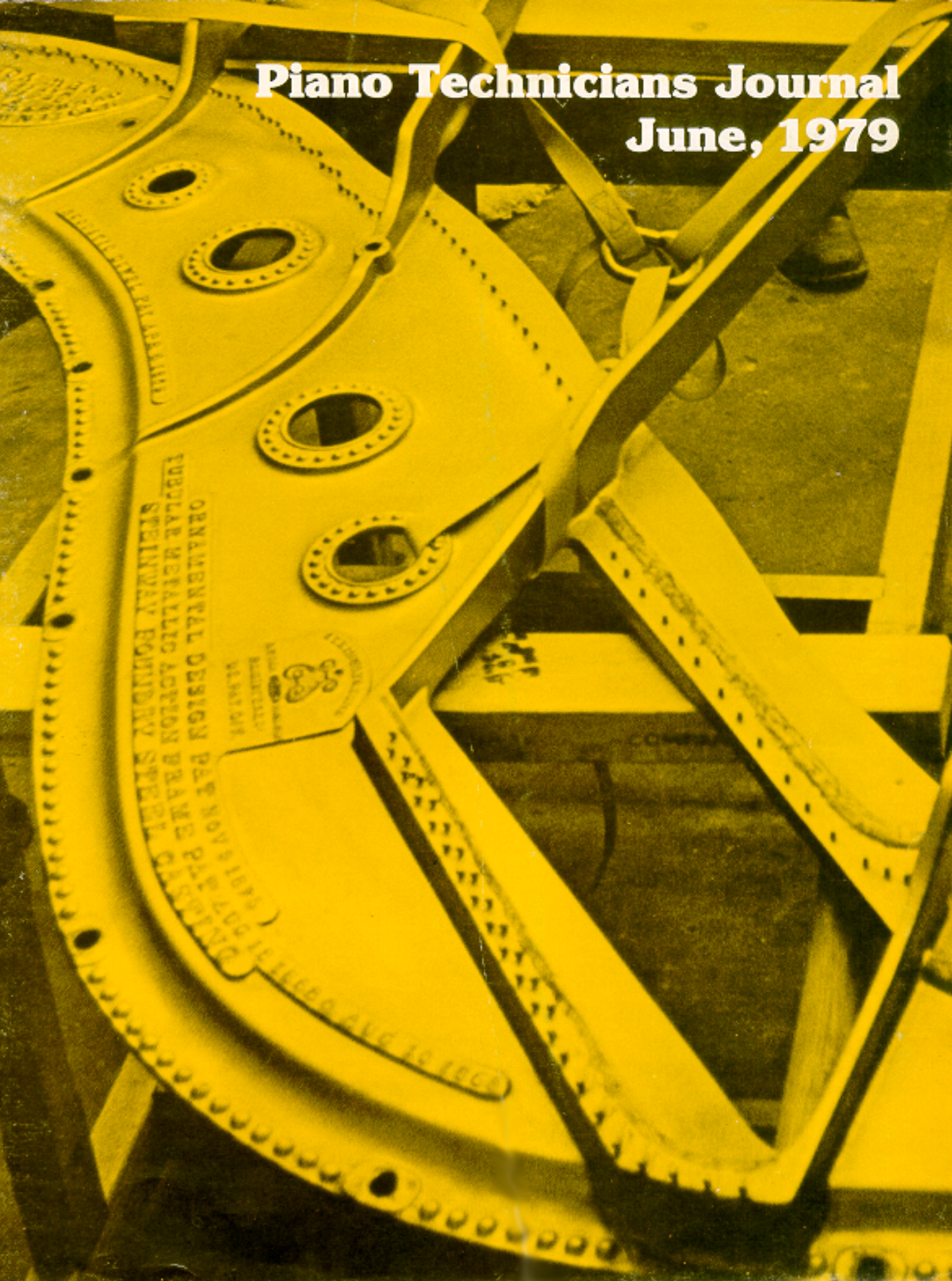
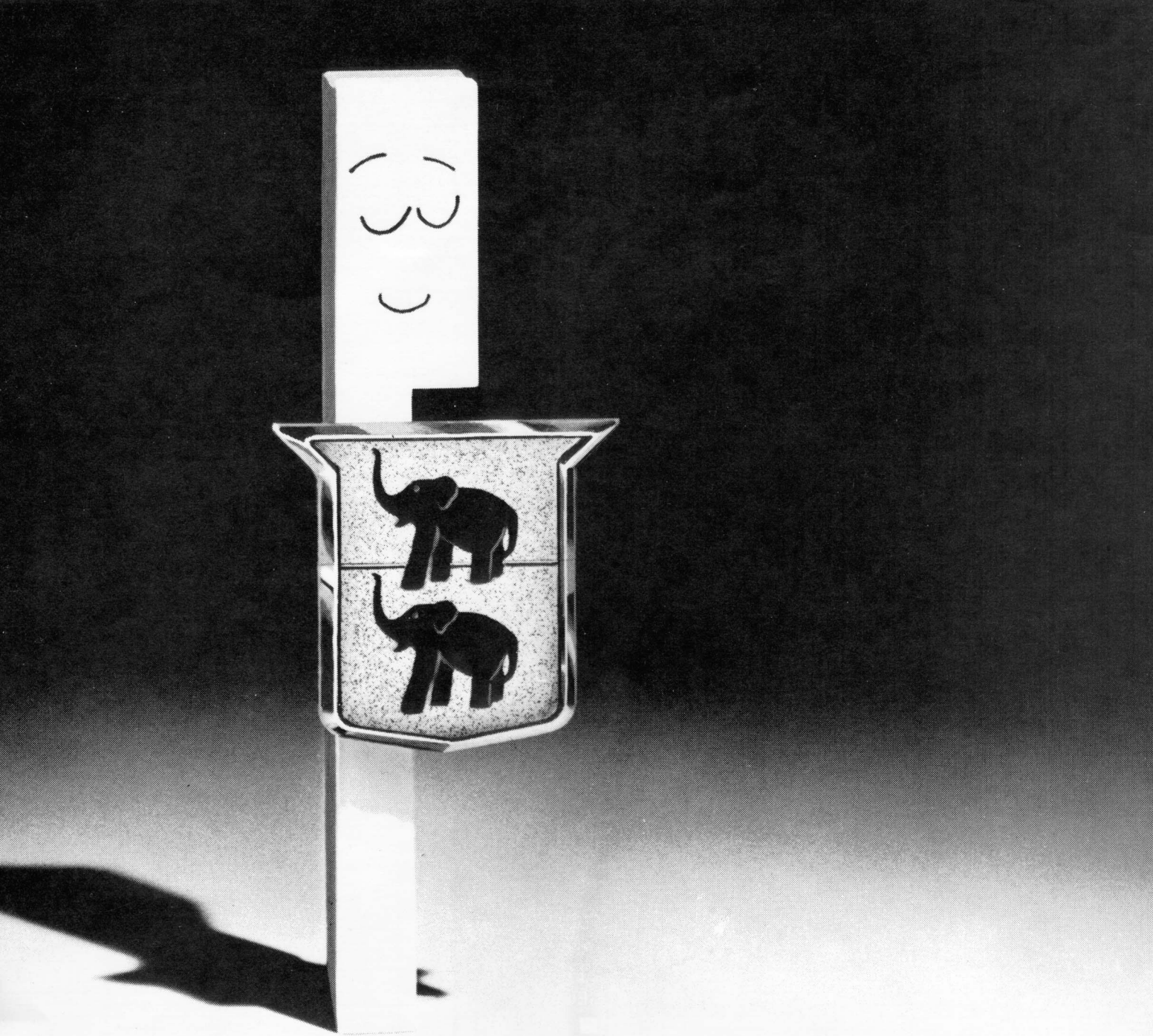
Piano Technicians Journal
June, 1979





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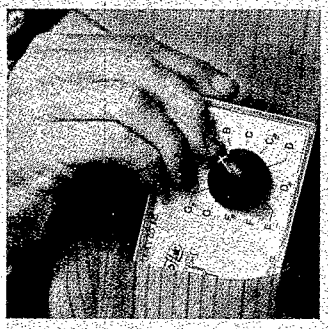

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Official Publication of the Piano Technicians Guild/June 1979 Volume 22 Number 6

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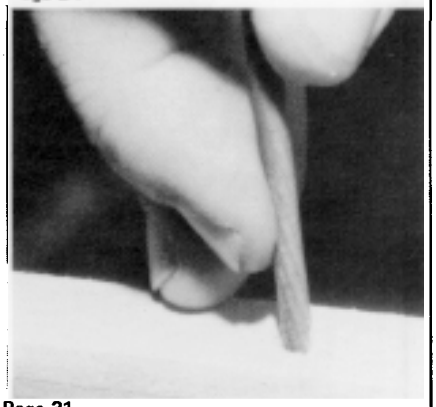

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The Piano Technicians Journal, the official publication of the Piano Technicians Guild, is published monthly and issued to members twelve times a year. Annual subscription price: $40 per year; $72 for two years; $3.50 per single copy. EDITORIAL OFFICES are at 113 Dexter Avenue North, Seattle, WA 98109. TELEPHONE: (206) 283-7440 or 682-9700. Second-class postage paid at Seattle. CLOSING DATE FOR COPY AND ADVERTISING IS SIX WEEKS PRECEDING DATE OF PUBLICATION. Advertising rates furnished on request.

PIANO TECHNICIANS JOURNAL REPRINT SERVICE

Reprints of most articles appearing in the Piano Technicians Journal are available from PTG Headquaters: 113 Dexter Avenue North, Seattle, WA 98109. Prices per page (plus postage): Single copy, 25 cents; 10 copies $1; 100 copies (or more), $6 per hundred. US ISSN 0031 9562 Foreign and Domestic.

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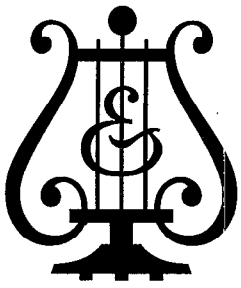

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EDITORIAL

I recently became interested in the field of visual impairment. A staff executive in our management firm sits on the Board of Seattle's Community Services for the Blind and, while helping him to assist them (they need a stronger organizational base and more public recognition), I began to reflect on just what would be involved if I lost my own sight. How would I cope with the problem? How much strength and courage would I be able to muster to keep me in the mainstream of life and overcome the obstacles which would most assuredly confront me?

According to a recent Gallup poll commissioned in 1976, fear of blindness ranked second only to fear of cancer. Most of us do not really stop to think about it — we take sight for granted. There are 10 million adults and children among us with severe visual impairment — a considerable segment of the population. Only 4 percent of those considered legally blind are entirely blind. Far beyond the many thousands who are totally blind, there are millions more who live with severe visual handicaps. Many exist with intense eye pain, discomfort, and psychological distress — making do with vision far from perfect.

Even those with normal vision are beginning to learn that sight can be damaged abruptly by an unsuspecting disease or the aging process. Our chance of becoming visually impaired increases with age. Even if we manage to escape such things as glaucoma, cataracts, and diabetes, we could ultimately face what is known as macular degeneration (an aging process that has to do with deterioration of the retina). This condition currently affects about 150,000 people in this country and is increasing at about 10 percent annually. A person who is in his/her 40's today can expect to live another 30 or 40 years. During this second period of time, he/she has about one-third chance of becoming visually impaired on a moderate to severe level. Unfortunately, there are no cures for these diseases — only reorientation, rehabilitation, and intensive training can help.

