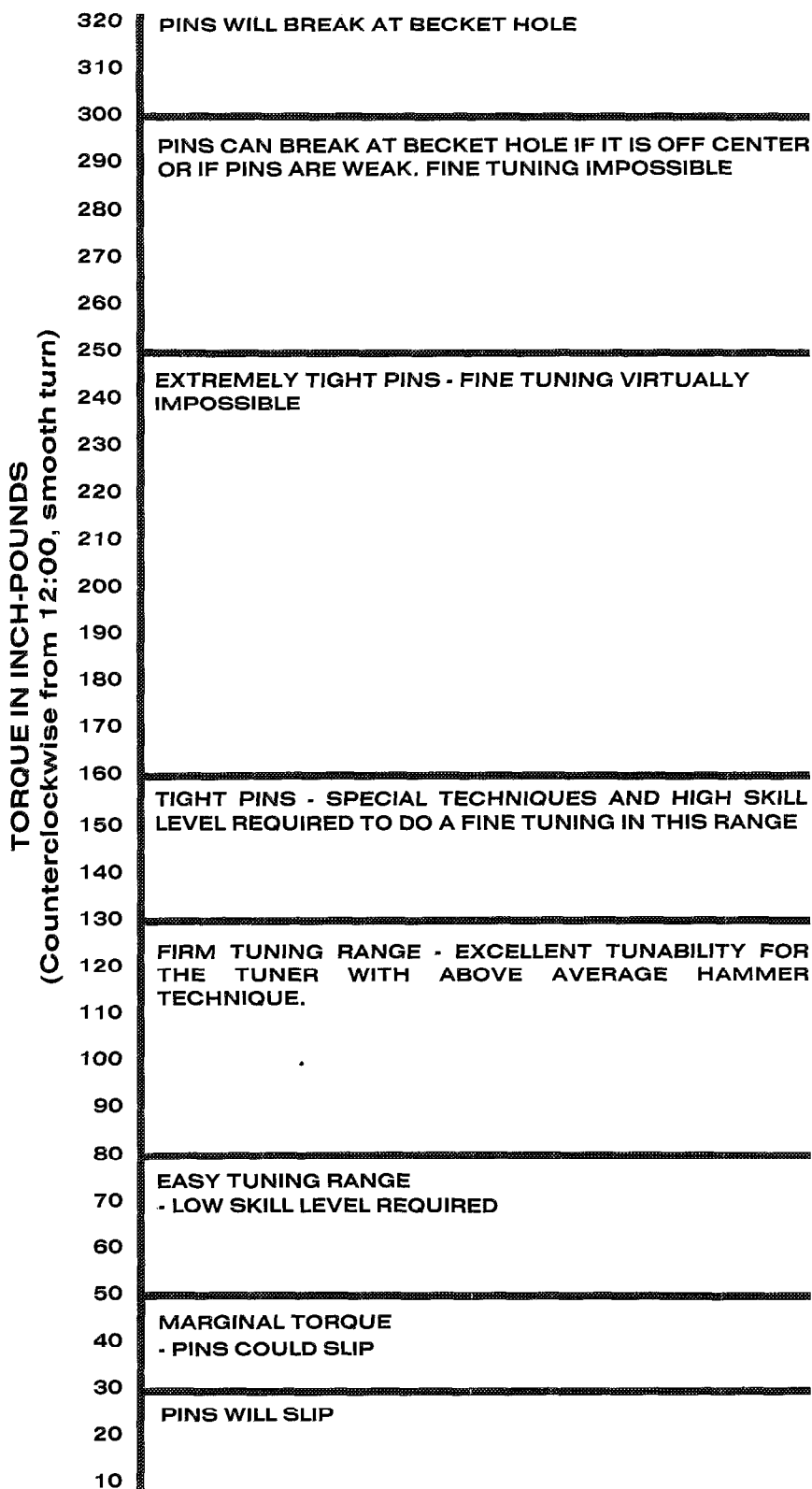


Figure 3

measured pins which were supposed to be 00 size, and found them to range in diameter from 0.2805" to 0.2821", an unacceptable variation in my opinion. Pins of domestic make were a little more consistent than those made in Germany or Japan, but the U.S. product wasn't perfect either. The new technology involving multilaminate pinblocks, which is gaining acceptance around the world, pinpoints the need for tighter tuning pin diameter tolerances because of the denser multilaminates require a larger hole and do not readily crush in the manner of traditional quartersawn blocks. Piano makers who use thick-ply blocks usually drill them with bits measuring anywhere from 0.245" to 0.260", while the multilaminates seem to require hole sizes in the range of 0.266" to 0.272", depending on density and wood specie. All of these holes are drilled of 00 pins, so there is obviously a lot more crushing of fibers with the thick-ply blocks. Where there is a minimum of crushing, uniformity of diameter of pins would seem to be of paramount importance. This is, I think, one of the reasons that multilaminates are tricky and less forgiving to drill, all their advantages notwithstanding.

Tom didn't say what kind of block had been installed in this grand, only that the pins are inordinately tight. What one tuner would consider to be too loose or tight, another might consider ideal, within reason, but when a tuner of Solinger's experience says a block is tight, we can assume it's *tight*. I have prepared a chart, **Figure 4**, which represents my opinion mostly, but with a few hard facts thrown in -- we know, for instance, that pins will definitely slip at 28 inch pounds and that they will break at 300 inch pounds. Everything between these extremes might be considered negotiable or debatable ground, I suppose.

Figure 4



Before we discuss the chart, let me specify the manner in which the torque readings are taken. I am not talking about *breakaway torque*, which will always be higher numerically, but about the torque reading on a *smooth turn of the pin in a counterclockwise direction from 12 o'clock*. On a vertical piano, the torque wrench would be placed so its handle points as nearly straight up as possible; on a grand, the handle would point toward the hitchpin of the string being checked.

Now to the readings. Some tuners will tell you they like torque in the 35-lb. range, while others say that anything under 100 is chancy. If we were to poll the Guild, I suspect that the average tuner would prefer to tune a piano with consistent readings in the range of 65 - 75 inch-lbs., though he might feel more confident of the holding power of the block if the readings were somewhat higher. On the other hand, readings above 150 inch pounds are descriptive of a piano that is frustratingly difficult and time-consuming to tune.

The actual torque reading doesn't tell the whole story, either. Two pianos could have identical readings and yet one of them would be easier to tune; for example, if one had a thick plate at the web and the other had an open block, as illustrated in **Figure 5**, the pins in the piano with the thick plate would twist a lot more before turning because of the longer unsupported distance between tuning hammer and pinblock. Assuming the pins in both instruments are the same length, which might or might not be the case, in order to have equal torque the heavy-plate piano would have to have tighter holes because less pin surface is touching the block. The fact that the pin is tightly gripped at the bottom, rather than being firmly gripped along its entire threaded length, makes it

not only twist but also spring. This springing or bending of the pin, sometimes called "flagpoling", presents another facet of the problem to the tuner. The amount of spring left in the pin after tuning, as well as the amount of clockwise torque left, must exactly balance and counteract the force exerted on the pin by the string, otherwise the piano goes out of tune after a few hard blows. In addition to all this, if the pins are very tight or, worse yet, jumpy, then fine tuning becomes just about impossible.

I would not suggest reaming holes. If the pins are merely tight, not tight and jumpy, simply backing them out a few turns and pounding them back in will loosen them noticeably. Of course, this requires that the becket be removed from the tuning pin temporarily, so if more than a few pins are too tight it becomes quite a big job. An alternative, less effective but a lot quicker, is to very quickly turn the pin counterclockwise about ninety degrees and back up to pitch. Since only one string at a time is being radically lowered, this isn't nearly as disruptive of the tuning stability as if tension were uniformly lowered and then restored. The idea of this procedure is to prematurely wear out or scrub away some of the end-grain wood fibers. Some pins have a rougher thread surface than others, and some blocks are denser than others, so the effectiveness of this procedure will vary quite a bit. Incidentally, an easy way to estimate the density of a block is to find out what size hole is customarily drilled for a 00 pin --- all else being equal, the hole diameter must increase with density.

I think we have covered jumpy pins recently in these pages, but briefly I will say that jumpiness is not necessarily related to high torque readings. It may be caused by a pin

that is out-of-round, in which case the pin should be replaced; or it may be caused by some contaminant, such as natural oil from the stringer's hands. In this event, remove the pin, swab the hole with varnish, and replace the pin. An alternate procedure used by some technicians is to use chalk on the pin instead of varnish in the hole, although people who have tried both methods generally prefer the varnish.

REPLACING WHIPPEN CORD

QUESTION: "...I service an old grand that has the Schwander-type whippens with the silk cord connecting the jack to the spring. The problem is, the cords are deteriorating and a few of them have broken already. I can't find a reference to this problem in recent *Journals*, except one which suggested tying thread around the jack in a surgeon's knot. What is the generally accepted method?..."

ANSWER: I wouldn't use thread, as even carpet thread would wear too quickly. The best material would be nylon, probably, since it is very strong and is impervious to the elements which cause the deterioration of natural fibers. Dacron is almost as strong, and is used in applications where the stretching characteristic of nylon would be unacceptable. Silk cord is good, too, although it will eventually deteriorate. In a pinch, monofilament fishing line will work.

In this particular instance, since it is obvious that all loops are deteriorating and several have already broken, common sense would seem to dictate mass replacement. Anything less than that is sure to lead to repeated house calls, dissatisfaction and, in the long run, more expense. Silk loops are like plastic elbows --- once they start breaking, it's only a matter of time until they all break.

Upon close inspection it will become obvious that the original loop was held in position by a small plug which was either tapered and pressed in, or not tapered and glued in. In the former case, it is possible to simply push the old plug out and remove the remains of the silk cord. In the latter, drill out the plug. The size drill bit to use is dependent on the thickness of the new cord --- drill a smaller hole if monofilament will be used than if the new cord will be heavy silk, for example --- and my suggestion would be to make a dry run first on a scrap piece of wood to be sure the hole size is right before drilling out all the jacks. What we want is a hole that will admit two thicknesses of cord plus about a

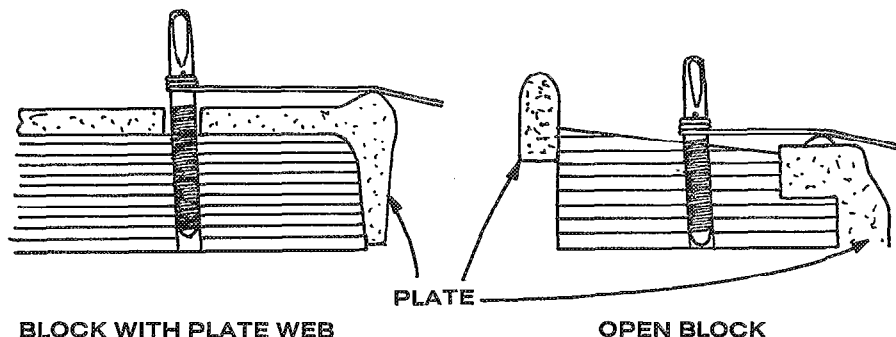


Figure 5

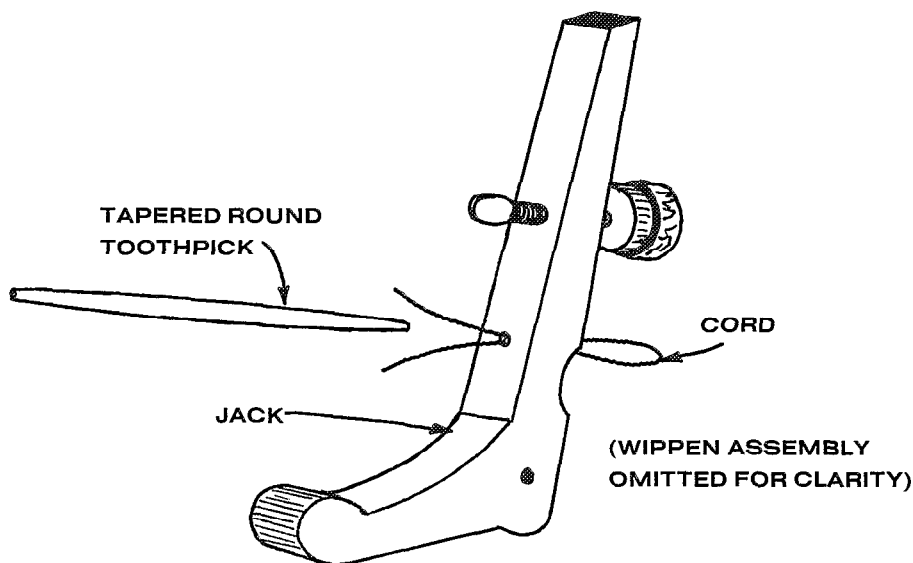


Figure 6

fourth of the length of a tapered round toothpick, as shown in **Figure 6**.

Note how much of the point projects beyond the back edge of the jack and trim that much from the ends of 44 toothpicks as shown in **Figure 7**. Since the toothpicks are tapered on both ends, each toothpick will plug two jacks.

It is important that the loops be equal in length, and that the length is the same as the original loops. I suggest the use of a Popsicle stick or something similar as a gauge. Find one of the original loops that is as yet unbroken, and whittle the stick down until it will just fill the loop as shown in **Figure 8**, which also shows how to make a loop inserter out of a piece of old bass string. Now, if all jacks are drilled out and we have the cord, glue,

gauge, toothpicks and hobby knife ready, we can proceed quickly and accurately.

Figure 9 is a step-by-step illustration of the procedure.

GHOSTING DAMPERS

QUESTION: "There is a good quality grand piano here in town that gives a noticeable strumming noise when the damper pedal is depressed. The felt seems to be strumming the strings as the wedges begin to clear, yet the regulation is fine. Can anything be done?"