There are many fine PTG members who are visually impaired. This does not seem to stop them. They ply their craft with the best of them, attend PTG meetings, and contribute to the Guild in many ways. Visually impaired PTG members share their thoughts and concerns, constantly demonstrating their willingness to participate on all levels of Guild activity. Many of these fine members have accepted important leadership positions. All of our visually impaired members serve as a constant inspiration to the rest of us. Frankly, in the same situation I don't know what I would do.

It is heartening to note that today there are numerous organizations (such as the community center I am currently helping), local libraries, braille establishments, and other supportive groups who are interested in the visually impaired problem and are standing by to help. It is also reassuring to know that there are many aids and appliances now available to those who need and want them. People who are visually impaired can do practically anything anybody else can do, including reading, writing, cooking, sailing, skiing, biking, and hiking. They can engage in almost all hobbies and crafts. Additionally, the visually impaired can take lessons in first aid and cardiopulmonary resuscitation (CPR). They may need a little help from time to time (and who doesn't), but most of them seem to manage beautifully. Today they occupy positions of importance in all segments of society and, just as in PTG, they represent many owners of small businesses throughout the land. Many do so well without the benefit of sight it is sometimes difficult to even recognize that they have a handicap.

The PTG Board of Directors has discussed providing JOURNAL tapes versus the printed version to those members with visual difficulties. While our policy is not exactly crystal clear on this issue at this point in time, it will be taken up again this summer. Meanwhile, we are continuing to provide these members with both until the matter is resolved. PTG certainly owes a debt of gratitude to our long-time valued member, George Defebaugh, who has steadfastly maintained the JOURNAL ON TAPE service for our members with visual problems over the many years. I am sure that there are many members who thank him each and every month for this generous sacrifice of time.

Our hats off to you George, keep up the good work. — DLS ■

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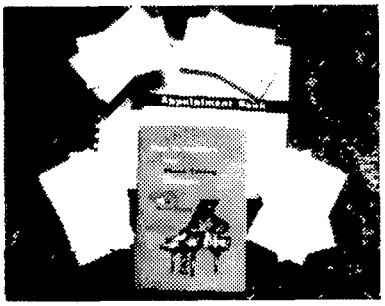

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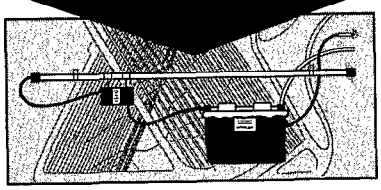

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DON MORTON

PRESIDENT'S REPORT

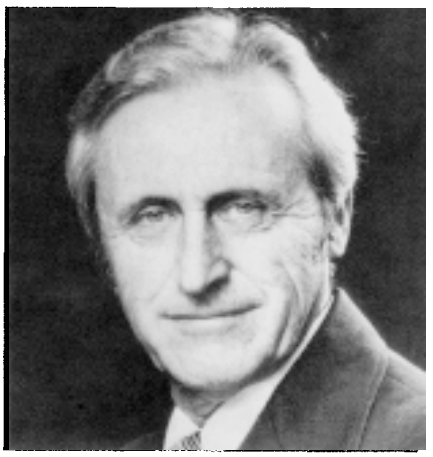
"Of the 92 million plus labor force in the United States, over 60 percent are employed by the government and the 500 largest corporations. . . ." stated an article in a recent labor survey. This leaves less than 40 percent of our country's total labor force working for small corporations and companies, in private enterprise, or as independents. The independent classification applies to most piano technicians and is usually at the bottom of the list when comparing numbers employed.

I am old enough to remember quite a different labor picture — when there were many mom-and-pop businesses and small one-man shops, and the title of "farmer" or "rancher" carried a proud heritage. Today the independent, along with the small-business operation, is almost crowded out of the labor pool. The economy is geared for big volume and operated by computers with built-in obsolescence a prime factor in the basic product plan. As computers take over, the human element is more or less eliminated — at least the element of personal pride in the maintenance of quality and service. The computer, including all of the varied systems involved, is without doubt accurate and efficient; but the computer doesn't care — I mean personally care — what it does to or for you. It simply proceeds on its programmed course, regardless of human needs and effects.

No, I am not trying to build a case against the computer, but I am saying that we should recognize these instruments as a servant to man's needs rather than become a society enslaved by electronic calculations and predictions. I see the service industry (which, by the way, has grown into a valuable force in our society) as being among the last strongholds of the independent business person. Sooner or later, perhaps it too will succumb to corporate organizing — putting more pressure on the independent to join forces or be eliminated.

Personally, I will do all I can to keep this from happening because I believe personal independence is necessary for the preservation of humanity. Independence allows freedom of choice and the opportunity to set your own life style with ultimate goals. The piano service person is by nature a member of this group who wants to be masters of their own destiny. They are professionals who take pride in their reputation and the ability to render value received when called upon. **Long live this independent service person who has mastered the profession of his/her choice and then maintained standards according to his/her ability and the needs of the community!**

If you've chosen to be an independent, keep in mind that freedom demands responsibilities — one of which is the constant effort required to maintain our freedom. This involves continual awareness of the movements and plans of the social and political forces constantly at work to manipulate and control us. Recently the *Los Angeles Times* newspaper carried an interview with one of the nation's leading senators on its front page. The senator was asked if he believed the big oil corporations were ripping us off in their control of gasoline and supply. His immediate response was, "Oh yes, of course." Whether we like it or not, we are manipulated in many ways.



Three forces which are most powerful in their ability to control are television, motion picture, and news media. The audiovisual effect of these types of communication is almost overpowering, especially when these media join in what they term a "saturation" effort. As an independent force in our community, it is imperative that each of us continue to be active on all levels of governmental and social projects. We should always be ready to speak out against manipulation and control by special interest groups. As independent craftsmen we can be a determining force against organized controls which channel humanity into a computerized standard — stifling freedom and enslaving our efforts for the special benefit of those who are the manipulators.

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JIM ELLIS

COMMENTS ON SOME 18TH CENTURY GERMAN ACTIONS

ABOUT THE AUTHOR

James F. Ellis, Jr., was born in Knoxville, Tennessee, in 1928, and grew up at Jefferson City, Tennessee, where he studied physics and music at Carson-Newman College. After graduating in 1952 he took a laboratory job at Oak Ridge, Tennessee. He served in the U.S. Army during 1953-54, after which he returned to Oak Ridge. Ellis is a member of the Fusion Energy Division of Oak Ridge National Laboratory, where he is active in the development of specialized instrumentation. He holds six U.S. patents.

Ellis tuned his first piano when he was 12, and maintained all the pianos in the Music Department at Carson-Newman College while he was a student there. Since that time, piano tuning has been an occasional weekend hobby – along with amateur radio. Jim has applied for membership in the PTG and hopes to be a member of the Knoxville Chapter by the time this article is published.

I was very interested in Jack Krefting's book review of *The Piano Hammer*, translated by Jakob Engelhardt from Walter Pfeiffer's *Von Hammer* (JOURNAL, January 1979). I was particularly interested in the chapter on "The Bumping Action," which was taken from the book and printed in the same issue. Before I had finished reading the chapter, however, I had the feeling that something was wrong. For some reason six of the eleven illustrations appeared to belong in the classification, but five did not. Furthermore, I was a little disappointed that the chapter did not fully describe the place of the "bumping action" in piano history.

My first inclination was to write a "letter to the editor," but I decided against that. Instead, I reviewed the available literature once more and, as a result, became aware of an interesting aspect of early piano-building that I had previously overlooked. I would therefore like to share my findings (and my theory) about these early actions with those JOURNAL readers that may be interested. I will describe what I believe the "bumping action" actually was, how it differed from others in the same German classification, how these developments fit into piano history, and their significance to the modern piano. In doing so, the figures to which I will refer will be those shown in the JOURNAL article, "The Bumping Action" (pages 11-17, January issue).

THE CLASSIFICATION

In his book review, Mr. Krefting mentioned two difficulties in translating from the German. These are (1) no direct English equivalents for some of the German terms used, and (2) Dr. Pfeiffer's occasional use of unorthodox terms. To what extent Dr. Pfeiffer used unorthodox terms, I am not sure. Some terms that now seem unorthodox may have been traditional at one time. A case in point is our own term, "tuning hammer." We would no more call this tool a wrench than an infantry officer would call a rifle a gun; however, by English definition, a tuning hammer is a special wrench and a rifle is a particular type of gun. A hammer, per se, is what a tuning hammer is not. It is used to turn (set) tuning pins, not drive them. To drive a pin, we use a tuning pin "setter" (plus a hammer). The names we give these tools are inconsistent (reversed) with respect to the names we give their functions, but we think nothing of it because we are so accustomed to this usage. Imagine the difficulty a Russian translator might have with these terms, say, 200 years from now!

These are idiomatic expressions, and they show up in any language. German is one of the more precise languages; parts are named after their functions. While idiomatic expressions are minimized, they still exist. Combine these difficulties with the tendency of "old school" Germans to make sharply defined classifications, and what sometimes begins as a very slight error in translation can end as a very significant one. I think this may partly explain why Dr. Pfeiffer disagrees with Curt Sachs about the classification of the action in Figure 6, but I will discuss that later.

The German terms *Prellgetriebe*, *Prellwerk*, and *Prellmechanik* were all used to designate a general class of actions having their hammer assemblies mounted on the keys. This classification comes from the German verb *prellen*, meaning to make rebound, to toss, to backstroke, buffer stop, etc. It can also mean "to cheat" or "to swindle"; therefore, the true meaning must also depend upon the context in which the term is used. *Getriebe* is a mechanism, transmission, driving motion, etc. *Mechanik* and *Werk* are similar and refer to a mechanism. In this context, *Prellgetriebe* and *Prellwerk* refer to actions in which the hammers are actuated by rebounding, tossing, or backstroking motions, or any combination of these.

Hollis refers to *Prellmechanik* as a "bouncing" action.[1] The illustrations and descriptions given are of those types shown in Figures 1-6 of Dr. Pfeiffer's chapter. Hollis specifically points out that these particular actions had no escapements; therefore, they were truly "bouncing" actions. Both terms are appropriate. They might even be considered *Prallwerk*, although I don't find this term in the literature. *Prallen* means to bounce, to be reflected, rebound, impinge, etc.

Another reference describes *Prellmechanik* as a primitive form of square piano action that evolved from the clavichord.[2] Still another reference describes the *Prellmechanik* as a "jerking" action in which the hammer assembly mounted on the key.[3] This

source agrees with Dr. Pfeiffer's definition, and it includes actions with escapements as well as those without. To what extent *Prellmechanik* was an idiomatic term, I am not sure; but it does seem certain that it was used to designate all actions in which the hammer assemblies mounted on the keys.

REBOUNDING ACTIONS

It is probably appropriate to classify the actions illustrated in Figures 1-6 as "bumping" because this term is descriptive of the dynamic characteristics they must have had. In the action shown in Figure 3, for example, the rear half of the key rose, the hammer tail bumped against the rail, the hammer bounced up, the hammer hit the string and rebounded, and the hammer tail bumped back against the rail (*Prelleiste* or rebound-making slat, moulding, or ledge). The only "let-off" available was the clearance between the hammer tail and the bumper rail, and the limited travel of the key as it bumped against the stop.