ANSWER: Try ironing the sides of the wedges to make the nap lie down. Most of the dampers can be ironed without removing them from the piano if the upstop rail is raised all the way.

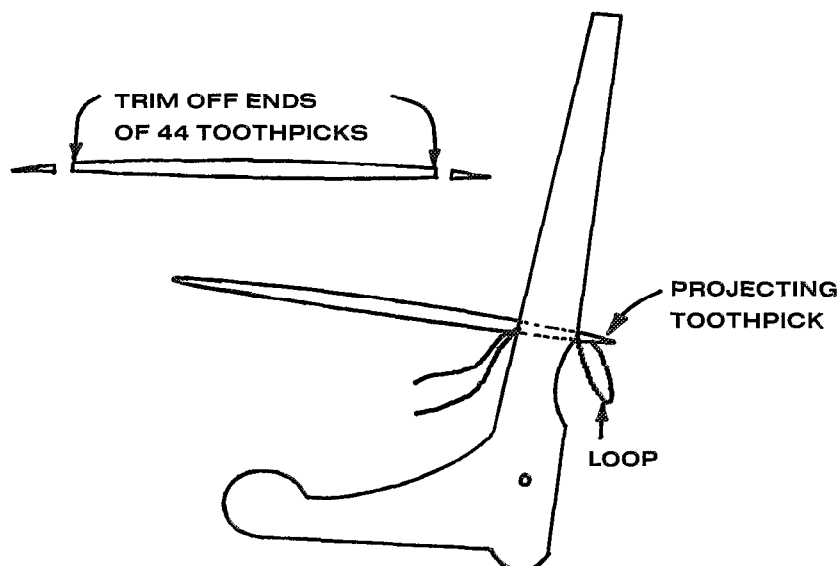


Figure 7

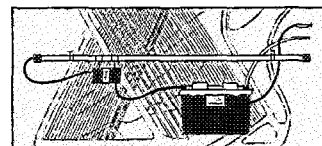
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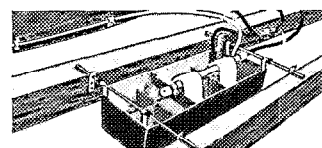
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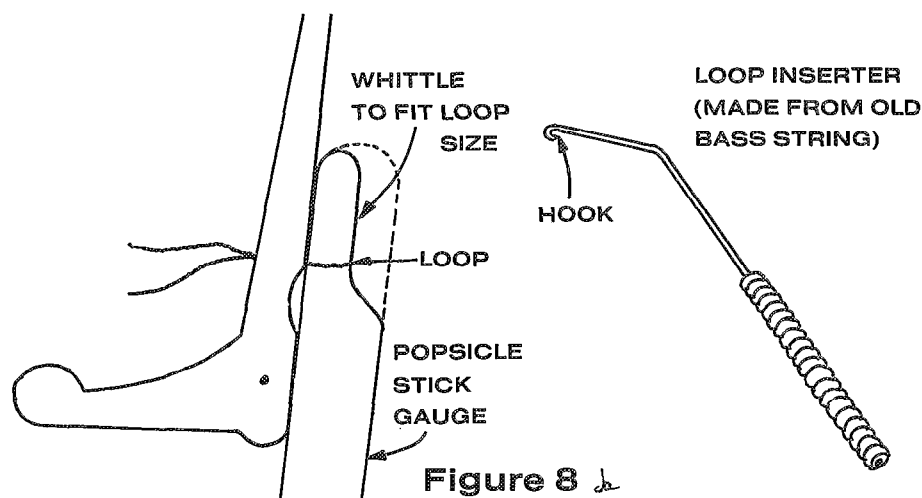


Figure 8

Heat a pallet knife, lift a damper head as high as possible, and smooth down the wedge with the hot steel. Don't make it too hot, though, or you will scorch the felt.

The trichord wedges are more difficult to iron, so I suggest removing them for this procedure. It is also a good idea to inspect them for the possibility that they may be pinching the center strings and strumming or ghosting for that reason. This can be cured by cutting the slot deeper with a razor blade and pulling a piece of string in as far as possible. Don't glue the string in place, just pull it in and trim it flush and it will stay there. Its diameter has a slight wedging effect,

pushing the points of the trichord wedge slightly further apart. Then iron the inside of the slot just as the out-sides were done.

READER COMMENT

Editor, *Piano Technicians Guild Journal*,

Recently a few musicians have expressed to me interest in having their pianos tuned to an unequal temperament. I would like to get in touch with other tuners who have noticed this phenomenon and exchange notes to see what works well for them. I use a mixed 1/6th, 1/12th comma temperament I got from fortepianist Malcolm Bilson, who started deviating

from E.T. in recitals and recordings about a year ago. I reduce the fifths C-G-D-A-E by 1/6th comma each, tune the fifths E-B-F# and Bb-F-C to E.T. and the remaining four fifths pure. Prof. Bilson is the only artist pianist I know who retunes his piano. However, I would not be surprised if others followed, in view of what seems to be a growing belief that Bach and early classical music are not best served by E.T. A discussion of this may be found in the article on Temperament in the New Grove's Musical Dictionary, London, 1980. Philip P. Jones, Bethesda, Maryland.

IN CONCLUSION

Our thanks to all who contributed to this issue, as well as those who sent in temperaments. We are about ready to go with that series. I hope, and it should be most informative. In the meantime, this month we present a very interesting article on tuning by Gary Shulze.

All technical material for possible publication in the PTJ should be sent to me at this address:

Jack Krefting,
Technical Editor
3802 Narrows Road
Erlanger, KY 41018

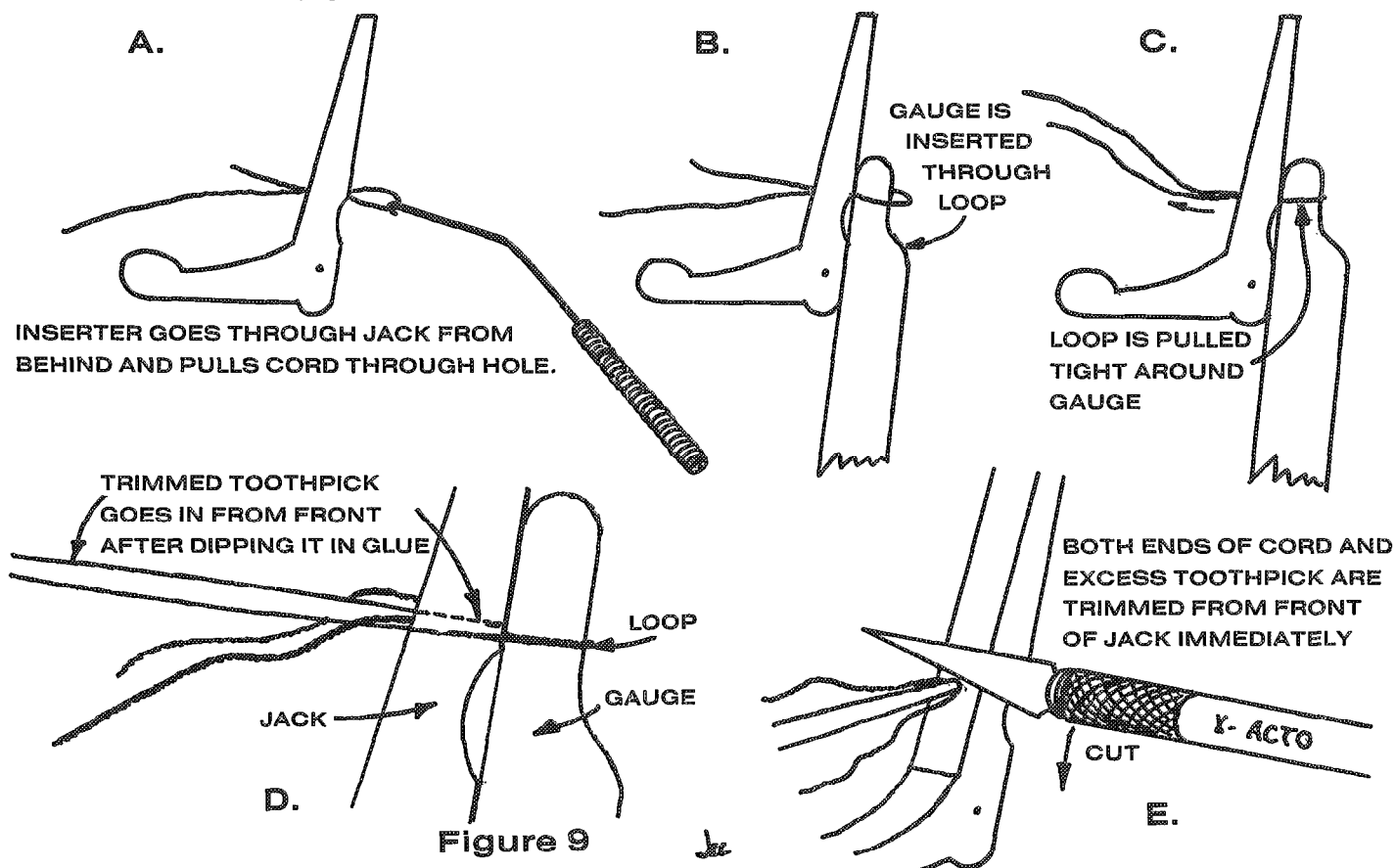


Figure 9

THE TUNER

Paul Monroe RTT
Orange County Chapter

(This is a continuing article for the apprentice and the student. To understand what follows in this article, I suggest you read what was written last month.)

To summarize where we are to-date, the temperament is tuned and the octaves in the tenor and treble sections are also tuned. We are about to proceed from the temperament down through the bass section.

Recheck the temperament, make adjustments as necessary remembering to check the tenor and treble octaves if you do make any changes.

Tune E3 to E4. Check this octave using the 3rd-10th test, the outside 6th-inside 3rds test, and check the even progression of beat rates in the 3rds, 6ths and 10ths. These beat rates should be slowing down as you progress down the keyboard. There are other tests but at this point these tests will achieve a good tuning for the beginning tuner.

Some readers may not have understood the outside 6th-inside 3rd test from a previous article so I'll explain again by example.

The M6th, F3-D4 beat rate should be in between the beat rate of M3rd, G3-B3 and M3rd, G#3-C4.

M3rd	G3-B3 = 7.8
M6th	F3-D4 = 7.9
M3rd	G#3-C4 = 8.0

In tuning the bass section, I use all of the test intervals available until the beat rates become too slow and tend to slow down my tuning. It is at this point, and it varies from one piano to another, that I utilize the simple use of coincidental partials.

For this article I will start using F2 as a starting point. Tune F2 to F3. Try to tune the octave as pure as possible. To check the accuracy, depress F2 & F3, slow enough not to strike the strings and sufficient enough to release the dampers from the strings. As you hold down the octave, in staccato fashion, strike F4. Left handed tuners on verticals with their left hand and right handed tuners with their right hand. What do you hear? Is it pure tone without any beats or a rolling effect? Which side of perfect is it tuned, the contracted or

expanded side? It should be on the expanded side of perfect, without beats and at most with a very slow roll.

By holding down the octave and striking F4, the double octave of F2, you excite the 2nd partial of F2, the bottom note of the octave. You also excite the 1st partial of the top note, F3. This method of tuning in the bass section will give you basically pure octaves.

There is another way of tuning the bass section using the same method but exciting different coincidental partials. Hold down the octave F2-F3 and in staccato fashion, strike C5. This will excite the 6th partial of the bottom note, F2 and the 3rd partial of the top note F3. I try to make this combination beatless. (Keep checking the beat rate progressions on the 10ths and 17ths.)

By now you are beginning to think this tuning business is phenomenal so let me introduce another phenomenon. When you first play the octave F2-F3, you have difficulty hearing the combination of the 6-3 coincidental partials. I have found the following suggestion works not only for me but for many of my tuning students.

Hold down the octave F2-F3 as before. Strike in staccato fashion C5. Listen for the tone. Now play the octave F2-F3 and listen. You should be able to hear the 6-3 coincidental partial more clearly than before. Eventually you will be able to utilize this method and increase your speed in tuning the bass section.

For a little enjoyment try the following experiment. Play the octave C1-C2 and record on paper what you hear. Then hold down the octave C1-C2, releasing the dampers from the strings and in staccato fashion strike C3-G3-C4-E4-G4. Listen. Now play the octave C1-C2 again and record what you hear this time. It is surprising what you can hear when you wake up your subconscious computer.

At this point I can visualize some of our long time craftsmen tuners are saying. "Aha!--Wait 'till they start tuning. It isn't as easy as it sounds when you read the words on the written page"; and they are right. So what follows are some of the problems you will be facing.

In some pianos, the transition from plain string to wound string causes a hitch, as some technicians call it. In other words you can *not* have the beat rates of every Interval you have tuned fit in with perfection. You will have to compromise. ie: As you progress down the keyboard the beat rate of the M3rds should slow down evenly. You may find that M3rd C3-F3 may have the same beat rate as C#3-F#3. This can happen, not only with M3rds but with all of the other intervals such as the M6ths, 4ths, 5ths, etc. etc. However, to have the M3rd C3-F3 beating faster than C#3-F#3 I consider *unacceptable*.

Other areas where compromise is common in small grands and vertical pianos is the tenor-bass break or transition where wound strings start to cross over the tenor section, moving from bicord unisons to unison and from single wound to double wound strings.

In my experiences the sections of a piano that need compromising vary from one instrument to another. Therefore it is virtually impossible to describe what to do for every piano. Remember however that the piano must sound as good as it was designed to sound when you finish tuning.

It has been said that a good tuner is one who is a master in the art of compromise. For this capability there is only one source and that is experience. With each piano you tune you will learn more about it. May I suggest at this point that when you complete tuning a piano, make sure you are satisfied. If you are satisfied, most likely your client will be also.