TOSSING ACTIONS

Unlike the actions illustrated in Figures 1-6, the improved designs shown in Figures 7-11 did not operate in a rebounding mode. To refer to them as "bumping" actions is, in my opinion, a misnomer. They were included in the general classification *Prellwerk*, but their dynamic characteristics were greatly improved by the addition of the escapement. Since *prellen* also suggests a backstroking or tossing motion, I think the term "tossing" would be much more appropriate than "bumping." It retains the meaning of the German word, and also describes the dynamic characteristic of the mechanism. The hammer was literally tossed off the key by means of the *Auslöser* (trigger release), also called the *Prellzunge* (tossing tongue, or blade). More than one translation of this term is possible, but I use the one that agrees with the function clearly shown in the drawings.

In these improved actions shown in Figures 7-11, the hammer still swung in the yoke, or flange (*Kapsel*), and made backstrokes off the key; therefore, the German classification (*Prellwerk*) was still used. But a more definitive term, *Prellzungenmechanik* (backstroke tossing-tongue action), was applied to these improved designs. The bumping effect was eliminated with the installation of the escapement. If this part had been a bumping pad, which it would have been if the action had been bumping, I think the Germans would have called it a *Pufferkissen* instead of a *Prellzunge* or *Auslöser*. *Prellwerk*, *Prellgetriebe*, and *Prellzungenmechanik* suggested mechanical arrangements, but "bumping" suggests a dynamic characteristic.

It may appear that I am being overly concerned with details. Perhaps I am; but I point out that these details made the difference between a piano action that performed its function beautifully, within its limitations, and some others that more or less defeated the purpose for which the first piano was built. These striking differences will become more apparent as I continue.

COMPARISONS

The chapter refers to Figures 5 and 6 as having "two-armed escapement levers," and Mr. Engelhardt's footnote 5 refers to Dolge. I disagree. Dolge's use of this term is unfortunate[4] because the only "escapement" shown (as I mentioned earlier) is the slack (lost motion) in the mechanism. This is not a true escapement at all. The German word used is *Treiber*, which means "driver." These are actuating levers — not escapements. They were used as velocity multipliers. The response of such an action would be similar to that of a very poorly regulated modern action having a shallow dip, lost motion, and completely missing let-off. We are all aware of the horrible results this condition produces!

Mozart felt the same way about it when he wrote his father on October 17-18, 1777:

> This time I shall begin at once with Stein's pianofortes... for they damp ever so much better than the Regensburg instruments.... In whatever way I touch the keys, the tone is always even. It never jars, it is never stronger or weaker or entirely absent; in a word, it is always even.... His instruments have this special advantage over the other that they are made with escape action. Only one maker in a hundred bothers about this. But without an escapement it is impossible to avoid jangling and vibration after the note is struck....[5]

This letter appears in several places in the literature. In one encyclopedia, it is incorrectly referred to as Mozart's letter to his mother,[6] but this error is corrected in more recent editions.

Mozart's remarks indicate at least four things of interest: (1) Escapements were not used in the majority of German pianos of that period, but their advantages were known and understood. (2) The hammers of these escapeless actions were prevented from blocking by lost motion in the action (Mozart's reference to uneven and sometimes absent tones). This feature is also shown in some of the drawings. (3) The hammers did bounce after the initial stroke (jangling). (4) The greatly improved damping of the Stein piano suggests that Mozart might possibly have been comparing it to a type of German action in which the damper was attached to the hammer mechanism.[7] A damper attached to a bouncing hammer assembly would certainly have given erratic results. Stein's dampers were actuated by the keys. I am unable to ascertain if the Regensburg instruments to which Mozart referred were of this type, so I must leave this point as speculation. As a whole, however, Mozart's remarks confirm the existence of the very same characteristics we would suspect after studying the drawings of these actions.

I agree with Dr. Pfeiffer that Stein's escapement hopper was a decisive improvement. However, the idea of an escapement was not new at all. Cristofori had it in his action of 1707, 66 years before the Stein

escapement action. Moreover, Cristofori's improved action of 1720 was complete with escapement jack, secondary lever, and back-check.[8] Nearly a century later, however, the rebounding action of Gottfried Mahr (1807, Figure 6) looks to me like a corrupted hybrid of the 1720 Cristofori action and the 1773 Stein action. The secondary lever has no escapement, and the jack is a firmly attached pusher (*Stosser*). Mr. Engelhardt's footnote 9 states that some English-language encyclopedias sometimes refer to a pivotless jack as a "mopstick." This usage is incorrect. The German word for "mopstick" (of a piano) is *Fangerstab*, meaning a "suppressing stick." This is a damper — not a jack.

It is the Mahr action (Figure 6) about which Sachs and Pfeiffer disagree. Sachs no longer sees the backstroke, because the hammer's angular motion is in the same direction as that of the key. He also sees the pusher (*Stosser*) connected to the secondary lever, or "driver" (*Treiber*); therefore, he classifies this as a "pushing" action (*Stossmechanik*). On the other hand, Pfeiffer sees that the secondary lever is actuated by impact with the "bumper rail" (rebound-making slat, *Prelleiste*). He also sees that the hammer is being tossed off the key and swings in its pivot mounted on the key; therefore, he classifies it as a rebounding action. Sachs and Pfeiffer are both correct; the action is indeed a hybrid. The point I make is this: Mahr's action had no escapement, and its hammer rebounded at the end of the stroke as well as at the beginning. For this reason, I would call it a "bumping" action, regardless of where the hammer assembly mounted.

Figure 5 is an action invented by Christoph Schröter in 1717, independently of Cristofori's work. It was from this crude action that the "Vienna" action later evolved.[9] The rebounding (bumping) actions of the middle eighteenth century and later (Figures 1-4) came after that of Schröter (Figure 5) — not before it.[10,11] An action by Zumpe in 1760-65 had the hammer assembly mounted on a rail and actuated by a jack firmly fixed to the key.[12] There was neither an escapement nor a secondary lever. This also was a "bumping" (bouncing) action because of its dynamic behavior, but it was not a *Prellmechanik*. It was a *Stossmechanik* because of the jack. I am here distinguishing between mechanical structures and dynamic characteristics.

A question now arises: **What became of the escapement and the back-check between the time of Cristofori's death in 1731 and the Stein escapement of 1773, or the Stein-Streicher backcheck of 1780?**[13] I will attempt to answer this question in the following summary of events.

DEVELOPMENTS SUMMARIZED

The piano is a product of guided evolution. Its history is one of experimentation, invention, and development by many people. But as so often happens with inventions, the piano was invented more than once. Two of the earliest keyboard hammer actions were never developed and never recognized as inventions of the piano, but two of the later ones were. One of these latter inventions was by far the more advanced, but its development ceased when the inventor died. Subsequent development followed the inferior design through a period of transition, during which time the "bumping action" was developed.

Two of the piano's earliest known ancestors were the psaltery (a sounding box with strings), which existed in Biblical times, and a somewhat similar instrument, the Chinese *Ke*, which dates about 2650 BC. The monochord (a string and movable bridge on a sounding box) was used by Pythagoras about 582 BC.[14] The earliest known keyboards were used by the Romans for playing an organ about the first century AD, but disappeared after the fall of Rome.[15] The next known keyboards appeared about a thousand years later in the tenth century.[16] Bowles shows 41 pieces of artwork and design drawings dating from 1400 to 1500 depicting various forms of clavichords, harpsichords, and even a keyboard psaltery. These instruments were of Austrian, Burgundian, Dutch, English, Flemish, French, German, Spanish, Italian, Istrian, and Swedish origins.[17]

One thing led to another and, during the two centuries from 1500 until 1700, there was a considerable increase in the size, number, and complexity of clavichords, harpsichords, and virginals.[18] There was even a keyboard instrument in which the strings were "bowed" by cloth and parchment-covered wheels turned by a crank.[19] The first traceable keyboard hammer action appears to have been built about 1440. Another has been dated 1610, but I find no evidence of subsequent developments until the time of Cristofori.[20] These were the early keyboard hammer actions to which I referred above.

The clavichord was a very simple instrument in which the strings were struck and held by metal tabs (tangents) attached to the keys. Its tone was very very weak, but it did have limited degrees of expression. By contrast, the keyboard-plucked instruments (harpsichords and virginals) had stronger tones but no touch expression. Various mechanisms were devised to make them sound louder or softer, and to change the tone quality, but these could not provide shades of individual key-stroke expression. Each type of instrument was popular where its peculiar advantages were in demand, but there was no instrument that could provide the unique features of both.

The first recognized invention of the piano occurred about the time Prince Ferdinand dei Medici hired Bartolommeo Cristofori, an Italian harpsichord-maker, to maintain the royal instruments.[21] Cristofori was experimenting with hammer actions about 1698, and by 1700 he had produced his first "harpsichord with hammers."[22] The earliest existing drawing of his hammer action (1707) includes an escapement and damper.[23] Cristofori continued building and developing his instruments; by 1720

his "pianoforte" action was complete with jack, escapement, secondary lever, back-check, synchronized damper, and una corda to go with the double-strung instrument.[24,25,26]

As far as is known, Cristofori had no pupils, and piano making in Italy languished after his death in 1731.[27,28] The second recognized invention of the piano occurred when Christoph Schröter, a German organist who was working independently of Christofori, designed two very simple hammer actions in 1717. One was upward striking (Figure 5) and the other downward striking. Schröter showed his models to the King of Saxony in 1721, but received no support. By 1724, however, other makers in Dresden were using the Schröter design. An organ builder, Gottfried Silbermann, made pianos with Schröter's action design in 1728. Silbermann further simplified this design by eliminating the secondary lever. The result was an action similar to that shown in Figure 3. Johann Sebastian Bach tried one of these instruments, but did not like it. At some time prior to 1747, Silbermann obtained the designs of Cristofori's action. This might have been through the knowledge of an Italian craftsman, by obtaining copies of the drawings, or by purchasing an instrument made by Cristofori. Whatever the answer, we know Silbermann knew the details of the Cristofori action because that is the design he used about 1747 for the pianos he built for Frederick the Great.[29,30]

During the next several decades, pianos with a variety of action designs by different makers were built and sold. These were generally small, cheap, light instruments intended for domestic use. They were generally rectangular in shape, resembling clavichords. Their tones were weak (although stronger than those of clavichords) and their touch expression was poor. Nevertheless, the popularity of the clavichord in Germany and surrounding countries had not died out, and there was a demand for these little clavichord-like "square pianos." One of Silbermann's pupils, Johannes Zumpe (whose action I mentioned earlier), built and sold many of these little instruments. Productionwise, this was a period of growth; but designwise, it was a period of retrogression.[31,32,33,34,35]

It is interesting to note that one lone Italian, Cristofori, was more than a half century ahead of the best German piano builders. Except for the repetition lever and sostenuto, his action had the rudiments of just about every part in the modern grand action. The mechanical cleverness of the Germans was second to none; so why did their piano designs lag behind? One might speculate that they didn't pursue the more complicated designs because there was no real demand for them, and there was a ready market for the simpler ones. I believe the record bears this out as fact. Also, we must remember that piano building in Italy ceased (as far as the record shows) at the time of Cristofori's death. This does not indicate a national trend; it simply indicates that one man was ahead of his time!

One might also speculate that the cheap German actions, prior to Stein, had no escapements because they evolved from an action that had no escapement. However, the fact that Silbermann (about 1747) began using Cristofori's designs instead of his own proves that they were known at that time. Furthermore, Backer's action design of 1776 (later called the English action) had a redesigned escapement still retaining some similarity to that of Cristofori.[36,37,38]

As I also mentioned earlier, J.S. Bach, the great German composer and performer (1685-1750), disliked the Silbermann piano with the Schröter-Silbermann action. The reason Bach gave (according to Dolge and others) was that it was too hard to play. It had a "deep heavy touch," and the treble was too weak.[39,40] We might conclude from this that Bach was accustomed to the very delicate touch of the clavichord; therefore, the heavier feel of Silbermann's hammer action was objectionable to him. I doubt this. Bach was **the** organist of his day. Organs at that time used "tracker" actions and, unlike the electrically controlled pipe-organ actions of today, the organ actions of Bach's day were mechanical, involving a whole network of levers, wires, rods, and mechanical joints going in all directions to operate the valves. I believe the touch of Silbermann's piano would have been quite light by comparison.