Hopefully these articles have been of assistance to the beginning student and apprentice. They have been designed to motivate you in becoming a good craftsman tuner. Therefore, please remember that the tuning procedures in these articles are but a beginning. When you have mastered these few suggestions, be creative and do some research and analysis of your own. If you wonder about some of the things you come up with, ask someone in your chapter to check out your discovery.

Next month the topic will be unison tuning and hammer technique. □

VACUUM LINE

Raye McCall, RTT
Pomona Valley Chapter

One of the player classes which was presented at the last National Convention was entitled "THE LEAK STOPS HERE". The main topic of discussion was valves.

Valves are found in several different configurations throughout the player system. Therefore the work which is done in repair or replacement must be done by a technician who is knowledgeable in the player theory of operation, because valves are at the very heart of the player system, since they control the movement of air.

All valves in the player system can be placed into two categories: Direct and Indirect. Simply stated, a direct valve is one which controls the movement of air without receiving a signal from another source. It follows then that the indirect valve must receive its signal from somewhere, thus causing it to function.

Some examples of direct valves would be:

Knife valve - such as is found
in some governors

Motor slide valves - on the air
motor

Finger valves - those little buttons in the front of the keyboard on upright players

Expression control - Ampico or Duo-Art on - off, Loud pedal on - off, etc.

Flap valves - There are four on every foot pump player. Two are visible, and two invisible

Slide valves - Each governor has two, one for motor speed control, and another to bypass this speed control.

Note keying and expression triggering is done by valves which are in the indirect category, be they primary or secondary. These valves receive their signal from the tracker bar.

All valves must be clean, free of dirt or foreign particles, and in correct alignment in order to function properly. Beyond that, there is specific treatment which is dictated by either the kind of valve or the way it functions.

Attach a sheet of 220 sandpaper to a piece of plate glass. Use this to sand the motor slide valve as well as the surface of the air motor on which the valve slides. Sand in circular motion. When the surfaces are perfectly flat they can be lubricated with McLube 1725. This is a clear spray-on lubricant containing no silicone.

Knife valves need to be disassembled and sanded in the same manner. The lubricant applicable to them is McLube 1708. It is a slightly better lubricant, dark grey in color, and applied in the same manner.

Expression control valves also need to be disassembled and sanded in the same manner as above. If the pot metal valves are to be retained and used, check them carefully for any cracks. When they are reassembled, the mating surfaces should be lubricated with Player Lube.

Finger Valves - the wood surfaces must be clean and flat. Clean the spring and make sure alignment is correct. It is necessary to make certain that both the lateral and longitudinal alignment is as it should be. It can appear to be right and still

leak. Do not fail to install new leather.

The procedure used on flap valves is the same for player pianos as was described in the article on reed organs. Do not assume that the leather which you find there is still usable. Replace it with new adequate leather, pre-treat it properly, and install it correctly.

That part of the slide valve which is covered with pouch leather must also be perfectly flat. The surface on which it slides needs to be carefully examined to be sure it is clean and flat. It can be lubricated with McLube 1708. The small rods which connect to and are used to control the slide valves need to be cleaned and spray lubricated. The holes through which these rods pass should be rebushed. On top of most slide valves you will find a flat spring which is there to hold the valve against its seat. The tension in that spring should be adequate to do the job for which it was installed. When it comes time for assembly, it is very possible to get careless and negate all of the effort which you have put in up to this point. Use good workmanship techniques - that is just a good habit to practice at all times.

The indirect valves are all of the primary or secondary configuration. As a result, they are different to work on. They all have two seats which must be cleaned. In the case of Standard or Ampico, the removable seat is metal and can be cleaned by the circular sanding on plate glass. Cut a three inch long piece of dowel that will fit into the cavity from which the valve was removed. Attach a 220 sandpaper disc to the end of the dowel and this can be used to clean the inner seats, either metal or wood. You will find that frequent changes of the little discs will be necessary. The discs can be attached to the dowel by contact cement.

Both leather faces of the valve should be replaced. In our shop, only white alum valve leather is used for valves.

It is best not to take a chance with old pouches. Using the correct size arch punch, it does not take long to stamp out a new set of pouches, and then install them with PVC-E Glue.



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Another advantage to pouch replacement is that you have the opportunity to clean out the pouch cavity, as well as any dirt that may be under the bleed.

When all of the foregoing has been completed, you will be ready to reassemble the valve with the new leather, and set the travel. This is a critical step. If it is not done correctly, and with extreme care, the note will not respond as it should. Suggestion: To set travel use a depth micrometer with the attachment for reading downbearing. There may be a spring inside the micrometer which will need to be disconnected for this purpose. Set the two outside feet on the valve body, and the probe on the valve itself. Then with a tube connected to the valve nipple, exhale into the tube just enough to inflate the pouch, raising the valve and giving you a reading on the micrometer dial which will tell you how much travel you have. Most secondary valves should have .060 travel. The setting for primary, and single valves, is .031. The tool for setting primary valves is an automotive feeler gauge with a slot cut into the end of it to accommodate the center stem of the primary valve. Insert the bottom part of the primary valve into the hole so that the stem projects up through the hole. Lay the slotted feeler gauge around the stem. Now put the top part of the primary valve (cap) on to the stem and slide it down until it is snug against the feeler gauge. It will be necessary to support the bottom part of the valve while sliding the cap on. Put just a drop of glue on top of the cap to secure its position. Carefully extract the feeler gauge and the valve is installed with the correct travel. If you are working on a system which has just one valve per note, then the travel should be .028 to .031.

The Simplex player is one brand which has one valve per note. The valve body is an integral part of the pneumatic. The valve has an aluminum collar on the underside which has three small shoulders. Check the shoulders to be sure there are no burrs on them anywhere. When putting the ring back on the valve stem, the flat surface goes next to the leather. Put a tiny amount of PVC-E glue on top of the collar so it will stay in place.

Materials which you use in restoring player pianos need to be very carefully selected. Just because it is sold by a supply house as being the best material for the application in

question, this may not be true. It just might be possible to find a material which will do the job better for about the same cost if you are willing to invest time to find it, and have a strong desire to upgrade the product which you send out to your customer. □

Long-Play Accessory Introduced For Pianocorder Reproducing System

The Pianocorder reproducing system, the patented device which converts an ordinary piano into an electronic player, can now be adapted for long-play capability with an eight-track tape accessory introduced by Marantz Piano Company of Morganton, N.C. The accessory is designed particularly for the commercial users of the Pianocorder system -- restaurants, hotels and other businesses where piano music is desired continuously throughout the day or evening.

"This feature will make it even easier for a restaurant or club to create a new mood with ragtime or contemporary cocktail music," says Tony Blazina, executive vice president of Marantz Piano. "Restaurant owners who are currently using the original Pianocorder system in New York, Chicago, Los Angeles and other cities claim that it provides top entertainment equal to that of a live pianist, but at a fraction of the cost. With the long-play accessory, they should be able to reduce that cost even more by eliminating the need to change tapes every hour."

The new eight-track unit uses a tape cartridge which plays more than 65 selections (approximately 3 hours of music) before it automatically repeats. Systems equipped with the unit will accommodate Pianocorder's standard 45-minute cassettes, as well.

A "fun" feature of the long-play accessory is a special request switch which will interrupt the three-hour tape to perform a celebration or theme song, such as "Happy Birthday", "Auld Lang Syne" or "The Anniversary Waltz". Custom cassettes for this feature are available.

The entire unit is designed for remote operation, with tape deck and controls hidden behind a counter or in another room. It can be adapted to any new or existing Pianocorder system installed in a console, upright, spinet or grand piano.

For more information, contact Marantz Piano Company, Box 460, Morganton, N.C. 28655, or phone toll-free (800) 438-7023. □

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THE EXAMINATIONS AND TEST STANDARDS COMMITTEE

Ron Berry,
Chairman

Where are we one year later?

At the time of this writing, it has been one year since the new tuning exam became the official Piano Technicians Guild tuning exam. Where are we one year later?

A large amount of money was spent to get the exam implemented along with a lot of hard work by many people who were committed to the ideas of this exam. If we had been after a cheaper exam or one that was easier to give and that took less time to give, we could have come up with a number of systems. What the Council chose to do was have an examination that was better than the one we had before. This was not to say the previous exam was no good. Many people put hard work into that exam to make it the best exam of its time. The fact is that a new exam which would achieve the same goals of fairly analyzing a tuning had come into being and was found to be a better exam for its time. No doubt it will be replaced by something better in time to come.

We presently have 96 CTE's who have committed themselves to this exam. They have passed the exam at 90% and have spent many hours giving exams under the guidance of another CTE (Certified Tuning Examiner) so that they can be good examiners. This creates a snowball effect as these people can examine and train their own replacements. This can happen often within their own chapter.

The response of seminars generally

been good. The National Guild could not continue to spend large amounts of money to send examiners to seminars. Most seminars have decided to incorporate tuning exams as one of the features of their seminar. We know that many people have come to a seminar for the sole purpose of taking a tuning exam. This means that the seminars must bear the expense of moving pianos if necessary and whatever expenses are negotiated within the examiners. Most seminars in the Northwest Region went as far as to offer free registration to those who came to spend their time learning to give exams. These seminar coordinators realized that these people were using their own time and talent to learn something which would help the Guild more than themselves personally. Although I must admit that a person can learn as much about tuning by giving exams as he can by going to a class on tuning.

Perhaps the most important factor of all is that we have literally improved tuning across the country in a substantial way. When I first joined the Guild, technicians were always willing to share their ideas, but somehow tuning wasn't talked about all that much. Experienced technicians were always willing to critique my tunings, but somehow we never thought of tuning a piano as a group. The procedure of setting up the master tuning for the exam is the greatest spin-off of all. Vast amounts of knowledge are exchanged just by seeing the difference test tuners use. The idea of being able to realize just when the precision of the tuning is limited by the piano more than by the

tuners is a rare experience which one wouldn't believe unless there were other tuners there to concur and to share the moment. In the end, it comes down to the fact that we can define a good tuning quite precisely. This helps us and it helps us teach students more efficiently. We can now give helpful tests instead of just saying "tune it until it sounds right."

Obviously not everything has gone without a hitch. We haven't had "our act together" smoothly at times and

Perhaps the most important factor of all is that we have literally improved tuning across the country in a substantial way.

applicants have sometimes felt that we didn't know what we were doing. This is an inherent problem with any new system which is being worked out. A few chapters have been overloaded with applicants, which is certainly a problem of success where the examiners must train their replacements to share the load. Some chapters especially in remote areas have felt deprived of means to get new members. They say they are too small to invest in equipment and it is too far to get examiners together for an exam. Yet one of our test centers is a chapter with only two members left, and the CTE has been very active giving exams at conventions and seminars. For the spread-out chapter there is a problem; yet the problem is not related to examinations alone since just to have a meeting involves the same problem. We have been providing exams at seminars and conventions to help cover these chapters. The applicant gets an exam and a seminar that certainly will give him

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his money's worth for the travel.

It has not been our goal to have every chapter be a test center. Many chapters were glad not to give exams and have worked out arrangements with nearby chapters. The exam committee is making efforts this year to see that every chapter has a suitable arrangement for examining their applicants.

The resolution passed in San Francisco allows chapters to qualify an apprentice member based on an aural tuning test. This can be a help to remote chapters in that it gives them a way to get members if they are not set up themselves as a test center. I believe that any stigma attached to the apprentice rating can be lessened when the chapter's system is to make applicants apprentice members until they can get to a seminar, convention, or test center for the official test.

All told, we have come a long way in the first year of the official use of the exam...

The main factor is that we now have a standardized tuning test. We have had some chapters concerned because the test is too hard and some feel it is too easy. The fact remains that it is a standardized level and we can change the difficulty if desired, but we will all do it together.

My own chapter had a transfer member recently who pointed out why we have needed a standard exam. He came from another region where he had been examined in the old way and made an RTT. He knew that the exam he took was not strict enough and has felt bad about the rating and has not advertised himself as a craftsman member. I'm sure the chapter wanted more members and felt they were doing him a favor by making him a craftsman. What they did give him was a lack of confidence when he transferred to our chapter. He felt ashamed of his rating and thought we would think less of him because he knew he was not craftsman level. He was even hesitant to mention the experience with the former chapter because he didn't want to get them in trouble. He didn't realize we have known of this type of problem for a long time and have now made a new exam to prevent its happening in the future.

All told, we have come a long way in the first year of the official use of the exam thanks to the hard work of many people. We have made our steps in the right direction toward giving the craftsman rating a standard meaning of which we can all be proud and on which the public can depend.

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SOUND BACKGROUND

Jack Greenfield, RTT
Chicago Chapter

MUSIC AT THE START OF THE EMPIRE'S DECLINE

Greek music theory reached its most advanced development in the work of Claudius Ptolemy during the middle 100's A.D., a time when the Roman Empire was nearing the end of its period of greatest power and prosperity. Its decline began in the final decades of the century with the unsettled conditions brought on by the increasing menace of barbarian tribes on the east and west borders and the political dissension arising under the rule of a series of bad emperors.

The lack of further progress in music theory was part of the general deterioration in culture. Besides the effects of the political and social changes taking place, an important factor was the trend of philosophical study already under way, toward reexamination of the works of old philosophers -- editing them, commenting on them and interpreting them rather than advancing new concepts. The writings resulting from these studies do not rank as great intellectual achievements but are important for having preserved and given us a better understanding of ancient philosophy. An important book at the start of the second century A.D. providing information on early Greek music and Pythagorean principles was *De musica*, by a member of a sect of Neopythagoreans, Nichomachus of Gerasa, a small town about 50 miles northeast of Jerusalem. Nichomachus was active just before Ptolemy.

Beginning about 185 A.D. the Roman Empire entered an unsettled period of domestic turmoil and external warfare that lasted 100 years. The huge increase in taxes to support the enlarged army was a severe economic burden. The effect on musical activities was a drastic reduction in the lavish musical entertain-

The End Of The Era Of Greek Music Theory

ment of earlier times but there was progress in the development of the organ and the study of music theory continued. The all-pneumatic organ first appeared late during the second century or early the following century. In the late 200's Porphyry, a Greco-Syrian philosopher who had lived in Athens and Rome, wrote a work giving information on the life of Pythagoras and a commentary on Ptolemy's *Harmonics*.

DIVISION OF THE EMPIRE

In 285, the Roman Empire began a short period of comparative stability but it moved closer to its downfall when the Emperor Diocletian divided it into two parts. He ruled the eastern division from the city of Nicomedia in Asia Minor and appointed a subordinate to rule the western division from Milan. Rome now lost its important status as seat of the empire.

In 313, the emperors of the west and the east, Constantine and Licinius together issued the Edict of Milan making Christianity legal and annulling previous anti-Christian measures. The empire was reunified when Constantine, who had become emperor of the west in 307, seized control of the east also in 324. Constantine decided that the capital of the empire should be located in the east. The location he picked was the Greek town of Byzantium, nearly 1000 years old. Byzantium was renamed Constantinople in 330 when work was begun to establish a magnificent new city. After Constantine died in 337, there was a resumption of political turmoil and conflict with periods of divided rule leading to the final separation into the separate West and East Roman Empires in 395.

EARLY INFLUENCE OF THE CHURCH ON MUSIC

As the church gained power, its influence was felt in musical activities. The early church authorities rejected the idea of cultivating music as an art purely for enjoyment. They wished to banish music associated with Roman public spectacles, rowdy parties and events, and pagan cults. They permitted the use of the lyre and similar string instruments to accompany religious

chant, but banned the organ, widely used in the popular entertainment which continued in spite of the objections of the church.

In the east where the emperor and civil authorities had greater control over daily life, secular music was even less restrained. Here, the organ was an important element of the courtly pomp of Constantinople. Instruments at banquets, chariot races, weddings and similar events were decorated with gold and costly ornamentation. The later instruments were bellows-type organs while the hydraulis gradually disappeared. The arch of Theodosius I. in Constantinople built late during the fourth century shows a small organ with foot-operated bellows.

CONFLICT BETWEEN RELIGIOUS CULTS

The study of music theory was continued by members of the cults devoted to the teachings of ancient Greek philosophers. During the mid-300's, a member of a Syrian cult, who had studied with Porphyry, wrote treatises on the work of Nichomachus, Pythagoras and other Greek writers in music theory and mathematics. Since the Greek cults had religious purposes also, there was hostility between Christian and non-Christian sects. A serious outbreak of violent conflict arose in Alexandria which had still retained its position as a leading intellectual center. As a result, its prominence was dimmed in the early 400's by partial destruction of the library and the migration of many scholars to Athens wishing to leave the hostile environment of Alexandria.

SCIENTIFIC STUDIES IN THE EAST ROMAN EMPIRE

Ever since Plato's time a group of professional mathematicians had lived in Athens. Around 420 this Athenian school was enlarged by the addition of the scholars who had just left Alexandria. During the next century several important scientific works were written in Athens. The work of the school came to an end when the church had the Emperor Justinian issue a decree that "heathen learning" should no longer be studied in Athens.

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SHOP TALK

Susan Graham, RTT
San Francisco Chapter

Keys

Here's a collection of tips and ideas, loosely grouped under the heading "Keys". Although a thorough discussion of keys would include capstans, backchecks, action ratios, touch weight and so on, I won't be going into all those things. I mention them to point out that a piano key is more than just a stick of wood acting as a simple lever. It has certain critical tolerances which must be met for it to function properly; if the key doesn't work correctly, nothing else will either. In addition, keys greatly affect the appearance and market value of the instrument. They are the action part most familiar to the customer (in fact, many think the key is all there is and are astonished to see the complex mechanism inside). Therefore, time spent working on keys is time well spent.

One of the keyboards in the shop right now comes from a concert grand which has just done a long hitch in the Navy. The bushings are worn and saturated with gunk; there are loose key buttons and leads and the keys are "pulley". Key pins, capstans, backchecks and damper lifter felts are dirty. There is also damage. A sharp has been broken off, taking part of the key; other keys are split in front or have wood broken or gouged away. The action is to be "rebuilt". Where to begin?

First, after removing the stack, I'll vacuum up the loose dirt; the first of many cleanings so I can work without covering myself and the shop in old cigar ash. Even after vacuuming and brushing, the keys are stained and dirty, so an orbital sander (with 220 garnet paper) is used to sand the exposed wood surfaces (between keytop and balance rail, etc.). After this the keys will be removed to clean the the frame and replace the punchings so I don't worry about the grit from sanding; I'm also going to rebush or else I would avoid sanding around the balance rail mortises. This sanding really dresses up the appearance of the action. It may not seem important now but later when you pull the newly rebuilt action in the home and the customer comes running for a look it's good to have it as clean as possible.

As I remove the keys from the frame, I mark any which are pulley. A pulley key has an elongated balance rail hole. This allows slight forward and back motion of the key. It can be detected by grasping the key at the front and attempting to wiggle it back and forth, or by tapping the front and listening for a knock against the key pin. In playing, pulley keys will feel mushy, click as they are released, and cannot be properly regulated. They must be repaired and I mark them now because I want to do that at the same time as the rebushing.

The fastest way I've found to remove old bushings is to line up the keys on the bench and use an old iron and a piece of rag about 2' long and 1' wide. The rag is folded into a 2" width, soaked in water and placed over the row of bushings. The iron, preheated to high, is placed directly on the wet cloth, creating a cloud of steam. When the bushings are loose I slide the iron along to the next batch of keys and tweeze out the bushings. Experimentation will tell you how long the iron can be left to loosen the bushings but not inadvertently remove key tops or fronts. I remove the balance rail bushings first (checking for split buttons as well) then turn the keys over and remove the front

bushings. This leaves all the pulley balance rail holes exposed and ready for glue-sizing. A thin solution of water-soluble glue and hot water (1 tsp. glue to 1 pt. water) is mixed and a drop applied to the edges of the wood just inside the hole. A #10 screw works well as an applicator; it fits in the hole and picks up the same size drop each time. (Note: if the elongation is extreme the hole must be resized with wood by making a sawkerf across the hole, gluing in a shim and filing it to round the hole. Placement of the shim will affect front alignment so check the key on the frame to determine which way to "move the hole".)

The reason for doing these operations simultaneously is that each requires that the keys dry overnight. New bushings won't adhere to wood still damp from steaming; the glue size won't work and will gum up the key pins if it isn't dry. This way, both drying operations can take place at once.

While that happens, attention should be turned to the keyframe itself. Remove all the old punchings and backrail cloth, saving the least-worn as samples; observe how the backrail cloth is glued (at the edges only) and whether it is one or two pieces of felt. Unless you have good reason to do otherwise, match the thickness of keyframe felts carefully. The trick to matching punching thicknesses is to make stacks of several of each size and compare them to a stack of the old ones. I usually leave the old cardboard and paper unless it is very dirty. Check the joints in the key frame and tighten any screws which help hold it together.

Clean the key pins using Brasso or a similar non-abrasive cleaner; don't use even fine steel wool as it tends to remove plating, leaving the pins free to rust. If the pins are already badly corroded, replace them. More usually front rail pins are nicked from burred edges on the spacing tool or from improper use (it should only be used at the base of the pin in the area usually covered by the punching). Nicked pins must be replaced or they will chew up the new bushings (leaving tell-tale

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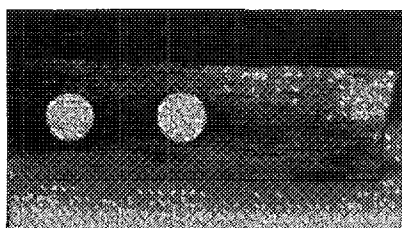
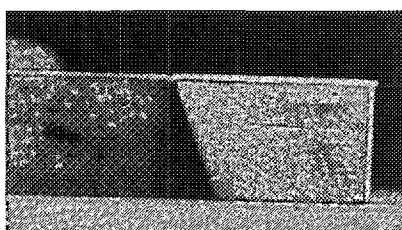
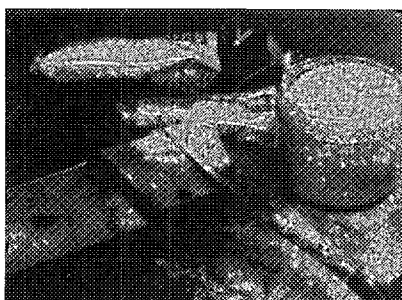
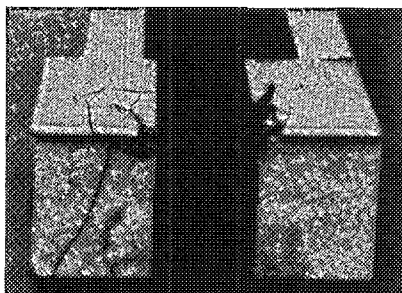
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piles or red dust on the punchings). Clean the glide bolt heads and the guide pins in the end of the frame with Brasso. When all of these surfaces are clean I use Slipspray or McLube on them as a *clean, dry* lubricant. It's not to make them work correctly - this depends on proper contact with

The following pictures show the keys before, during, and after repairs.



related parts - but to protect them and to aid in assembling and disassembling the action. Many pulley key problems are created by technicians forcing the key against the balance rail pin trying to remove it, so I lubricate the pins. I'm also careful to lift the key at the front and back simultaneously as I remove or replace them.

Before rebushing, replace, reglue or repair problem key buttons.

A few words about bushing cloth: it is a woven cloth, designed to stand up to friction against the pin. The best cloth has a hard, polished surface (not fuzzy) and is recognizable by its white core. It is sometimes referred to as 605 felt and is worth seeking out. Take care in selecting thickness of bushing cloth: too thin a new bushing is not much good, but if the cloth is too thick the key will stick and stick. This is because in order for key easing to be effective it must cause a dimensional change in the wood, so don't think you can put in thick cloth and squeeze it down. You'll only crush the key trying.

Bushing wedges must fit snugly but not too tightly or they compress the cloth and force glue to the pin-bearing surface. I don't like the metal spring clamps for this reason, and often find that the wooden ones which are split also have too much spring. These can be modified by increasing the length of the kerf; it can also be shimmed open if need be. I use hide glue (bushings should be removable) applied sparingly to each side of the mortise. Bushings should only extend into the hole as deep as it is wide; overlap the two ends of the strip over the hole so each end just extends to the opposite edge of the hole, push in a wedge, and cut the cloth flush with a razor blade. The front rail wedges must be tapped with a small hammer to drive the cloth down into the recess on either side of the hole; the wood of the key and not the bushing must contact the punching or the dip will vary. However, it isn't necessary to snake the cloth back out the slots in the key buttons!

Bushings should dry overnight before the keys are returned to the frame; usually some easing will be necessary. Glue-sized keys will also need easing at the balance rail hole. Of course you will ease only the sides of the hole and not the front or back; there are tools available for this. On the other hand, a second glue-size can be applied if necessary.

Moving along from bushings, what

else is there? Inspect each lead of each key. If any are loose, place the key on its side so the lead is supported and make an indentation in it with a chisel or punch to enlarge it. If the lead is loose because the key is split, remove the lead, repair the key and replace the lead. There are 3 sizes of key leads; all are slightly conical and should be knocked out large end first and knocked in small end first.

This pretty much takes care of the usual stuff. At some point before regulation the capstans should be checked for burrs and smoothed and buffed if necessary. Otherwise they are cleaned with Brasso and lubricated with Slipspray or McLube. The backchecks should be brushed with a suede brush (or replaced) and ditto for the damper lifter felts.

Before this action gets reassembled, though, it's necessary to repair damage to the keys where wood is missing. There are two ways of repairing such problems. Either new wood can be pieced in or epoxy can be used to fill the area: the extent and location of the damage determine which method to use. In some cases, such as sharp keys broken away at the front rail, there isn't enough surface left to hold a good epoxy bond, so wood should be used. If the damaged area is very large the expansion and contraction of the remainder of the key should be considered, since the repair must behave compatibly. Balance and weight might also be affected by filling a large area with epoxy.

On this keyboard, however, the damage is relatively small and the repair will be surrounded on three sides by the other material (wood or key covers) so I can use epoxy. Epoxy has the advantage over glue in that it has filling qualities. Rather than create attraction between the molecules of the wood surface as glue does, epoxy bonds to each surface and holds them together by its cohesive (internal) strength. In addition, there are epoxies which are pastelike, suitable where more body is needed.

We've all been cautioned against undated, untested epoxy from the local hardware store, but I'll just mention once again: don't use it. Stock up on the proper material or don't do the repairs in this manner. Keeping epoxy in the refrigerator will extend the shelf life, which is usually about a year. I keep three kinds on hand: Thermoset

Continued on page 23

AFTER TOUCH

David W. Pitsch, RTT
Utah Valley Chapter

50 Point Guide To Grand Regulation

Part XVIII March 1982 Step #35 The Aftertouch

Apparently not everyone understood what I wanted to communicate about regulating by the dip or blow priority methods. Whether a technician chooses one method or the other, the results will be the same. The letter which Mr. Cortes wrote and was published in the November 1981 Forum give the impression that depending upon whether the dip priority or the blow priority was used, the regulation would come out different. This is not the case. When regulating by the dip priority method, the technician *must* regulate completely a few sample keys to prove out by aftertouch that the distances for the dip and blow will work. Likewise when regulating by blow priority method. I have stated in the past why I like to use the blow priority method. These reasons will be restated, along with some new ones concerning the use of a key dip block.