In testing Silbermann's piano, Bach would have played the same kind of music he normally would have played on the clavichord or harpsichord. Silbermann's hammer action was no doubt heavier than that of the clavichord (the only other key-touch-expression instrument) to which Bach probably compared it. I suspect Bach objected to it because it was too hard to play with any degree of evenness of expression for that type of music.

Bach's unfavorable response to Silbermann's piano was bound to have had an adverse effect on the development of the instrument. It might also have influenced Silbermann to change to the Cristofori action design, but this is speculation. Bach is reported to have tried an improved version of Silbermann's pianos in 1745, and this time approved it.[41] I suspect this might have been Silbermann's first piano after adopting the Cristofori design. It would have been logical for Silbermann to call Bach in to reexamine the instrument when Silbermann thought he had corrected the features to which Bach objected. Unfortunately, the records I find are vague on this point and do not indicate that anything ever resulted from it. Bach was getting old by this time and it was not long before his death.

Regardless of any adverse effect J.S. Bach's disapproval of Silbermann's piano might have had, the professional musician's desire for more volume and a wider range of expression was beginning to have its effect. Bach's son, C.P.E. Bach, used the piano, but still preferred the clavichord. Another son, J.C. Bach, preferred the piano, and even gave a recital on a Zumpe square in England in 1768 where Zumpe now builds his instruments.[42] I seriously doubt Zumpe's piano would have been J.C. Bach's choice if any better ones had been available to him at that time and place.

Two more brilliant young pianists, Mozart (1756-1791) and Clementi (1752-1832) were now coming on the scene. It is safe to assume that these young professionals, and others as well, were beginning to influence piano builders to make improvements. Communication then was obviously much slower than it is today, and we notice from Mozart's letter that Stein's improved action was already four years old before Mozart tried it. According to Mozart's letter (the one to which I referred earlier), Stein himself was a pianist as well as a builder, and it was this that motivated him to produce an instrument of superior design and quality. Clementi, Mozart's major peer, was living in England at this time. It is interesting that the rapid improvements in piano-making occurred in England and Germany at about the same time, but along two different design patterns. The interaction that existed between makers and musicians is obvious. Musicians were seriously turning to the piano because of its potential; and piano makers were seriously making improvements in order to win more acceptance. Each group motivated the other.

We now return to the question: **What became of the escapement and the back-check between 1731 and 1773, 1780?** Silbermann apparently used them in some of his pianos after 1745. Other than that, I think it was just like Mozart wrote in his letter. Most of the piano makers of that period just did not bother about an escapement; and without an escapement, a back-check would have been useless.

CONCLUSION

As far as is known, Bartolommeo Cristofori built the first complete piano about 1700 and brought it to a considerable degree of perfection within a 20-year period. Piano making virtually ceased in Italy when Cristofori died in 1731, but the Germans had begun building pianos of an entirely different type. The majority of these German instruments (from 1724 until 1773) were quite inferior to those Cristofori had built in 1720. About 1773 Johann Andres Stein invented a new escapement which converted the German action from a rebounding mechanism to a hammer-tossing action. This eliminated the objectional "bumping," "bouncing," "dancing," "stuttering," and "bobbling" (jangling, as Mozart called it) effect of a hammer mechanism without escapement.

In English-language terms, I think a "bumping" action should be considered as that which, by design, was/is without escapement mechanism, resulting in a rebounding characteristic of the hammer. It might also be appropriate to divide the German actions with key-mounted hammers into two subclasses: (1) rebounding, for those having no escapements; and (2) tossing, for those with escapements. This would retain the German word meanings. More importantly, I believe piano technicians should have a good understanding of the basic dynamics involved, why these developments took the course they did, and how this related to the performance of a modern piano. ■

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THE TUNER-TECHNICIANS FORUM

The story is told of the young husband who watched, mystified, while his bride sliced off the end of a roast before placing it in the oven. "Why are you wasting that meat?" the young man wanted to know. His wife assured him that she was using the correct procedure, which her mother had taught her from childhood.

Unconvinced, the young man asked his mother-in-law about it, only to be told patronizingly the very same thing — that this was the proper way to cook a roast. She had learned the method from *her* mother, a woman now in her seventies who was still considered the best cook in the family. As it happened, the young man and his bride had been invited to her grandmother's house for a roast beef dinner the following Sunday, so he jumped at the opportunity to find out why a roast should be cut short before cooking.

"Oh, that," said Grandma with a disgusted wave of her hand. "It's because my roasting pan is too small. I've pestered my husband to buy me a bigger one for 50 years!"

And so it goes in the piano service business. Too often we accept seemingly strange methods without question, simply because "that's the way it's done." But times are changing, and the new breed of younger technicians is demanding to know the *why* as well as the *how* of piano service. Occasionally this leads to the debunking of an old method which was based on a faulty premise, but more often this questioning process confirms the validity of the traditional methods. At any rate, we regard this questioning attitude as a sign of healthy progress in our craft, and we intend to encourage it in these pages each month. After all, who among us can say that he already knows everything there is to know about pianos?

PAPERING GRAND WHIPPENS

In addition to the fact that the grand whippen must be aligned in a side-to-side plane so that it does not interfere with its neighbors, there are four points of contact that must be considered. The two that are the most important involve the centering of the whippen over the capstan and under the knuckle. The secondary points are, of course, the let-off button and the drop screw; we will ignore these for now.

Ideally, the whippen rail is perfectly straight and the flange is cut and pinned so that the whippen will be perfectly square with the rail, both upward as measured from the top of the rail and forward as measured from the front of the rail. And, naturally, in the ideal world all birdseyes are drilled perfectly straight and all bushings are uniform. The whippen lines up perfectly with all its neighboring parts, just as surely as the Congress will abolish all taxes tomorrow.

Unfortunately, dreaming about a perfect world will not travel those whippens, so we must return to reality and get out the travel paper. Examine the alignment of the whippen to the knuckle and capstan after the hammers have been spaced to the strings. It should be centered perfectly at the knuckle, and very nearly so at the capstan.

There are four places on the flange which may be papered, as shown in Figure 1, marked A, B, C, and D. Points A and B should not both be papered on the same whippen, as the effect of one would be canceled by the other. Similarly, points C and D should not both be papered. Point A may be papered along with either C or D, or B with either C or D. Let's look at the effect of papering at each of the four points.

Papering at point A would move the entire whippen, top and bottom, toward the treble. It would swing that way like a garden gate, without tipping. Papering at point B would move the entire whippen toward the

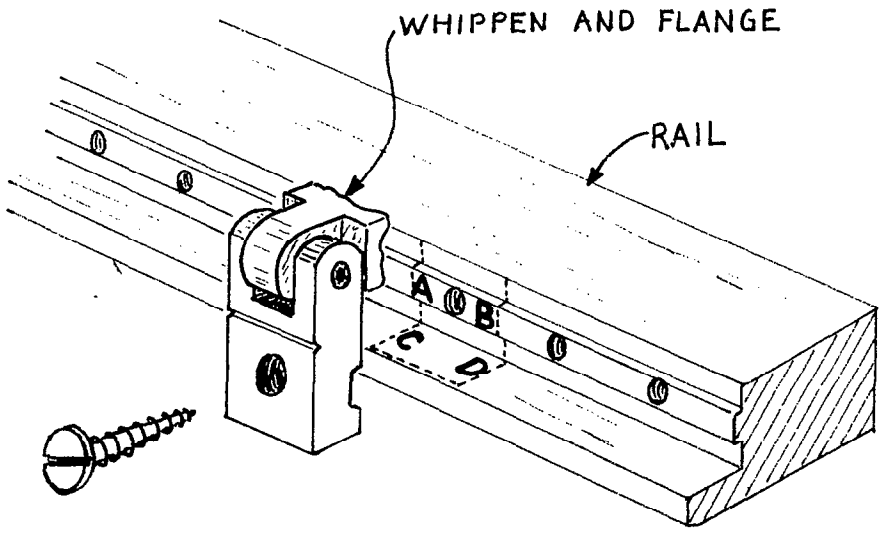


FIGURE 1. JEC

bass (see Figure 2). If the whippen is misaligned in the same direction at **both the knuckle and at the capstan,** then the papering should be done at point A or B only.

Now let us suppose that the capstan is perfectly aligned with the whippen support cushion, but the cradle is not centered under the knuckle. In Figure 3 we note that the bottom of the flange is about at the same level as the support cushion. If we paper under the flange at point C or D, then the top of the whippen will tilt to one side while the bottom will remain almost exactly where it was before papering. If we wish to move the top of the whippen toward the bass, we paper at point C; if we want the top to move toward the treble, we paper at point D (see Figure 4).

Our next hypothetical case would be where the cradle is aligned perfectly with the knuckle, but the support cushion must be moved toward the treble to be centered over the capstan. In this case we would paper at points A and C with one continuous piece of travel paper. **Why?** The paper at point A moved the entire whippen toward the treble, which aligned the cushion with the capstan; and the paper at point C tilted the top of the whippen toward the bass so that the cradle would still line up with the knuckle. **Are you still with me? Good.**

But suppose the support cushion needs to move just a bit toward the bass, and the cradle needs to move even more in that same direction. Paper at B and C. If the support cushion needs to go toward the bass, but the cradle needs to move toward the treble, what then? A continuous paper at B and D will do the trick, if an extra thickness is placed at point D.

I hope this isn't getting confusing, but it probably is, so let's try it one more time, stated as simply as possible: If you need to swing the **bottom of the whippen** to one side without moving the top, use a continuous paper (both behind and under the flange) on **that side** of the flange screw. If you need to tilt the **top of the whippen** to one side without moving the bottom, paper under the **opposite side** (at point C or D). If you need to move the **entire whippen** (top and bottom) to one side, paper behind **that side** of the flange (at point A or B only).