Referring back to the grand regulation chart printed in the May 1980 After Touch article, only two steps affect the blow distance while five steps affect the dip. Of these steps, the key height affects both the dip and the blow. Regulating the key height was step #12 in the 50 point checklist, so it should not interfere when getting to section IV The Touch at step #31. This leaves only the jack height to affect the blow distance, while four steps still affect the dip. These four are the blow, jack alignment, let-off, and the drop. Remember that I always include the correct aftertouch measurement when discussing the dip.

What we want as the end result is uniform aftertouch across the entire keyboard. I find it faster and easier to use the blow priority method to obtain a uniform aftertouch. The fact that the jack height alone affects the blow distance while four steps still affect the dip is certainly one reason why I prefer to use the blow priority method. However, the dislike which I have for using a key dip block is by far the main reason. I would like to relate some of my experiences when trying to use a key dip block.

Given the choice between playing on a keyboard with plastic keytops versus one with real ivory and ebony, most musicians will quickly choose the ivory/ebony. This is especially true for performing artists. Their hands perspire while playing, and the ivory/ebony keyboard absorbs this moisture while the plastic does not. When performing very fast passages, this can make the difference between playing the correct notes or slipping and hitting the wrong notes.

Unfortunately, ivory keytops present a problem to the regulating technician. Amongst its other attributes such as discoloring, cracking, chipping, coming unglued, ivory also has a tendency to warp and to wear. On instruments where the ivories have been played upon so much that the keys have become grooved, or where the sides of the keytops have begun to warp up, I find it impossible to accurately set the dip with the use of a key dip block. Replacing these old ivories is not always possible, as the customer often would prefer these to plastic. Yet it is impossible to determine whether to add or subtract punchings using a dip block!

Another somewhat related problem is where the keytops have been replaced, but the job was less than desirable. Everybody has seen such a piano. The keytops moved a little when the clamp was put on and the tops of the key itself were not sanded level. The keys can not be leveled or squared properly. Yet the customer can not afford to replace the keytops again. But they would like the action to be in better regulation! Try setting the dip on such a keyboard with a dip block! The same situation occurs when the key buttons are very worn but the customer can't afford to have the keys rebushed. The only way to get the action regulated is to use the blow priority method.

Being a concert technician, I can recall many times receiving a phone call to come out and tune for a concert. When inquiring about what else the piano may need, the response is always "all it needs is to be tuned". When you hear that, you just as well had plan on spending the whole day at that piano! What the people are saying is that all

the care it has had in years is tuning. The action needs regulating, the hammers are worn and need voicing very badly, action centers need repairing, etc. More than once I have been told by the performing artist to either get the piano in concert condition by show time, or else he will cancel the performance! With only a few hours to work and so much to do, should time be taken to get the keys perfectly level? If not, then how can you give the artist the uniform aftertouch you know that he will demand? The answer is to use the blow priority method.

Going to the other side of the coin, what about the times when you have sufficient money to do everything the piano needs, and enough time to do the work? We have all experienced the elusive compression of the front rail punching. When checking the dip with a key dip block, it is certainly possible to read the same key as shallow, deep, and just right depending upon how hard the key is depressed. The Yamaha "Little Red Schoolhouse" instructors had a good solution to this problem. Listen to the notes as you depress the keys. If the piano is producing the same volume each time the dip block is used, chances are that you are depressing the keys with the same force each time. It is also very helpful to go quickly from one key to the next. They even explained how in the Yamaha factory the workers used the sides of their fingers instead of the bottoms because the fingers are more sensitive there. Unfortunately, as is the case with all good ideas, there is the exception to the rule. What do you do if the piano needs voicing? The dip should be set *before* the instrument is voiced, but the sound from the piano can not be used to determine if the block is depressed each time with the same amount of force!

In spite of all the above reasons for using the blow priority method, there is one more reason which in my opinion takes the cake. Even if the above problems could be overlooked, this last one is enough in itself. We all know that different size pianos have different lengths of keys. I am speaking about white keys in particular. A spinet has very short keys while a concert grand

may have keys that are 50% longer. The length of the key of course determines the leverage that the pianist has. I believe that this difference in key length is one of the main reasons why pianos can not have the same amount of key dip.

I can not understand why the piano supply houses sell us only one type of key dip blocks. Because the keys are different in length, the angle that we use a key dip block varies with the size of piano. A spinet has a much sharper angle than a concert grand in the depressed position. Why then are we left to using the same dip block for both pianos? When comparing the adjacent keytop with a dip block, if the angle of the key does not match the angle of the block, it is very easy to read the dip as being shallow, correct, or too deep depending upon where the block and key are compared!

The workers in the piano factories are aware of this problem. They take a dip block which is too thick and gradually sand it down to match the angle of the keys for the piano which they are working on. This is fine for working in a factory where the number of different lengths of keys are rather small. The technician just keeps a dip block handy for each model of piano he works on. But what about the technicians in the field? We work on hundreds of different pianos. Shall we clutter up our tool cases with a different dip block for each of these pianos? Or would it be easier and faster to just eliminate the dip block by regulating the blow priority method? Next month we will discuss how to set the correct dip by aftertouch on both the naturals and the sharps. □

Shoptalk *Continued from page 21*

104, Hysol 1-C and Hardman quick-set in double-bubbles. It is not the variety of brands (all three are excellent) but the variety of types which is important.

The Thermoset 104 is very liquid and runny when first mixed. This makes it useful for repairs such as the split natural where the pieces to be bonded can't be separated and something is needed which will seep into small cracks. The point of a chisel is forced into the split to lever it slightly open. Epoxy is applied and forced as much as possible into the split with a palette knife. The chisel is removed, allowing the split to close and then the procedure is repeated several times. This glue-spreading technique is usually done by clamping

and unclamping but in this case the spring to the wood is enough to force the epoxy throughout the split. Finally the key is clamped, cleaned of excess epoxy, and left to dry.

To fill in larger areas where wood is missing, I use the Hysol 1-C. It is a filled type which makes it pastelike when wet and more woodlike in appearance and workability when dry. It also blends with powdered stains, useful in these applications where the repair will be partially visible.

A solvent such as acetone or benzine is used to clean and degrease the damaged area; this is important for good adhesion. The tinted epoxy is applied with the palette knife, worked well into the splintered areas and then build up to overfill the hole. It's easiest to apply an excess and then sand down to a neat edge and corners so don't waste time trying to be exact; just get enough in place. After the epoxy sets (about 2 hours at 70°), it can be sanded to dimension and then the key covers replaced. (Since the covers are still bonding mainly to wood, I used the normal gluing procedure.)

There was enough of the original surface of the sharp key left so that some of the sharp could be bonded directly to the wood with the epoxy, now tinted black. The epoxy was piled up on the key, the sharp clamped in place, and the area under it smoothed with the knife. After it cured it was sanded, the key was stained and the sharp is ready for refinishing.

Another thing I always do to keys using epoxy is to fill the gouges in the sides which result from heavy playing. These areas will be dirty and must be cleaned well first, but filling them in and sanding them smooth is well worth the trouble. It is a nice touch on a job which many customers notice and appreciate. Other types of filler such as wood putty don't work; they tend to crumble or fall out.

The secret to success with all these repairs is to have good, fresh epoxy,

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tint it appropriately (use enough color to make it opaque), overfill the areas and then sand them as carefully as you would wood.

These keys are once again in working condition, lacking only key covers to make the job complete. By this time I've decided that the ivories are not salvageable. As much as I prefer to save them and do it when possible, it is time-consuming and expensive. Since this is a case where every head would need to be replaced, I'll have to let this go into plastic.

As you can tell, nothing has been done which is complicated or difficult. Restoring a keyboard is largely a matter of lots of little steps. It is sometimes tempting to skip a few or assume they don't need to be done, but each is important to the function of the key and therefore the function of the whole action. A careful restoration before you begin regulation will not only make that work easier but will save you from having to disassemble the action to troubleshoot key problems in the future. □

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Influences of Inharmonicity on Aural Tests in Equal Temperament

Gary Shulze, RTT
Lansing, MI Chapter

I first became interested in inharmonicity in an attempt to understand certain phenomena I noticed in my tuning, which were not explained in the literature on tuning and temperament. Specifically, what I observed was that there seemed to be a wide range in which one could maintain a "beatless" octave, and that the beat rate of the fifth remained relatively consistent throughout the keyboard. This led me to the use of twelfths and nineteenths (a "perfect" fifth plus one and two octaves, respectively) as tests for the accuracy of my tuning. These intervals seemed to want to be pure in equal temperament, and when I started tuning with the intent of making them "beatless", my tuning became both efficient and consistent.

I have since examined closely the physics of aural tests as they relate to inharmonicity. An aural test is not something which is to be used only when one is in doubt of the interval being tuned. Aural tests convey specific information regarding the size of the interval being tested and should be used systematically to control consistently the amount of "stretch" required by the piano. William Braid White discussed in length the usefulness of various aural tests for determining the accuracy of octave tuning. These are the Major third/Major tenth, minor third/Major sixth, and Major third/Major seventeenth tests; which are presented as being entirely accurate when the beating of the intervals used is identical.¹ When the beat rate resulting from one test becomes too slow or fast to duplicate with accuracy, a more easily perceived test is to be used.

Unfortunately, the theory behind White's explanation of aural tests is based on simple *frequency* ratios (harmonics), rather than on the inharmonic *partial* ratios found in the

modern piano. When we change from one test to another, the partial ratio of the interval tested also changes. Consider, for instance a situation where we have two conjunct octaves: A_{37} , A_{49} and A_{61} , and use F_{33} as a test note, thus creating a Major third, Major tenth, and a Major seventeenth. The beating of the Major third will be between its fifth and fourth partials, the Major tenth between its fifth and second partials, and the Major seventeenth between its fifth and first (or fundamental) partials. Since the fifth partial of F_{33} is common to all three intervals, if all beating is equalized we are then making the fourth partial of A_{37} , the second partial of A_{49} , and the first partial of A_{61} coincident; creating then a perfect 4:2 octave, 2:1 octave, and 4:1 double octave (in terms of *partial*, not *frequency* ratios!)

This would work quite neatly if these were the only notes we had to tune. In view of tuning the entire keyboard, the quantum shifts from one ratio to the next which occur automatically when changing tests will not produce a "smooth" tuning, and we are faced with how and where to "temper" these transitions.

Most literature on tuning suggests that the Major seventeenth should beat slightly faster than the Major third and Major tenth, thereby "stretching" the octave beyond the 2:1 partial ratio an equal beating test would produce. The reasoning behind this should be clear, since this "stretching" is intended to accommodate the change of ratios caused by the change in tests. The problem now is in how best to affect the smooth transition from one ratio to the next necessary to fine tuning.

To do this, no one test should ever be used exclusively, nor taken too seriously. Rather, as many tests as possible should be used and allowed to overlap. By reconciling the differences between say a 6:3 and 4:2 octave test, one arrives at a neat compromise between the two. By using the Major third/Major tenth test beyond the point where the Major seventeenth is used, one forestalls the

shift to a 2:1 ratio and will also begin to train the ear to distinguish extremely rapid beat rates.

Still more control can be gained by incorporating a different, albeit compatible system of temperament: the equally tempered perfect nineteenth. Assuming that an ideal tuning is one which contains the most nearly coincidental partials, inharmonicity then becomes quite convenient.

The basis of equal temperament theory is the attempt to make all fifths as beatless as possible, while preserving the purity of the octave. With the modern piano in equal temperament, the beat rate of the fifth does not double with each octave as theory would dictate, but remains reasonably pure. In fact, the twelfth and nineteenth are no more tempered than are the octave and fifteenth. The "stretch" necessitated by inharmonicity seems quite consistent with the stretch inherent to tuning these intervals pure.²

The tests for the perfect twelfth and nineteenth automatically create a Major seventeenth which beats slightly faster than its corresponding Major third and Major tenth, thus tempering the shift between the 4:2 and 2:1 octaves previously mentioned. Incorporating these tests with octave tests allows for a high degree of control over accumulated errors in temperament by creating a consistent relationship between the Major and minor third, as well as between several other intervals - as an examination of the accompanying table will demonstrate.

This method of using as many tests as possible and reconciling discrepancies is especially important when spanning a "break" in the piano's scale, since a break causes an irregularity in the overall rate of change in inharmonicity, which in turn affects partial relationships. The area of the piano which exhibits the most problematic and critical break in terms of fine tuning, namely the transition from wound to plain strings and from bass to treble bridges is also, quite conveniently, the area in which the tuner has access to virtually every

¹ W.B. White, **Piano Tuning and the Allied Arts**, 5th ed. (Boston: Tuners Supply Co., 1946) pp. 82-85.

EQUAL BEATING TESTS FOR BEATLESS RATIOS (arranged in approximate order of their degree of stretch)

All beating will be at:

The musical notation displays various frequency ratios and their corresponding beat patterns. The ratios are arranged in four rows, each with a treble and bass clef staff. The ratios include 2:1, 4:1, 3:1, 6:1, 8:1, 4:2, 6:3, and 8:4. Each ratio is accompanied by a specific musical interval and a bracketed number indicating the beat pattern.

position, depending on the size of the octave created by their respective test notes. When these test notes create a perfect 6:3 octave, both ratios will yield the same result. With a wider octave, a 3:1 tuning will produce more stretch, and conversely with a narrower octave, less stretch. Also, as one descends into the bass, the fixed rate of stretch inherent to tuning pure twelfths and nineteenths (*see footnote 2*) begins to surpass the stretch due to inharmonicity alone for the octave ratios, causing a reordering of the sequence of ratios presented. The points were 3:1 and 6:1 overtake other octave ratios are of course dependent on the bass scaling of the piano.

There is an observed tendency in human hearing to stretch melodic intervals.³ William Braid White described this phenomenon as "a very common defect of the ear shared by most players of the pianoforte".⁴ The well tuned piano, because of inharmonicity, approaches the degree of stretch desired by the ear. Neither the human ear nor the piano should be considered "defective" because of their inharmonic characteristics, but instead should be viewed in terms of their compatability. The piano is not tuned with stretched intervals in order to satisfy the melodic desires of the ear, or even to make it sound more "brilliant". The piano is tuned so as to produce its best arrangement of nearly coincident partials.

test presented in the table, with the exception of the 2:1 tests. All of these tests must be used if one is to hope to achieve a smooth progression of intervallic relationships across the break. The 3:1 and 6:1 tests are especially advantageous here, since they, in effect, change the position of the break as it relates to the intervals being tested.

I view tuning as being a complex puzzle which has no solution, and approach it with the intent of doing some creative cheating. Piano tuning is an art which involves seemingly endless compromise in the attempt to produce a result which gives the illusion of being "in tune". Inharmonicity requires a tempering beyond that involved in temperament theory. Any "beatless" octave is a "stretched" octave when viewed in terms of frequency ratios. An octave tuned so as its second and first partials are coincident will exhibit some beating

where other partials are nearly coincident. Achieving an optimum alignment of all partials requires that all intervals, including octaves, be tempered. This is accomplished by means of the conscientious application of the aural tests presented in this discussion. By so doing, it has been my experience that all octaves, double octaves, twelfths and nineteenths can be made to give the appearance of being "beatless". This of course necessitates absolute precision in temperament, and if all of these intervals cannot be reconciled so as to exhibit negligible beating, the temperament should be reevaluated.

The aural tests presented in the accompanying table all beat, for convenience of illustration, at A₆₁ and are arranged in approximate order of their degree of stretch. Some are not, as will become obvious with application, presented in their optimum range. This ordering is "approximate" because the 3:1 and 6:1 ratios change

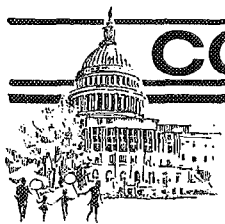
² This stretch, disregarding inharmonicity, is exactly equal (in cents) to: $\log \frac{3}{2^{19/12}} \times \frac{1200}{\log 2}$, for the perfect

twelfth, and $\log \frac{6}{2^{31/12}} \times \frac{1200}{\log 2}$

for the perfect nineteenth.

³ S.S. Stevens, J. Volkman, E.B. Newman, "A Scale for the Measurement of Psychological Magnitude Pitch", *J. Acoust. Soc. Am.* 8 (1937): 185-90.

⁴ W.B. White, "Practical Tests for Determining the Accuracy of Piano Tuning", *J. Acoust. Soc. Am.* 9 (1937): 48 fn.



CONVENTION

A Capitol View in '82

You will be surprised at how easy it is to find your way around Washington, once you understand the plan, because the city was logically and symmetrically designed before the first street or building was started. The Federal District was laid out as a square, 10 miles on each side, with the corners oriented exactly north-south and east-west. Andrew Ellicot surveyed the boundaries, and pinpointed the location for the dome of the U.S. Capitol exactly at the center. His lines from the Capitol to the four corners of the District are true and are divided into 4 quadrants. Maryland gave 69.25 square miles of land and Virginia gave 30.75. However, in 1846, the residents of Virginia were dissatisfied with the slow development of their portion and succeeded in having the land returned to the state. This is why you will find most of the South-West quadrant missing.

Compromise between the North and South, led to the location of the District of Columbia at the Potomac River, almost exactly half-way between New England and Georgia. George Washington chose the precise site at the head of the tidewater, far enough inland to protect against surprise attack but accessible for ocean vessels. Pierre Charles L'Enfant, the French-born "artist of the Revolution", planned central Washington in imaginative detail. A comparison of his 1791 plan with a map of today shows how much of his concept has been carried out.

Here are the important facts to remember: North-South streets are numbered from the Capitol, except for North Capitol, South Capitol and East Capitol; East-West streets are lettered from the Capitol; the broad avenues, named for the states run diagonally. For example, the intersection of 10th and G Streets, N.W. occurs ten blocks west and seven blocks north of the Capitol. Note that 10th and G Street intersections also occur in the other three quadrants - so please pay careful attention to the N.W., N.E., S.W., or S.E. which forms part of all

At points where the avenues cross intersections of the streets, L'Enfant

planned great circles. Some think the L'Enfant, drawing on the experience of his native Paris in the French Revolution, envisioned these circles as strategic points which could be fortified, and thus defend the city against unruly mobs or enemy attack. The circles form a distinctive and beautiful part of the city today and most have traffic tunnels built under them to relieve traffic congestion. The numbered, (North-south) streets are regular but omissions occur in the lettered (east-west) streets. Thus no "A" street appears in the Mall area (the broad green swath between the Capitol and the Lincoln Memorial) because Mall streets carry the names of the early presidents. You will find no "B" streets, because Constitution and Independence Avenues take their places, I Street is sometime written as Eye Street and Q Street as Que. There is no "J" Street because it is thought that John Jay, the first Chief Justice of the Supreme Court, who was a controversial figure in his time, was being deliberately slighted. However, he is recognized as an important jurist today and an exhibit on his life and times can be found in the Supreme Court Building.

L'Enfant's plan for the city extended north only to "W" Street & there is no "X", "Y", or "Z" street. When the city overran the original area, the single letter names were substituted by 2-syllable names in alphabetical order (Adams, Bryant, Channing, etc.) and then a 3-syllable alphabet of street follows (Ablemarle, Brandywine, Chesapeake, etc.). Here and there you will find small streets, in or out of order, scattered among the alphabetical east-west street.

Washington, D.C. owes a literal debt to its designer L'Enfant. He was never paid for his work. Shortly after making his plan, he became embroiled in a running controversy with property owners in the Federal area and was blamed for the slow sale of lots. As the financial success of the District depended upon the sale and development of land, he resigned under fire in 1792. L'Enfant lived out the rest of his life in obscurity, and by the

time of his death in 1825, he was no longer recognized as the designer of the city. His plan was also in danger of being passed over as development of the Federal City lagged badly. For almost the entire first half of its history, the capital remained a backward town, one of the slowest to grow in the entire country. Only after the Civil War did the city really begin to develop and only then was the initiative regained to carry out the original plan. Belated recognition of L'Enfant came in 1909 when his obscure grave was moved to the present site at the Curtis-Lee mansion. In the early 1970's construction began on L'Enfant Plaza, now a large complex of office buildings, shopping areas, hotel and promenade.

At night the lighted monuments and buildings in the Federal District provide some of the most beautiful vistas of the capitol. Don't miss the panorama from the steps of the Lincoln Memorial across the Reflecting Pool to the lighted Washington Monument and the illuminated dome of the Capitol or the view across the Tidal Basin from the Jefferson Memorial. This is your city and being here will bring you a different and unusual feeling of awe and pride in our country and its history.

Ruth Ann Jordan
(with great assistance from the
Washington Guidebook)

Technical Institute Preview, Part II

Teddy Primack, RTT
Long Island Chapter

As the believers among you know, one of the most beneficial -- and over-subscribed! -- programs at any Convention has been the individual tuning tutoring. Something that is the essence of the Piano Technicians Guild causes the good tuner to seek out the constructive criticism of his/her peer or betters. At the D.C. Convention, the tutoring program has been expanded to some thirteen highly competent instructors -- among them many of the

top tuners and most experienced teachers of tuning in the country. There is hope, this time around, of accomodating all those who sign up; but since the number is always considerable, early pre-registration is again being urged.

In our continuing conversations across the northeast corridor from New York to Washington, Technical Institute Director for '82 Wendell Eaton explained why the tutoring program has always been so limited in scope.

"It is an expensive program for the Piano Technician Guild because it involves renting a number of extra hotel rooms for the use of one instructor and on member at a time. Now add on the cost of moving in a good piano for each tutoring location, and later moving it back to the dealer. We know there is certain luxury about all this, but since one-to-one is the ideal pedagogical situation, we are committed to it. Actually, we are putting two people, a piano, and a hotel room together for 1½ hours at a cost of only \$35." (I raised an eyebrow, but Wendell, 200 miles away, chose to ignore it.)

Eight rooms for oral and electronic tuning have been designated. At this writing, the list of tutors includes Virgil Smith of Chicago, Fred Openheimer of L.A., Barbara Martin of Indianapolis, John Farrell of Baltimore, George Morgan of Seattle, Ralph Kingsbury of Milwaukee, Jack Sprinkle of Virginia and Pat Stone of Annapolis. The discriminating eye will recognize many former teachers and concert tuners among them.

Continuing last month's preview of course offerings at the upcoming '82 Technical Institute, my sources once more being the instructor's own description wherever possible: **From the Bottom Up: Lyres, Pedals, Trap Systems: Norman Neblett.** A "how to" slide show of four representative grand trap systems (Steinway, Baldwin, Mason & Hamlin, Yamaha), each minutely detailed in the process of restoration. New bushings, dowels, leather spacers, glues; repairing broken grand lyre posts; regulation of the grand trap system; tools for this work. (Major vertical repairs are also shown.) Intention of the class: to guide and encourage piano technician to do a professional and profitable job in this area.

Additionally, Steinway's **Fred Drasche** has again been persuaded to offer his classic, **Pedals, Lyres and**

Sostenuto at the same convention. This perennial favorite is a field service approach which may be of interest to those who work on Steinway pianos.

George Defebaugh, formerly head of service at Kawai and now with Steinway, will also be giving a slide presentation (which has been extremely well-received in local chapters) of **Steinway Construction: A Behind - the Scenes Factory Tour.** Many seldom view jigs and gauges used in action construction were caught by George's camera. Even the unique Steinway method of installing a pinblock is photographed, perhaps for the first time.

At last we get a glimpse of the little monster who slips the dowels between the stretcher and the pinblock! □

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ON MEMBERSHIP...

Wendell Eaton
1982 Technical Institute Director

When you read this the New Year will be well under way.

In view of this, I wonder how many technicians who are not members made a New Years' resolution to join the ranks of the organized, competent and well informed technicians of the Piano Technicians Guild?

Is it TIME you want? Time to think, ponder and evaluate the benefits of membership. How much time do you have? To paraphrase Oman Khayyam, "Time is as fleeting as snow upon the dusty deserts' face."

Why not take a few moments of this precious commodity called "time" and appraise the following questions:

Who gave the piano technician his professional status which so many of them enjoy today?

Who gave the piano technician his economic standing that he has today?

Who gave the piano technician, the manufacturer, and the dealer cooperation he derives today?

Who gave the piano technician and the music teacher respect they have today throughout Canada and the United States?

The answer to the above questions are obvious. As facts will bear out, this was accomplished by the Piano Technicians Guild.

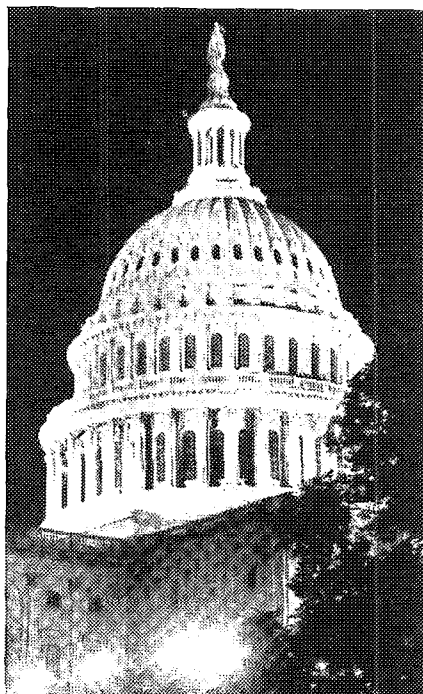
I feel now is the TIME to take cognizance of the value in organization and join with your fellow technicians into the ranks of the Piano Technicians Guild today. □

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Those who achieve 15 points will receive the President's Club ribbon. At the Awards Banquet each will be presented with the 1982 President's Club pin, and the member who has the most points will be announced and honored.

RESTORER'S CLUB

Those who bring in a former member will receive the Restorer's Club award ribbon in addition to the point credits.

BOOSTER CLUB

Everyone who brings in a new member will receive the Booster Club ribbon at the convention.

NOTE:

Your name and your own chapter should be shown IN PRINT on the candidate's application on the line "recommended by", for your guaranteed full point credit. (Sometimes credit cannot be applied because the sponsor's name cannot be deciphered).

CORRECTIONS

Should there be a need for correction on the Booster Club or other lists, please notify the Home Office promptly. We want you all to receive full credit at all times.