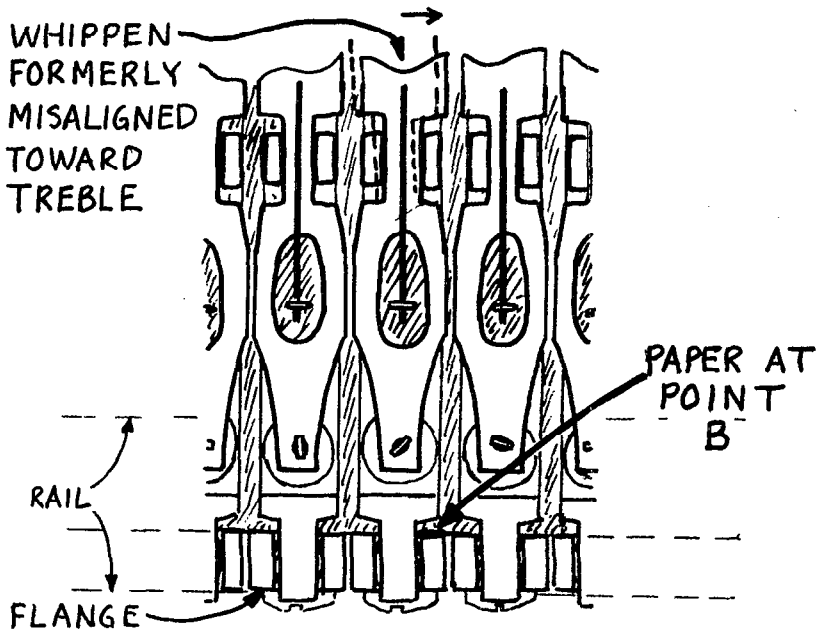


FIGURE 2. JEC

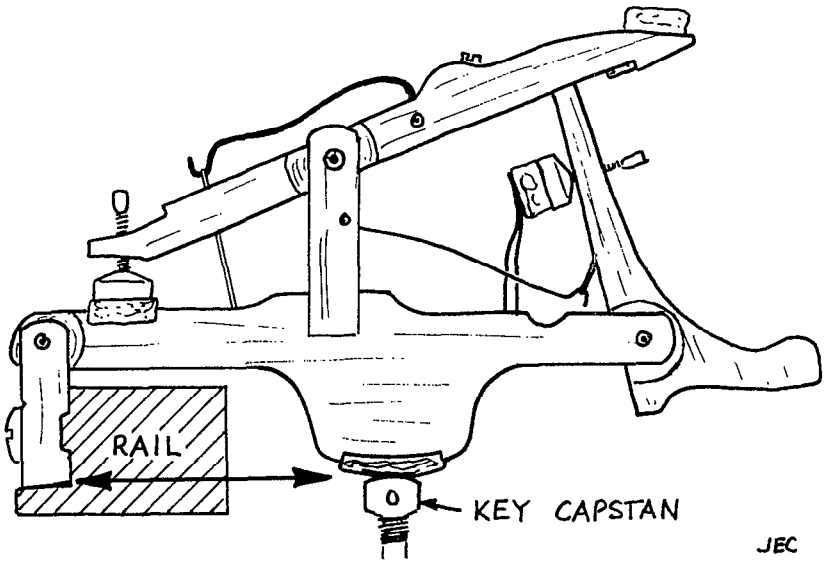


FIGURE 3.

As if this weren't already complicated enough, I must now tell you that the amount of movement of the whippen can be varied by any one of three factors:

1. The thickness of the travel paper is the most obvious variable. Some technicians use commercial travel paper; others use masking tape cut into very thin strips; still others use sandpaper. I suggest the use of No. 220 open-coat sandpaper, cut into strips about 0.075 inch wide. If you lick the grit side just before application, the sandpaper will stick to the flange. This is important because, if the travel paper is not stuck to the flange, it will fall out if the whippen is removed for any reason later, and the traveling will have to be done again.

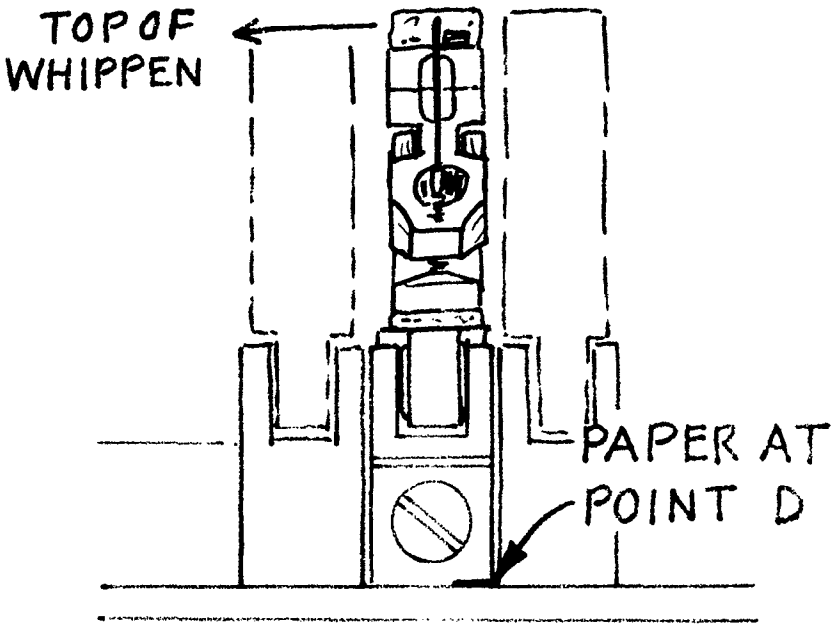


FIGURE 4. JEC

2. The placement of the travel paper in relation to the flange screw makes a difference in the degree of movement, whether the paper is behind or under the flange. The closer the paper to the screw, the greater the arc of movement of the whippen.

3. The length of the travel paper that is actually under or behind the flange will make a small difference. This provides a very fine adjustment. If the whippen moved a bit too far because of the travel paper, loosen the screw and pull the paper partway out. When the screw is retightened, the technician will notice that the position of the whippen will be closer to where it was originally. The flange is actually twisting slightly because some of the paper has been removed. Instead of one entire side of the flange being spaced outward, only one corner is spaced. The alignment of the bushing holes in the flange changes ever so slightly because of this twist in the flange.

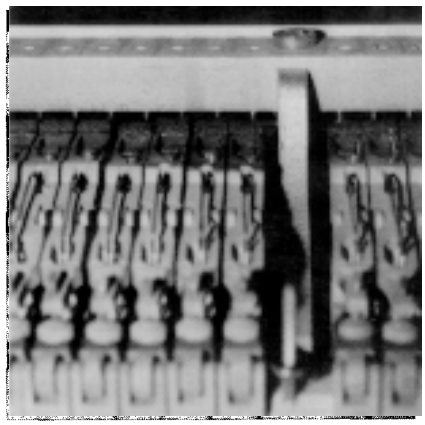
Earlier I stated that there is no reason to paper at both A and B on any one whippen. There is one possible exception which should be noted for the sake of completeness, however, Occasionally the technician will find that the front of the repetition lever is touching the hammer flange rail, and this must be corrected. There are two ways to do this, and the choice of method should depend on what caused the problem.

With the stack propped up on the bench, insert a block under the support cushions of several whippens around the offending one. The block should prop the whippens up to about their proper installed height. Now place a straightedge across the fronts of the whippen heels. This will indicate whether the entire whippen is too far forward, or whether the problem is in the length or mounting of the repetition lever itself. If the heels are parallel across the front, simply file the front of the repetition lever to obtain clearance.

But if the heel of the offender sticks forward, the entire whippen should be moved back by papering at points A and B. This will correct the condition, which probably resulted from inaccurate drilling of the birdseye or a too thin whippen support flange. If the flange is definitely identified as the cause of the problem, its replacement would also solve the problem.

Now that the whippen is properly aligned over the capstan and under the knuckle, we might take a look at the alignment of the tender to the let-off button. Whether the whippen was realigned or not, if the instrument has been played long and hard without periodic regulation, the end of the tender might well have compressed the regulating punching rather noticeably in one spot. If the tender was not centered under the button, this compressed spot will obviously be off center on the punching. The slightest turning of the let-off will, in this event, place the tender under an uncompressed spot on the punching.

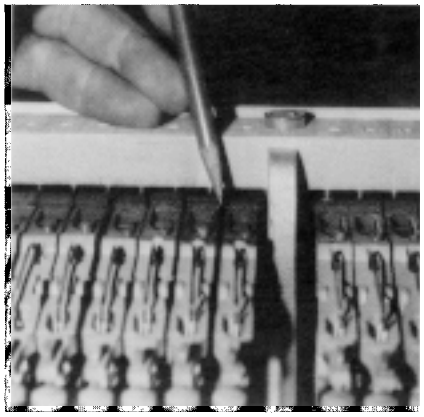
If this condition exists, it may well be impossible to do a very fine job of regulating the let-off. Suppose, for example, that the hammer just blocks against the string when the tender is in its groove in the punching. The technician turns the let-off down by, say, a quarter turn. This might well cause the let-off to change more drastically than desired if the groove was really deep, and there will be no reliable happy medium. The best solution to this problem would be to replace the regulating punchings. This



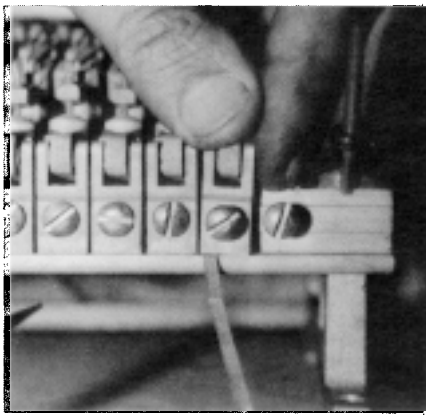
Picture A — The whippen just to the left of the action bracket is touching its neighbor. It is not just tilted at the top, but too far to the left at both top and bottom.

Picture B — By adding a strip of 220 paper to the right side of the flange, the entire whippen will move to the right. Note that we will only paper behind the flange in this case, not underneath.

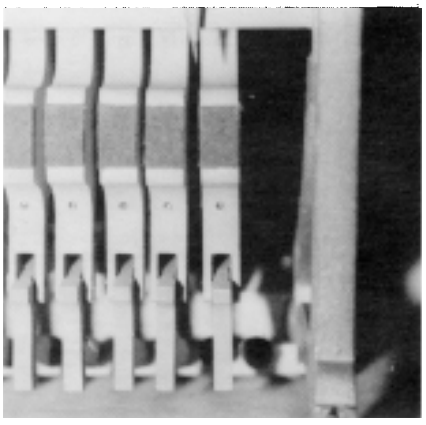
situation is less likely to occur on modern pianos because the punchings are relatively thin and made of woven cloth; but some old instruments used thick felt for this purpose. Replace the felt with modern cloth punchings and the problem will be solved.



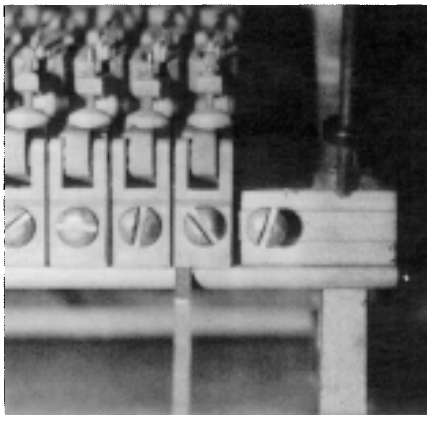
Picture C — When the screw is retightened, the whippen has moved as we intended it should. The pencil indicates that there is now a gap between the two interfering whippens.



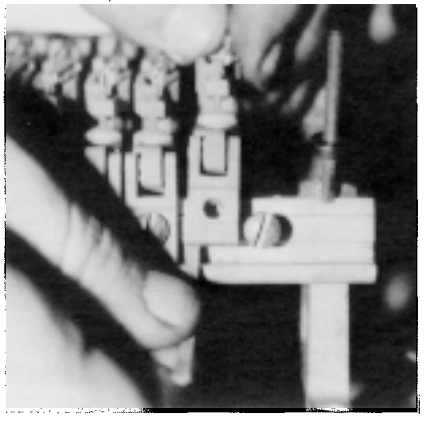
Picture F — With the screw not yet tight, my hand is holding the flange in an exaggerated position to show that the paper underneath will tip the flange and whippen to the right.



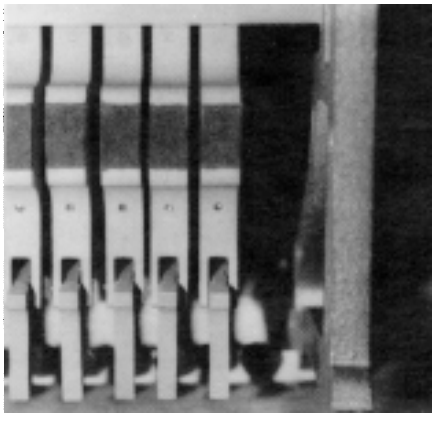
Picture D — A view from under the stack. The whippen on the right is tilted at the bottom only. We must move the whippen heel to the left without moving the top, because the cradle is already aligned with the knuckle.



Picture G — The screw is now tight, and the paper behind the flange should have brought the entire whippen to the left, while the paper underneath should have tilted the top back where it was originally.



Picture E — To swing the bottom of the whippen into alignment, we place a strip of paper behind and under *the left side of the flange.*



Picture H — And sure enough, that is what has happened. This is a second view from underneath, after papering. Compare the position of the whippen at right with the same whippen in Picture D, before papering.

GRAND DAGS

Question: *Would someone please explain just what the dags in a grand piano are for? One man says they hold the back rail down, another says they control the strike point, and a third says they don't do anything. Who's right?*

Answer: None of the above, although under actual playing conditions the third man comes the closest. The back rail is held down by the weight of the action, and if the dags were low enough to press it down they would create unwanted friction whenever the una corda pedal was used. The dags do not control the strike point (fore-and-aft position of the action) either, so long as the usual guide plate or block exists at the keyblocks. There might be an exception here on nonshifting actions or square pianos, but with the conventional system the dags do not touch the keyframe when the keyblocks are in place. The fit is very close on the Steinway and some other pianos, close enough that the dags must be graphited to allow the action to shift freely, but the back rail still must be properly bedded to prevent knocking, which proves that the dags do not press the back rail down.

The main function of the dags is to keep the rear of the action from flopping around when the piano is being moved. They also may serve as convenient perches for the tray cushions, but any kind of block would do for that. There is one often overlooked function of the dags, though. When the technician places the action in the case, he merely must be sure that no hammers are raised above their normal rest position. Once the hammers have cleared the pinblock and plate flange, the action can be shoved on in without fear of damage. Why? Because the dags prevent damage to the underlevers, back-checks, hammers, and sostenuto system which could occur if the action were pushed in too far. They stop the keyframe before that can happen.

CRACKED PLATE

Two readers have recently written to the "Forum" with questions on the same topic. The first letter comes from Robert Dommer of Eau Claire, Wisconsin:

. . . the music store at which I serve as technician has recently traded in two not-too-old uprights; when I inspected them for tuning and resale, I discovered they had cracked plates! I know it is possible to repair a cracked plate with metal plates bolted to it, though I have never done this myself. Is it safe to repair a plate? Can I help my employer recover his investment in these instruments? Could you refer me to a prior article in the JOURNAL which would describe this procedure? I know, of course, that cast metal cannot be welded (unless such a procedure has recently been discovered. . . .

In answering this question, I must preface my remarks by saying that I have never been personally faced with this problem, so I have no first-hand experience with such repairs. Other technicians have, though, so I did some research.

The February 1953 issue of THE PIANO TECHNICIAN contains an article which describes the procedure for bolting a cracked plate together with a steel gusset spanning the cracked area, and the July 1953 issue contains a picture and description of a similar repair on another piano. According to testimonials of the technicians involved, both repairs were successful.

Ordinary arc or gas welding techniques will not work on a piano plate because the temperature differential between the weld and the surrounding cast iron is too great. This temperature differential has the effect of rearranging the molecular structure of the iron in the vicinity of the repair, and plates welded in this manner will crack again right next to the weld as soon as the plate is stressed. I saw a plate a few years ago that had been welded in this manner and, sure enough, it cracked again when the strings were pulled to pitch. The new crack was welded, and the same thing happened again.

Inquiring around, I learned that Ben Wiant of Columbus, Ohio, has had two plates welded successfully, both of which have been in service without problems for some years. Wiant suggested that I call John Stump of Columbus Col-Weld, the firm that did the plate repairs for him. According to Stump, whose company has specialized in welding cast-iron engine blocks for 30 years, there is nothing difficult about welding cast iron if one knows his materials and uses common sense. This struck me as an oversimplification, sort of like saying that if you can drive a car you can pilot a spaceship, so I pressed him for some details.

The plate is placed in an oven where the chill is taken off the metal. Very gradually, more heat is applied; when the plate reaches a certain temperature, the plate is welded by a process known as thermofusion. Then the plate is very gradually allowed to cool. "It's like baking a cake," says Stump. "You have to know when to put it in the oven, how long to leave it there, and when to take it out. It's mostly common sense."

Common sense or not, the average welder is not equipped to handle this type of job. But it seems reasonable to suppose that any larger city would have at least one shop which does engine block welding, and that would be a good place to take a broken plate.

Obviously, this process requires that the plate be removed from the case, which may or may not be worthwhile on a vertical piano. Wiant says that the last plate he had welded was a concert grand plate that had been dropped and broken in three places — through two plate struts and the pinblock flange — and the welder's fee was $300. Add to this the cost of teardown and reassembly, with appropriate new parts, and the total cost begins to really add up. This was worthwhile in the case of Wiant's pianos, but might not be economically attractive to the dealer for whom Mr. Dommer works. A lot depends on the potential value of those two vertical pianos.

Newsletter Tech Reprints

Susan Graham is the author of the following discussion on bridge pins which appeared in the April 1979 issue of the San Francisco Chapter's newsletter, *In Tune*. In granting permission for us to reprint the essay, Susan emphasized her desire to acknowledge Willis Snyder's excellent class on bridge building in Cincinnati last July.

BRIDGE PINS

Consider the desirable qualities in a bridge pin. It should provide a solid definite termination point to the string. It should hold the string solidly enough to the bridge to transmit vibration, but not so solidly that the string won't move across the bridge in tuning. The pin itself should be solid in the wood so that it transmits vibration. It should do all this quietly and reliably; otherwise a whole host of buzzes, false beats, rattles, and other string noises may result — as well as tuning instability and poor tone.

A definite termination point is achieved in conjunction with bridge notching. Understand the principle of good notching even if you never intend to notch a new bridge, for it is not uncommon to find new pianos with notching trouble which should be remedied. Notching the hitch pin side is rapidly being abandoned and the speaking length side is frequently poorly done. It takes very little wood on the wrong side of the bridge pin to create a noise. The string should contact the wood at the edge of the notch and the pin at the same point. since the pin is round in cross-section, and the string passes it in a straight line, the contact point is at a small section at the diameter of the pin (see Figure 5). In other words, the holes for the pins are centered on the line beginning the notch so the wood is cut away from the middle of the pin forward. The string contacts the pin at its middle and, if the notching

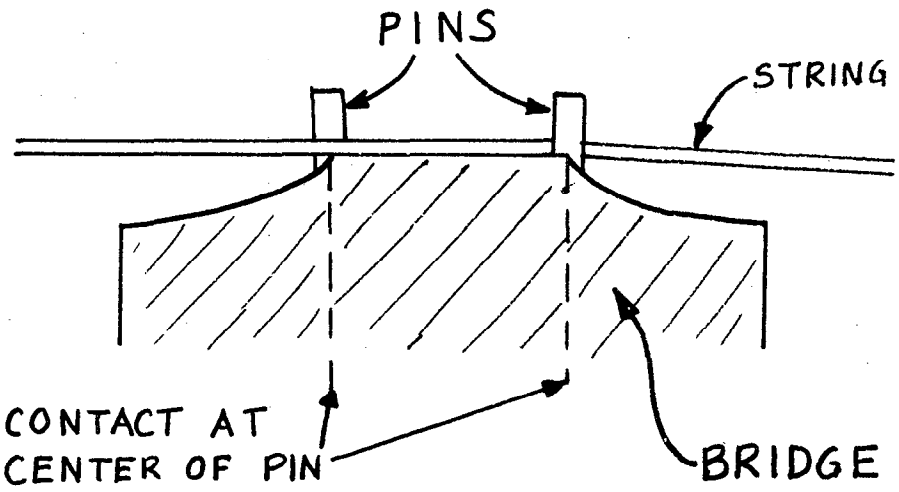


FIGURE 5. JEC

is correct, the bridge contacts the string directly under that same point (see Figure 6).

Sometimes a string will creep up the pin slightly and can make a variety of noises including false beats. Seat the string back down onto the bridge; use a hammer shank or a piece of brass — something softer than music wire. Tap the string down at both bridge pins. This is also helpful to do to new strings, as it will help settle the tuning as well as ensure good contact.

Staggering and angling the pins creates sidebearing which helps hold the string solidly to the bridge and against the pin. How much sidebearing? Generally the string is deflected by the width of a pin. If you draw a straight line from the upper bearing point across the bridge to the lower bearing point, it will bisect both front and back bridge pin holes (see Figure 7).

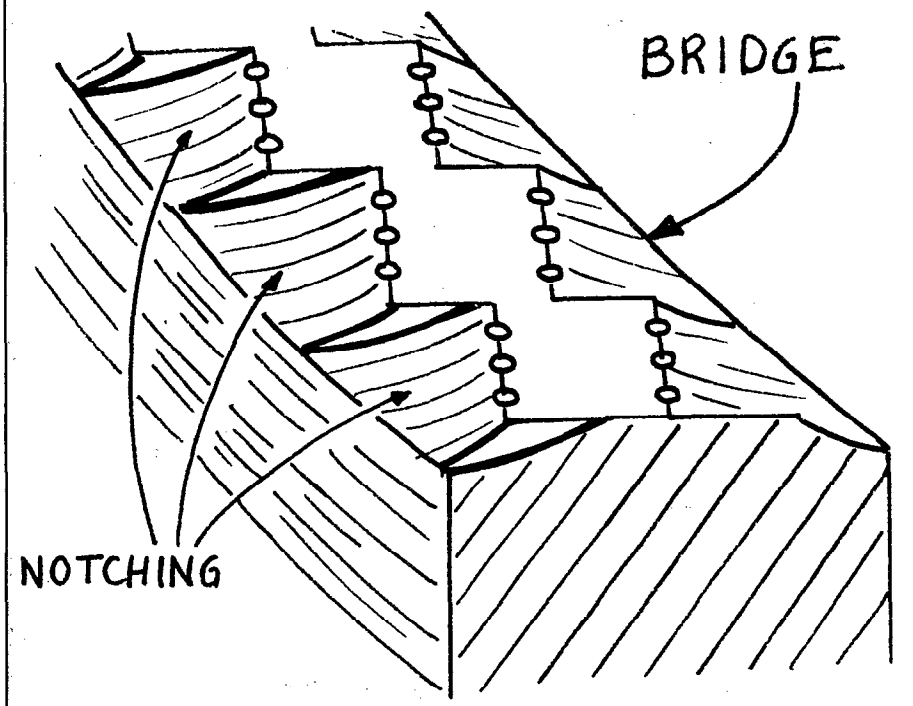


FIGURE 6. JEC

The wire going to the right of one pin and the left of the other creates the necessary sidebearing, together with the angle of the pin. Too much sidebearing can cause a string to hang up and not move freely across the bridge, and may contribute to string breakage. Not enough and the string may rattle or zing against the pin; none at all and the note will be dead. A minor rattle can sometimes be remedied by **slightly** *bending the pin. This is not a place to overdo it and create worse problems, but placing a screwdriver blade at the side of the pin and giving it a rap or two in the "more sidebearing" direction can cure a noise.*

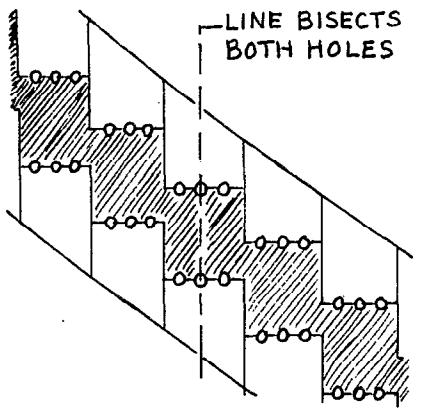


FIGURE 7. JEC

More seriously misaligned pins should be pulled, the holes filled with hardwood pegs, and new holes drilled. Five-minute epoxy will hold these pegs tight very quickly. That can be important if you have to drill part of the peg out again, which is frequently the case. Bridge pins are angled at about 15 degrees, but compare with other pins in the piano to be sure. Avoid drilling at too great an angle. Drill so the pin is tight and must be driven in — use the correct size pin to match those in the piano.