Booster Club

	Pts.	Mbrs.
ANDERSON, Robert A.	1	5
ASHEN, J.G.	1	1
BALGIAN, Agnooni	4	1
BENEDICT, Herb.	1	3
BITTINGER, Dick.	1	1
BRADY, Stephen H.	5	1
BRIDGES, Nate.	1	4
BULLOCK, William.	5	1
CALLAHAN, James J.	1	1
CAMPBELL, James.	1	1
COLEMAN, James W., Sr.	1	1
CONNOR, John.	2	10
CONOVER, Leslie.	1	4
COX, Merrill W.	1	1
CRABB, Larry.	3	3
CUNNINGHAM, Jess.	1	3
DEUCHAR, William.	1	1
DROST, Michael A.	1	1
DUNCAN, David.	1	1
ERWIN, Harold.	3	1
EVANS, Daniel A.	1	1
FARRELL, John.	5	1
FLINT, Neal R.	1	5
FOX, Lee.	5	1
FRANZ, Dennis.	1	1
GARRETT, Joseph A.	1	1
GILLER, Evan.	10	2
GOODWIN, Garland.	5	1
GREENWAY, Alton, William.	5	1
GROSSMAN, Matthew.	1	4
HAINES, Roy.	1	1
HARMON, Clayton C.	1	1
HARRIS, Dale.	5	1
HAUSMAN, Donald.	1	1
HAWKINS, Marshall.	5	1
HENRY, Fern L.	5	1
HERWIG, Lewis.	3	1
HESS, James.	5	1
HIGBY, James H.	5	1
HILBERT, Felton.	1	1
HINSON, W.L.	1	5
HOFSTETTER, Robert.	1	1
HUNT, Newton.	8	2
KEAN, Kerry.	4	1
KOKTAN, Paul.	8	2
LAFON, William I.	5	1
LUY, George.	1	1
MARCIANO, William.	3	11
MASTAGNI, Angelo.	1	1
McANNINCH, Daniel.	2	6
McKLVEN, Ben.	5	9
McMORROW, Edward.	5	1
MEEHAN, Joseph.	1	1
MEHAFFEY, Francis.	1	1
METZ, Al.	1	1
MOBERG, Jonathan.	1	4
MUCKALA, Marla.	1	1
MULLER, George W.	1	4
NEIE, Gary.	5	1



Ernie Preuitt
Vice President

NELSON, Robert.	4	1
ODENHEIMER, Fred.	1	1
OUSLEY, Robert.	5	1
PARKER, James.	1	1
RAUDENBUSH, Fred R.	6	2
RICE, Fred O., Sr.	1	1
ROBINSON, Marion.	4	1
RUSSELL, Bob.	1	1
SANDERSON, Albert.	1	5
SCHULTZ, Gary H.	10	2
SCIORTINO, Joseph.	1	5
SCOTT, Dennis.	1	1
SEWELL, Arnold M.	4	1
SPEIR, Leon.	1	5
STONE, Sid.	1	1
SYLVESTER, David E.	1	1
THILE, Scott E.	1	1
TUBLITZ, Evan.	1	1
WALKER, William H.	1	1
WALKUP, Kenneth.	5	1
WEST, Richard.	2	2
WHATMOUGH, Alan.	5	1
WILEY, John.	1	1
WINSLOW, Allyn S.	1	1
WOLF, Robert.	5	1
WOLTZ, Randall.	1	1
YAKOBOSKY, Walter.	4	1

Restorer's Club

CRABB, Larry B.
GREENWAY, Alton William
HAWKINS, Marshall
McKLVEN, Ben
NEIE, Gary
OUSLEY, Robert
WOLF, Robert

1981 - 1982 RECLASSIFICATIONS

Reclassification To Registered Technician

New Hampshire Chapter

FALLER, William G.

New York Chapter

DYER, Daniel

LEVIN, Stuart L.

RUSSELL, Gordon

Reclassification To Allied Tradesman

Los Angeles Chapter

SALKIN, William E.

Reclassification To Apprentice

Phoenix Chapter

MILES, Gary B.

NEW MEMBERS

Registered Technicians

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FOY, John M.
1420 W. Lake Dr.
Greensboro, NC 27408

Cincinnati Chapter

MARKINS, Charles W.
5835 Glenview Ave.
Cincinnati, OH 45224

Fall Cities Chapter

LOREE, Larry L.
425 W. Ormsby No. 403
Louisville, KY 40203

Hampton Chapter

SCHATZEL, Leo R.
206 Bolivar Drive
Yorktown, VA 23692

SCHATZEL, Thad J.
Rt. 3, Box 123HH
Hayes, VA 23072

New Jersey Chapter

GULINO, James
488 Louisa Ave.
Wyckoff, NJ 07481

New Orleans Chapter

HOPPE, Joseph F.
1452 Pauger St.
New Orleans, LA 70116

Tucson Chapter

FULTON, Bruce D.
516 East Mabel
Tucson, AZ 85705

PEELE, Mark L.
4225 E. Fairmount #1
Tucson, AZ 87512

Allied Tradesmen

Long Island Suffolk Chapter

MARESCA, Arnold L.
1103 Waverly Ave.
Hotsville, NY 11742

Boston Chapter

SZMYT, Henry J.
22 Forest St.
Plaiston, NH 03865

New Hampshire Chapter

STREETER, Elizabeth J.
436 Boston Post Road
Amherst, NH 03031

Apprentices

Fresno Chapter

WOOD, Jeffrey A.
1600 Union St.
Kingsburg, CA 93631

Memphis Chapter

VINCENT, Alan K.
3143 Jean Road
Memphis, TN 38118

Milwaukee Chapter

MARKS, Andrew A.
1837 North 49th
Milwaukee, WI 53208

New Jersey Chapter

CARDUCCI, Anthony A.
2 Helen Way
Netcong, NJ 07857

REX, Dewey T.
617 Townsend Place
No. Plainfield, NJ 07063

New Mexico Chapter

STURM, Fred S.
7709 Midge N.E.
Albuquerque, NM 87109

Rogue Valley Chapter

HANGER, David B.
P.O. Box 485
Medford, OR 97501

Tucson Chapter

WALKER, Mark
3344 E. Monte Vista
Tucson, AZ 85716

Students

Capitol Area Chapter

LARGE, Gordon R.
100 Maple Road
Cornwall-On-Hud, NY 12520

Dallas Chapter

STONE, Michael D.
6369 Scyene
Dallas, TX 75227

Central North Carolina Chapter

BENDER, Rev. E. Lewis
P.O. Box 1905
High Point, NC 27261

Cincinnati Chapter

JACKSON, David L.
1234 Oak Knoll Dr.
Cincinnati, OH 45224

Minnesota-North Iowa Chapter

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Rt. 3, Box 118
New Richmond, WI 54017

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San Juan Capist, CA 91675

Phoenix Chapter

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1916 E. Harvard Drive
Tempe, AZ 85283

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4711 Birch Bark Trail N.
Lake Elmo, MN 55042

Youngstown Chapter

SOWD, David H.
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Canton, OH 44709

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Indianapolis Chapter

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PRESIDENT'S MESSAGE

Considering that the outside temperature here in Indianapolis was 16 degrees below zero this morning, you might think I would find it difficult to write about Washington in July. However, it warms me up even to think about meeting with all of you and all of our friends in the piano service industry. Convention time is always a highpoint of our summer. It gives us a chance to meet again with friends we haven't seen since the last convention. We also have a chance to meet with people we have read about in the *Journal* or exchanged letters with through the mail. And during tricky economic times the convention gives us an opportunity to gather tips on how to make our business run more efficiently or how to get new business or how to keep the business we have gotten already.

Now you may think I write a lot about the convention, but I am just trying to write enough to get you to come to Washington. Once you get to Washington, you can spend your time learning and listening about a complete variety of subjects . . . and having a great time in the process.

With A Capitol View in '82,

Julie Berry

A TRIBUTE TO FRIEDA HOSKINS

Pauline Miller of the Los Angeles Chapter Auxiliary wrote these remarks after returning from the funeral of Honorary Life Member Frieda Hoskins who passed away December 15, 1981:

"It was significant that the minister, in telling of Frieda's life, gave great emphasis to the important role of the Piano Technicians Guild and its Auxiliary to her and to her deceased husband Leslie Hoskins, who was a giant as men measure in how they contribute to their fellowman. Frieda was always supportively at his side. She was a founding member of the Auxiliary when the parent organization was ASPT, and was a loyal and active member as long as her health permitted.

"Les and Frieda moved to Whittier, California from Milwaukee seventeen years ago to enjoy a milder climate, so we were privileged to enjoy a close friendship with them. Both entered into the activities of the Los Angeles Chapter.

"A memorial fund has been set up at Salem Lutheran Church, 6442 South Glengarry Street, Whittier, CA 91601, in Frieda's name, and messages should be directed to her daughter, Mrs. Virginia Stivers, 13647 Sunset Drive, Whittier, CA 91601."

CLEVELAND CHAPTER PROPOSALS

The Cleveland Chapter of the Piano Technicians Guild Auxiliary has submitted two items for consideration at the next Council meeting which will be held Wednesday, July 7, 1982, in Washington, D.C.:

First, to change Standing Rule #1 to read: "1. Admission fee shall be three dollars. (\$3.00)"

Second, to amend Article III, Section 2B of the Bylaws to read: "Payment of the admission fee plus one-half annual dues for the current fiscal year is required for those joining the Auxiliary after the first of July in any one year."

(This amendment would reinstate half-year dues.)

Please think about these proposals, talk them over with your chapter and your delegate (if you are not a member at large) and be prepared to discuss them and vote on them during the Council meeting.

ARMCHAIR TRAVELING, Part Two

with Dorothea Odenheimer

Last month we featured the first part of Dorothea's account of last spring's European conference in Switzerland. Now we rejoin the group in Switzerland:

We had quite a bit of rain, but by Thursday afternoon when the entire group of men and women took the trip to the Schilthorn, the weather was just gorgeous. Riding up and down was an experience in itself. Once up

there we had a glorious view over all the mountain peaks. We were able to sit in the rotating restaurant and have a panel of mountains and their names inscribed on a ribbon before us, and every time the restaurant moved the ribbon would show us the peaks just in front. In one hour's time we were able to know each and every one of them. We rather preferred to be out in the sunshine admiring the snowcapped peaks around us. Just when it was time to leave, a curtain of fog hung over the mountains, when it had been so clear just minutes before. We felt we would never forget this incredible sight. Mr. Laeuchli smiled, saying he had arranged it this way.

It rained again the following day. Everyone was invited to attend the fellowship meetings to learn to know each other better, but most of our ladies were too tired from all the new impressions and went to bed early. The surprise for the last evening was three men from the neighboring town of Spiez; they had come in their native outfits to play their alphorns for the group. It was an unusual event to hear a trio playing together. We all enjoyed it greatly.

On Saturday morning the bus was waiting for us. We had a Swiss driver who had never been out of his country, so the German towns were not too familiar to him. Our tour guide was Austrian and the two of them did not always see eye to eye.

We visited a musical instrument museum in Seewen on the way to Basel. Here we saw the Rhine River where Germany, France, and Switzerland meet. We entered France to drive to Colmar to visit the Isenheimer Altar by Hans Gruenewald. The quaint city of Colmar also was lovely to see.

It was a bit hard to get through the narrow Schwaben-tor in Freiburg with the large bus, but when everyone finally entered the Hotel "Zum Roten Baeren," they were all thrilled with their large rooms with bath, a piece of chocolate on each pillow, and the fantastic five course dinner that was waiting for us. Green tablecloths were on each table for six with a lovely lamp hanging right over the table. We all enjoyed this warm and cozy place.

Everyone would have loved to stay longer, but the following morning we were off to Mainz where it was rather cold, and later that afternoon we boarded the ship to have a cruise down the Rhine River. We saw a lot of full and empty barges passing us, and on both sides of the river trains were constantly moving. We passed several

castles and villages and the famous rock of the "Lorelei." Our bus met us again and took us to Koeln (Cologne).

The following day we visited the Ibach factory. Mr. Ibach, speaking fine English, took us around the factory and walked with us to a pretty restaurant, where we were treated to a very fine lunch. We visited the famous Gothic Dome the following day, and that night we had another treat to stay at the "Deutsche Haus" in the old city of Braunschweig. Here again we had some very elegant rooms with bath, and dinner was served in the old-fashioned beautiful dining room. The young waiters were in black suits and ties, and the white tablecloths and napkins really seemed luxurious.

Mr. Grotrian greeted us when we arrived at his new factory not far from the hotel. It was impressive to see all the new equipment for the manufacture of his pianos. After the tour we were treated to drinks and open-faced sandwiches. Everyone enjoyed the tilsit cheese from this area.

In the evening we all got dressed up. Mr. Grotrian graciously picked us up and showed us through some of the old part of Braunschweig. Most of it had been rebuilt after the war in the old-fashioned way. We were invited for dinner at the "Gewandhaus" which used to be the place where all the tailors had their shops in the olden times. There in the basement they have a fine restaurant. A long table was laid for us, and both Mr. Grotrian and Mr. Schimmel were our hosts. So we got acquainted with the manufacturers and some of their men from the factories.

The following day we walked through the brand new Schimmel factory which they had just moved into a week prior. They formed several groups, and each had an English-speaking guide. Then the office help had set up a horseshoe table for our lunch in the main reception room. Mr. Schimmel spoke Swiss German to us and said that he comes from there and was raised in Switzerland where his mother still lives today. After the fine lunch each one of us received a lovely gift each wrapped in the same beautiful paper: the ladies, a scarf with a large piano on it; the men, three lovely porcelain ashtrays with a piano on each. How could we ever forget such a cordial reception.

The bus then drove us all the way north to Hamburg where on the following day we visited the foundry. Here they pour the plates for Stein-

way pianos and many other things, too. Mr. Miller, a retired employee of the firm, came especially to greet us and to tell us the history of many of the cast iron stoves they exhibit and many beautiful pieces. We also had a tour through the city of Hamburg. The next day we drove to Amsterdam. We were lucky that Sunday was the following day and we were able to have a walk through Kuikenhof where we could wander amidst as many tulip fields as we will ever be able to lay our eyes on. The colors were breathtaking.

In the afternoon we visited a diamond factory, and later on had a lovely ride along the canals to the North Sea. We had a walk through the famous Rijksmuseum, and in the evening we were treated to an Indonesian dinner at one of the fine Amsterdam restaurants. We saw a little of Holland when we drove out to Ede, passing many people going to work on their bikes. Here we were greeted by Mr. Rippen and invited to a discussion about pianos in their brand new reception hall and then taken in groups through their fine new factory. Then they took us to a lovely country club nearby for a lovely Dutch luncheon.

We bid our gracious hosts goodbye, and then the group was now on their way back to Giessen and Frankfurt to catch the plane home. By this time our group was like a family, and we hated to have to part, all hoping we could again make an eventful trip like that together.