Pins which are loose in the wood do nothing well and may create noise. If you can pull a pin with pliers, it's too loose. I use a good quality liquid epoxy (such as Thermoset 103 or 104) to tighten these pins if the bridge isn't split or the hole abnormally enlarged. This isn't the time to discuss the relative merits of epoxy versus glue, or the suitability of epoxy in woodworking. I feel that this is an

instance in which the rigidity and gap-filling qualities of epoxy make it a useful material. I emphasize that I am referring to good commercial quality epoxy which is dated (and stored in the refrigerator) due to its short shelf life. The 5-minute epoxy mentioned before isn't nearly as strong and is best used in quick-repair situations only.

Either swab the epoxy inside the sides of the hole or dip the end of the pin in epoxy. Replace the pin, making sure it is seated to the bottom of the hole and is turned so the angle at the top is in the correct plane. Clean **all** *epoxy from around the pin and off the surface of the bridge. Acetone works well for this. Relubricate the bridge top — I use Dag 150, which is a graphite/isopropyl compound.*

Filing the tops of bridge pins in older pianos makes them shiny and improves the appearance of the instrument. However, it is possible to loosen the pins doing this, so consider the state of the wood of the bridge before filing pins. File side to side so as not to strain the wood/pin joint at the notch; since a file only cuts in one direction, it is pointless to drag it across the pins on the back stroke. If anything, that might have a tendency to loosen the pins. Filing the pins also makes them extremely sharp, so watch your knuckles!

This may seem like a lot of trouble for a small detail, but paying attention to, and understanding, these small details makes us craftsmen.

Our next reprint is from the Northern Virginia newsletter. The topic is broken let-off screws and the author is Gene Elfes:

Libby Blatt submitted the following to remove a let-off screw that has broken off at the rail: (1) Remove let-off rail (sorry, not for Steinways). (2) Remove let-off button. (3) Flatten parallel sides of screw remnant with a small file. (4) Turn out screw remnant with a drop screwdriver. (Wendell Eaton added to the above: **first** *lubricate the screw hole with a drop of WD 40.)*

Let's examine why the let-off screw breaks off. The regulating rail (let-off rail, jack rail, or set-off rail, depending on whose nomenclature one uses) in older pianos not protected by humidity control will have absorbed moisture, thus rusting the screw within, which in turn bonds it to the wooden rail. If severely rusted, they too often break when a technician attempts to regulate let-off.

I've found that if the let-off screw does not **easily** *turn it is best to stop right there rather than chance having the screw break off. At this point, heating the "frozen" screw will expand it and usually break it free. Then remove it completely and replace it. If in the shop, I use an electric soldering gun to apply heat to the screw. In the home, one could use a butane cigarette lighter — carefully, so as not to create that charred look which detracts so from the rest of the piano — or read and heed Libby's suggestion.*

What happens if the screw has broken off at both ends, or if heat will not break it loose? The supply houses carry a repair-type item which some technicians may prefer. I like to make a permanent repair.

To remove the broken-off screw, one can drive it out with a pin punch, or drill a hole parallel to the screw with a drill slightly larger than the diameter of the regulating screw. CAUTION: Support the rail to prevent splintering it! After prying out the screw remnant, the regulating rail will have to be repaired (see Figure 8).

With a hammer shank drill, bore a hole in the rail from front to rear, glue in a piece of hammer shank with the grain running horizontally to avoid future splitting. When the glue has dried, trim the excess hammer shank, bore a pilot hole for a new regulating screw in the same position as the old one, and install a new screw, button, and felt. That's it folks!

While on the subject of the regulating rail, how many of you have encountered difficulty in replacing the rail so the buttons will properly contact the shoulders of the jacks? There is a tendency for the rail to wander out of position when tightening the rail support screws. Solution: Position the rail on the hooks, clamp with a vise-grip pliers (either rail to hook or position pliers on the hook to serve as a "stop"), then tighten the screw.

Technical Tips

Herman O. Koford of Los Angeles, who has been a regular contributor to this column lately, has two more valuable tips for us this month:

1. To tighten the set screw on damper wires, fit a piece of tubing over the end of the screwdriver. Allow the tubing to project a bit beyond the end of the screwdriver and it will act as a finder for the screw, preventing the screwdriver from slipping off the screw.

2. Mice often get into vertical pianos through the square holes under the pedals. To keep them out, place a bunch of steel wool in the hole. This will not interfere with the operation of the pedals; in fact, it acts as

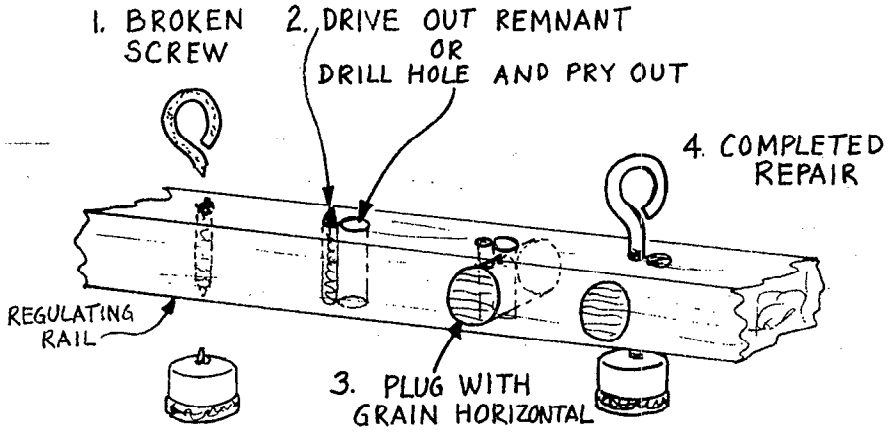


FIGURE 8. JEC

a helper return spring, and the mice can't get by it.

The next two tips come to us from Elizabeth Wheeler of New York City:

1. A useful tool can be made from a 15-inch piece of old bass string. Remove an inch or so of the winding from both ends and bend the wire back on itself, looping one end of the core wire around the core wire at the other end (see Figure 9). The straight end of the wire is now formed into a tiny hook with round-nose pliers. This tool can be used as a coil lifter or to coax a new string through an agraffe or under a pressure bar, etc. The tool may also be used for leveling strings.

FIGURE 9. JEC

2. A cupcake tin makes a convenient tray for holding balance rail punchings while leveling keys. The round angled cavities make grabbing the punchings a breeze.

Fred Fornwalt (Altoona, Pennsylvania) submits this next tip on replacing vertical damper springs. Fred suggests bending the bottom of the spring to form a complete loop around the flange screw, then replacing the damper with a piece of thread, as suggested in March by Herman Koford. Then, says Fornwalt, hold the side of the spring coil with the open end of a spring adjuster while the screw is being tightened. This will keep the bottom of the spring from twisting with the screw.

In the Connecticut Chapter's *Keybed* (April issue), Chris Robinson suggested the following:

Do you ever have certain days, or maybe pianos, when it just seems impossible to hear the beats of the instrument you are trying to tune? Next time this happens, try opening your mouth and yawning! Keep your mouth open if necessary. As when ascending in an airplane or elevator, opening the internal aural passages will equalize the atmospheric pressure inside and outside the head, and you will be able to hear more clearly. Besides, when your customer sees you doing this, she will probably offer you a cup of coffee and, at the very least, **that** *will wake you up!*

Tip of the Month

Our thanks to Elizabeth Wheeler for sharing still another ingenious idea with us:

A worn-out file can become a balance rail hole reamer by shaping the tang with a hacksaw and sharp file or grinding wheel. Remove materials from the widest part of the tang so that it measures about 5/32 inch, and round the edges. The end of the tang should be angled so that the tip is 1/16 inch and the point at 3/4 inch from the tip is 3/8 inch. The edges of this 3/4-inch portion of the tang may be left squared to act in a scraping fashion or rounded and polished to burnish (see Figure 10). This reamer is fashioned after the Yamaha tool which is inserted through the key button, reaming the balance hole in a cone shape.

REAMING BALANCE HOLES

I am glad this subject came up, because I want to enlarge a bit (pun not intended) on what Elizabeth is talking about. Is it better to remove wood from the key, or should we compress the wood instead?

If the key is lifted slightly off the balance rail, say 1/16 inch or so, it should fall back freely of its own weight. If it must be pushed back down, it is too tight and must be relieved somehow. There are various ways of accomplishing this, but no single method is ideal for every circumstance. First we must remember that a perfectly round hole is drilled in a material which has a grain. Changes in the moisture content of the wood, before and after drilling, will dictate whether or not that hole remains perfectly round in shape.

Wood expands and contracts measurably with humidity changes, but nearly all of the dimensional change occurs across the grain. The measurement from the front of the hole to the back, end grain to end grain, will remain relatively constant regardless of the moisture content; but the dimension across the grain will vary a great deal. If the keys were relatively dry when the holes were drilled, any subsequent addition of ambient moisture will cause the sides of the holes to pinch in on the keypin. If they were drilled wet, they will become sloppy in a dry environment.

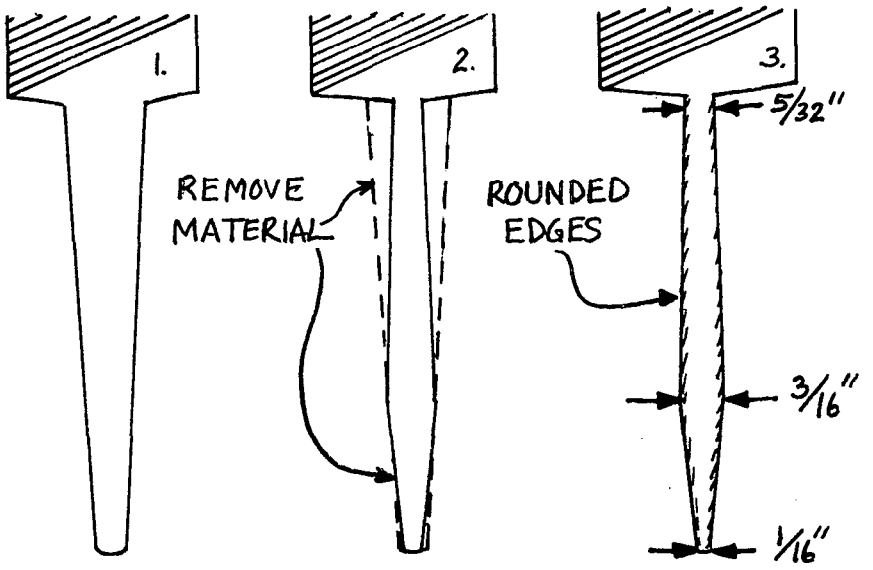


FIGURE 10. JEC

I am embarrassed to admit this, but when I started out in this business I solved the problem of tight balance holes by pushing a pointed regulating tool into the bottom of the hole to make it bigger. In so doing, I not only enlarged the hole at the sides where it was necessary, but also at the ends where it was neither necessary nor desirable. Worse yet, this treatment reversed the cone shape of the hole. The fulcrum of the key was moved up from the bottom of the key, causing the key to actually slide back and forth on the punching.!