CHAPTER PROGRAM IDEAS from Ginny Russell

How about a raffle? What fun for a chapter banquet, party, or picnic. During the year every member crochets "granny squares" (be sure all yarn is purchased at the same time, all the hooks are the same, and check to see that the squares are the same size). These can be crocheted during the meeting or on their own. When all the squares are completed someone crochets them together and a beautiful afghan is ready to raffle! It is a good feeling to accomplish something as a chapter, and, of course, your treasury benefits also. (The same project can be done with knitting, crewel work, or liquid embroidery.)

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370 Tapes		
380 Softening Glues		
Kretling, Jack	Replacing Upright Shanks	PTJ 11/77
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Piano Technicians Guild

1982

March Update

Boardroom Report

The executive board of the Piano Technicians Guild held the midwinter board meeting in Seattle, Washington on January 23-24, 1982. The following is a report of board action.

RVP MONTHLY REPORTS RVPs are to prepare monthly reports of activities and expenditures and send them to the vice president.

RECOGNITION OF LONGTERM MEMBERSHIP Specially designed new PTG pins are being ordered to honor members with many years of membership in the Guild. Pins will be made for 5, 10, 15 and 20 years bars and a different pin for 25 years membership. These new pins recognizing longterm membership will be presented at the 25th anniversary convention in Washington, D.C. next July.

Further information will be included with the convention mailing.

CHAPTER SUSTAINING MEMBERSHIP was granted to George C. Weeks of the Northwest Florida Chapter.

NEW CHAPTERS Temporary charters were granted to two new chapters:

Waukegan Illinois Chapter #600.....Central East Region

Prescott, Arizona Chapter #863.....Western Region

MEMBERSHIP RIGHTS AND ILLEGAL ADVERTISING The board considered the subject in depth with the following decisions:

- a) The Guild attorney is taking preliminary action on two cases of nonmember illegal advertising.
- b) The home office will continue to take prompt action on all cases of illegal advertising brought to our attention.
- c) Recommendations for members on correct forms for yellow page advertisements have been prepared by a board committee. (see following page)
- d) The bylaws committee is writing a new section for the bylaws specifying who may advertise membership in the Guild.
- e) Member rights and information on permitted advertising is to be brought to the attention of members and member applicants.

CHAPTER ACHIEVEMENT The committee report was reviewed in full and the following decisions made:

- a) Time will be planned for a session at the next convention on "How a Chapter Achieves".
- b) Plaques and certificates of award will be presented at the awards banquet.
- c) The chapter achievement awards are to be listed in the bylaws.
- d) Chapters are urged to participate through the established procedures on reporting chapter activities. Additional emphasis is to be placed upon the need for reports.

SEMINARS AND CONVENTIONS Seminar and convention chairmen are to submit reports on the events to the RVPs.

HALL OF FAME A new presentation procedure is planned for the next convention.

TECHNICAL EVALUATION OF CONVENTION INSTITUTES A new evaluation method was approved and will be used in Washington, D.C.

BUDGET The budget was reviewed and adopted after amendment.

AUDITOR The auditor was retained for another year.

1985 CONVENTION Kansas City was approved as the site for the convention.

ROTATING COMMITTEE ON INSTITUTES A new committee of three members on national convention institutes was appointed. Ernie Juhn, Ben McKlveen and Dick Bittinger were appointed for the 1982 convention. They will continue on the committee until changes are approved by the board of directors.

1982 MEMBERSHIP ROSTER The annual membership roster will be produced in late May after the final drop of members who have not paid 1982 dues.

EXAMINATION The subject was considered in depth with the following decisions:

- a) The examination committee has been directed to prepare a newsletter as a training and informational vehicle for CTEs.
- b) All currently approved CTEs are now required to complete and sign a consent-to-serve as a CTE Form.
- c) Before new CTEs are appointed the form for consent-to-serve as a CTE must be signed.

- d) Classes on instruction for handling examinations will be given at national conventions.
- e) It is recommended that seminars and regional conventions include a class on handling examinations.
- f) Classes should cover all three examination procedures.
- g) Two new series of written questions have been completed. A new bench test is currently being reviewed.
- h) A proposal to change apprentice level grade requirement from 50% to 70% will be proposed at the council session.
- i) Ruth Ann Jordan has resigned from the committee and John Phillips of Seminole, Florida appointed in her place.
- j) A new name for apprentice members will be proposed at the council session. Suggestions may be sent to the bylaws committee.

JOURNAL The editor is to check that the Journal reflects the international flavor of membership and avoid over usage of references solely to the USA where members in other countries are to be included.

JOURNAL SUBSCRIPTION The Journal subscription was raised from \$60 to \$85 p.a.

NATIONAL ADVERTISING The Guild is exploring exchange advertising with music trades and other national association magazines.

PTG BOARD PRIORITIES The board reviewed its planned priorities and reaffirmed major priorities as follows:

- a) Continue working for excellence in the tuning test program.
- b) Encourage increased communication from chapters to the home office.
- c) Strengthen weak chapters.
- d) Improve chapter program material.

PTG FOUNDATION The Foundation is now a legal entity and the following were appointed as the first officers: Sid Stone, Ernie Preuitt, Charles Huether, Bob Russell and Norman Miller.

UPGRADING There is a new form for use when notifying the home office of a member who has changed classification. These forms were mailed to all chapter presidents in December and more may be obtained on request. DO NOT USE a new member application form as it may cause delays for your reclassified member.

From the Executive Editor

Don L. Santy

Dick Bittinger sends me written and recorded "tidbits" from time to time and they usually prove to be quite interesting. Here is one regarding our conventions from back in September of 1961. It is amazing how things still apply even after a decade.

There really is no excuse in this modern age for any piano technician to conduct his affairs with out of date techniques and business methods. The way conventions are scattered across the nation, the newest and best in skills are brought almost to his front door. All he needs to do is avail himself of the golden opportunity they afford. Yet hundreds of tuners pass up conventions either because they consider themselves above such things or because they can't afford

the time off and the transportation to attend. This should concern each one of us. It is well enough to say that the absentees are the losers, but actually the whole profession is the loser if a sizable number of persons are out of step with progress.

**Piano Technicians Journal,
September 1961**

Program Ads

This year members will have the opportunity to register their names in Guild history by supporting the Commemorative 25th Anniversary Convention Program.

For \$25 any member can have his or her business card printed in this memento of the 25 year history of the

Guild. The program will include historical articles on the Guild, the *Journal* and past conventions, pictures of current board members, listings of the chapters, nostalgia and much more. The program will be designed to be a keepsake members will want to save and look back at in the years to come.

Any member who would like to support the commemorative program can send a business card and \$25 to the Home Office, 113 Dexter Avenue North, Seattle, WA 98109, Attn: Publications Dept.

MEMBERSHIP ROSTER

The 1982 Membership Roster will be ISSUED in June. Please send any changes of address, telephone numbers, etc. to the home office by April 1.

PTG Calendar

February 5-7

March 10

March 21-26

March 31

April 1

April 10

NAMM Winter Market at Anaheim Convention Center, CA.

NOMINATIONS Closing date for receipt of nominations for Guild office. Send to Ernie Juhn, Committee Chairman.

MTNA National Convention, Radisson Muehlebach Hotel, Kansas City, MO.

DUES must be paid to maintain good standing in the Guild.

MEMBERSHIP ROSTER Closing date for receipt of information on names, addresses, classification, etc.

DELEGATES Chapters elect delegates and alternates to the 1982 Council session, Washington, D.C. next July. Send completed credentials form to the home office.

CREDENTIALS Closing date for receipt of completed delegate credentials forms for inclusion in the Council Agenda Book.

REPORTS Closing date for receipt of Guild officers' and Guild committees' reports for inclusion in the Council Agenda Book.

Advertising

There are two categories of members in the Piano Technicians Guild Inc.

(1) **FRANCHISED**

(2) **NON FRANCHISED**

Franchised members are the only ones who can advertise their affiliation with the Guild.

They shall have the right to use the following titles:

(1) **CRAFTSMAN and/or REGISTERED TECHNICIAN**

(2) **REGISTERED TUNER TECHNICIAN**, abbreviated to R.T.T., after surname

(3) **REGISTERED TUNER**, abbreviated to R.T., after surname

TELEPHONE BOOK ADVERTISING

An important rule to follow is that the individual is the member, not the company.

Example:

A B C PIANO TUNING
440 TUNING STREET
PIANOTOWN, WE 17000

233-8888


(no logo)

Service by John Doe,
a Registered Craftsman
member of the
Piano Technicians Guild Inc.

Correct

A B C PIANO TUNING
440 TUNING STREET
PIANOTOWN, WE 17000

233-8888



Incorrect

It would be incorrect in any instance where it is not clear that the individual is a member.


This is especially true in group ads.

Example:

PIANO TECHNICIANS GUILD INC.
endorsed by the National Piano
Manufacturers Association.

For service call:

John Tuner 839-2727
ABC Piano Tuning 233-8888 ← *Incorrect*
Sam Tuner 243-0021



John Doe, or Joan Doe, who operates a business under a different name, e.g. ABC Piano Tuning, can have his or her own name listed in the white pages with the company telephone number for a small monthly charge. This will allow participation in the group ad.

Example:

In Trade name or group ads, there should be no company name listed.


It is true that Richard Dealer is a registered member of the guild, but Richard Dealer Pianos, the company, is not.

Example:

THE PIANO TECHNICIANS GUILD INC.
Endorsed by the National Piano
Manufacturers Association.

For Service call:


John Tuner 839-2727
Joan Doe 233-8888 ← *Correct*
Sam Tuner 243-0021



THE PIANO TECHNICIANS GUILD INC.
Endorsed by the National Piano
Manufacturers Association.

For service call:

John Tuner 839-2727
John Doe 233-8888
Sam Tuner 243-0021
Richard Dealer Pianos 662-0213 ← *Incorrect*



JANUARY CHAPTER MAILING

Sent to the president of each chapter

1982 COUNCIL DELEGATE FORM. The completed form is due at the home office by April 10, 1982.

STEVE JELLEN MEMORIAL FILM LIBRARY An updated list of current films and video tapes available to chapters, seminars and local conventions.

NEW BLUE PTG SUPPLIES ORDER FORM Be sure to check with your chapter for this new order form.

DELINQUENT AND DROPPED MEMBERS Every chapter on these two lists was sent a copy so that the chapter membership committee, or the president, can make contact with the member. Personal contact can mean a member retained for your chapter and for the Guild.

RESIGNATION LETTER Letter encouraging chapters to seek ways of helping members to stay in the Guild. The letter gives information on several approaches.

STUDENT RENEWALS List of students whose renewal date for membership is in the near future.

Chapter Notes

The January meeting of the **Southwest Florida Chapter** began with the customary dinner at Morresons. The business meeting, held at Central Music Warehouse, followed with 14 present.

Don Korb presented the Technical program, which dealt with the public and customer relationships. Don stressed that first impressions on the phone are important, whether the person answering is a wife-secretary or a recorded message, which in fact, should be changed periodically. In returning the call, be punctual.

A positive attitude, friendly conversation and taking a genuine interest in the customer and family is helpful. Try not to make unnecessary additional charges, but Don stated that we have to be fair and reasonable with both ourselves and the customer. If needed, discuss additional work required. Don suggests making the next appointment before leaving the house, and leaving a slip for that date. Call the day before to confirm the appointment.

--Duncan S. Ritchie, Secretary

Council Agenda Book Order

All chapters will receive a copy of the 1982 Council Agenda Book. The chapter is urged to encourage any chapter member who is interested to examine the Agenda Book. The book then should be given to the chapter delegate to bring to the Council meeting.

Any individual member who would like a copy of the agenda book should complete the form below and send it to the home office by April 5, 1982.

Please send me a 1982 Council Agenda Book. I enclose \$3.00 toward the cost of shipping and handling.

Name _____ Chapter _____

Address _____

City _____ State/Province _____ Zip Code _____

Your Funds, Member Cards & Gold Seals

DUES

The Home Office is pleased to report that the membership dues are flowing in very smoothly. Even with the economic situation, and the new requirement that dues must be paid in one sum this year we have about the same number of members dues paid as last year. The difference is that this year everyone who has paid is now in good standing and fully paid up in the Guild for 1982.

DELINQUENT DATE

It is not too early to remind you that the delinquent dues date is approaching for those whose dues are not yet paid. The deadline date is March 31st, 1982 for membership dues to be paid to maintain your good standing as a Guild member.

REINSTATEMENT

Reinstatement procedures require an additional \$30.00 fee and the possibility of being asked to retake examinations. Please take care to avoid any penalty.

DIFFICULTIES

If you have a problem about dues payment please call or write to the Home Office for advice or assistance.

MESSAGES

Please do not write messages on your dues billing. The funds go directly to the dues collection department and your message may be delayed unless you write on a separate piece of paper. For fast action write to us **BUT NOT ON YOUR BILLING**. Thank you for your cooperation.

CANADIAN AND OVERSEAS MEMBERS

The Executive Board Policies require all payment to the Guild to be in U.S. Funds. The billings show this requirement and we again ask that you please obtain the correct funds from your country when sending in your dues.

The Home Office cannot accept dues or other payment made in other currency even with an amount added for exchange. Our bank charges us exchange on all funds we receive and invariably the result is a loss to the Guild. Please do not make difficulties for yourself in having your payment returned.

MEMBERSHIP CARDS

These cards are mailed once a month after receipt of the dues payment has been recorded in the computer. The first series of membership cards were mailed the first week of January. We are now planning a special computer run once a week in order to get the cards into your hands as fast as possible.

GOLD SEALS

A gold 1982 seal will be attached to the membership card of every registered technician on the membership roll as of December 1, 1982. The seal is for use on the official engraved Registered Technician Certificate. New registered technician and those recently reclassified will receive their certificates in the next series within a few months when the number to be engraved reaches 100.