Unless oversize keypins are installed, requiring a larger hole in the key, I would not recommend any procedure which will enlarge the hole all around at the very bottom of the key. More and more, I am becoming reluctant to remove any wood at all. If the wood is compressed away from the sides of the hole, this can be reversed later if necessary by glue sizing; but once the wood is actually removed it can't be put back.

A conical reamer or burnisher, used from above through the key button, is a very good tool for this purpose — if used carefully. If it uses a scraping motion to remove wood, the technician should hold the key upside down and watch the underside of the key to avoid taking any wood from the front or back of the hole. In addition to the Yamaha tool and Elizabeth Wheeler's tool, a similar instrument is available from Francis Mehaffey. The latter has no cutting edges, but compresses the wood.

For those with limited tool budgets and shop facilities, there is an alternative which also works very well. Anyone can make this tool in 5 minutes or less. It is used from under the key and compresses wood at the sides of the hole. To make the tool, cut a 3-inch piece of 5/8-inch dowel for a handle. Drill a 9/64-inch hole in one end to a depth of about 1-1/2 inches. Drive a balance rail keypin all the way into the hole in the dowel (see Figure 11) and flatten the protruding end slightly by hammering it four or five times on each side. File a corresponding flat spot on one side of the handle, and always use the tool with your thumb on the flat spot, which will always face the front or back of the key. Add three or four cloth balance rail punchings to limit penetration, and the tool is ready for use. You could make one in less time than it has taken me to describe it. I have two of these, one with a standard pin and one with an oversize pin. It is not necessary to mike the pins in the piano before deciding which tool to use — use the standard one every time. If it goes into the hole without resistance, then use the oversize tool. So long as the flattened sides of the tool face front and back, there is no risk of enlarging the end grain of the hole.

If a set of keys requires repeated easing in this manner, then I would speculate that the keys were too dry when the holes were drilled at the factory. In such cases, I would recommend removing wood from the sides of the holes with either the sharp version of Elizabeth Wheeler's tool or with a No. 4 Nicholson round rasp, flattened by grinding as described on page 16 of our February 1979 issue.

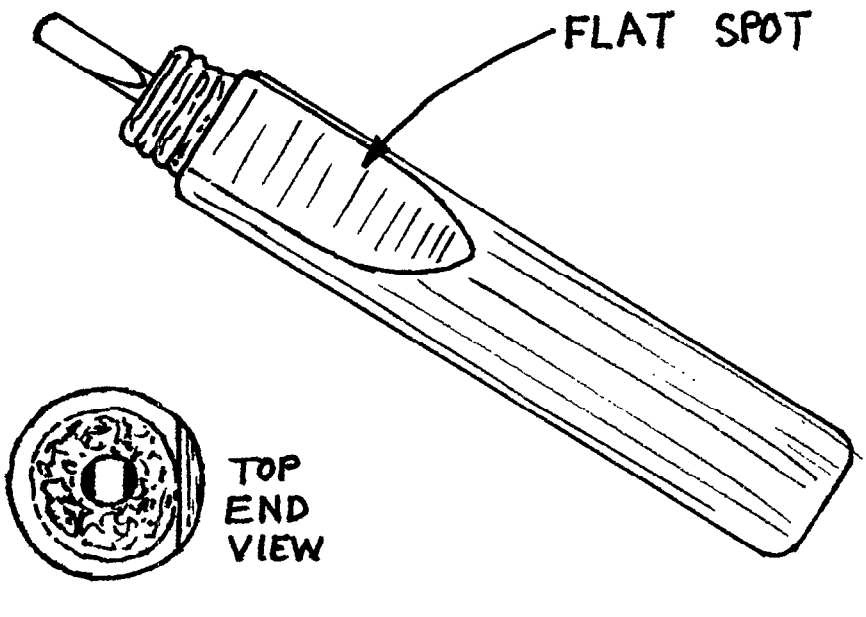


FIGURE 11. JEC

BOUNCING HAMMERS

Can an experienced Craftsman learn something about pianos from a 10-year-old boy? Here's Harry Berg of Bakersfield, California, to tell us about it.

I was called to the home of one of my regular customers and tuned their good studio-size piano, which is just a few years old. The lady also asked me to check on some hammers that were repeating themselves on a staccato blow when the sustaining pedal was depressed.

After tuning and checking on the hammers I told her the hammers did not "bubble" and that the regulation was all in good shape. Furthermore, pianists do not play staccato with the sustaining pedal down. Just then the 10-year-old boy arrived home from school. I repeated to him what I told his mother, but suggested that he show me what he meant. The little artist set up his music and played the closing measures. It was a fast run up the center of the keyboard with the sustaining pedal down, as shown on the music; the run ended with a sharp staccato note, and at the same time the pedal came to rest position. Sure enough, the hammer struck a second time. I saw what he meant and **he** *was right. I tried various ways of regulating the action (mainly out of regulation) to prevent the hammer from bouncing with the sustaining pedal down. (With the*

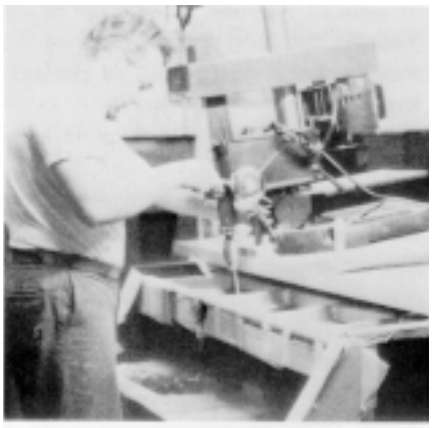
pedal at rest position the hammer did not bounce much.) Nothing seemed to help. That night in bed I tried to think of the cause and the solution. In my mind I solved the problem.

Several days later I returned to do what I had solved in my mind. Sure enough, the hammer rail felt was glued to the hammer rail everywhere — every square inch of it. I tore loose the upper two thirds of the felt the full length of the rail. Then I inserted a strip of name board felt between the rail and the rail felt and glued it only at the ends and at the two center brackets. The hammers **bounced no more**. *You see, when the felt was all glued solid it provided a rather hard surface from which the returning hammers "bounced" back like bouncing a ball on a hard floor. But with the felt being loose instead of glued, the hammers would* **not** *bounce. It was like trying to bounce a ball on a shag rug with a good thick padding underneath. The little artist was very happy with the results of the hammer rail changes and I learned a good lesson from him. Let's all be sure to listen with respect to these young pianists.*

PINBLOCK DRILLING

There are a number of ways to accomplish this exacting task, and we intend to present a highly detailed discussion of the principles and techniques involved in a future issue. To start us off, Bob Russell of Cleveland has offered the following information on his version of the in-piano drilling method devised many years ago by the late John Kohl. Here's Russell:

The jig that is used isn't really very complicated. The bottom board is made of 3-inch x 3-inch x 6-foot hard maple and birch which has dried for two years. They are glued and doweled in an alternating pattern (one strip of maple, then one of birch, etc.). I did this to keep the 2-foot x 6-foot x 2-inch board from warping. I now think that I would make the entire board from maple, turning every other strip so the grain would



Picture I

Picture J

be opposite. This will also keep it from warping and it will be a little more slippery.

The board is then sent through a planer, like you would find in a piano factory or lumberyard, until it is perfectly smooth and straight. You then lightly sand it and varnish it several coats until you have a slippery and very smooth surface. You can use cornstarch if you wish to make the drill move even easier.

The table model drill is bolted onto a birch or maple board 19 x 24 inches made in the same stripped manner as the big bottom board (this need not be doweled). As you can see by the pictures, two 2-inch maple wood skids, cut to a 7-degree angle, are glued to the board. After the board is glued to the skids, drill two 1-inch handle holes into the board and halfway into the skids. These will be drilled on a 90-degree angle from the bottom board and can be placed wherever desired. Glue 1-inch dowels into these holes and round off the tops. These dowels can be about 6 inches long. Now this drill and platform will slide easily on the 2- x 6-foot board and drill every pin hole at exactly 7 degrees. If you want a different angle, this is easily done by putting strips of veneer between drill and platform at the front or back before you bolt them together. This way you can get the perfect angle for every piano.

The drilling is done at 650 rpm and must be done with the same feed so that you will get a uniform feel in the pins. Use the drill size that the pinblock manufacturer recommends. When in doubt what size drill to use (it will vary with different pinblocks), we try to get between 175 and 225 inch-pounds when the pin is first driven into the block.

Our thanks to Bob Russell for this information. As I said before, I intend to expand on this in another issue. Among the things that will be discussed will be the variables that affect hole size — rpm, type of bit, construction of the block, rate of feed, and bit temperatures. Readers who wish to share their thoughts with us on this or any other topic are urged to write in.

READER FEEDBACK

You may recall a discussion on cracking keytops that appeared in our March issue, in which I stated that the cracks were probably the result of a chemical reaction of some kind, possibly related to silicone or moth cakes. A member in Maryland, after some kind words for our efforts here, writes:

. . . Not often do I feel that my experience is different enough to write to help other technicians, but your article in March 1979 on plastic keytops rang a bell. In each case that I've had where plastic tops were cracking crosswise and had some pieces curling, I searched for the reason and in each case found that someone had regularly used a cleaning solution containing **A-1 Solution** *on them. Odor in wood was my first clue. But I found that the piano owners were hyper concerning disease being carried by*

key contact and had regularly used A-1 to prevent disease! . . . — Robert W. Moreland, Baltimore Chapter

Moreland goes on to say that, after replacing the keytops and advising against further use of this particular cleaning agent, the keytops in two pianos he recently inspected have exhibited no further problems in the past five to eight years. Obviously, we should add this solution to our list of products which may be harmful to keytops.

The problem with such a list is that it keeps getting longer because it is never complete, and we usually find ourselves giving such advice only after the damage has been done. If we had our own independent testing laboratory, we could determine what specific cleaning or antibacterial agents would be harmless to keytops, and that list could be released to the public. This would be a positive statement, psychologically better than endless negatives.

Lacking laboratory facilities, I can only say that a damp cloth is safe to use, possibly with a bit of mild soap added for really dirty keys. This won't satisfy those owners who are concerned about disease transmission, but we might suggest to them that each pianist wash his hands with antibacterial soap before and after playing, and that the keyboard be wiped off with a damp cloth. Beyond that, the suggestions begin to sound really silly — like wearing sterile surgical gloves while playing, or buying a separate piano for each member of the household.

Next, we have a letter from James F. Ellis, the author of the feature technical article in this issue. Regarding the item on plate stress in our March 1979 issue, Ellis writes:

. . . you might mention that the holographic measurements Mr. Manhart asked about are indeed very sensitive. One of the problems is that this technique might be too sophisticated and sensitive for practical use in measuring strains in piano plates. Another problem is that the greatest sensitivity would be in a plane perpendicular to the strains we would want to measure. The interference patterns of monochromatic light would detect the slightest deflections normal to any of the surfaces of the plate, but what we would most likely want to measure would be the strains that are parallel to these surfaces. You might also mention that strains in piano plates could be measured with standard strain gauges. These are very thin electrically resistive elements that are cemented to the surface of the measured substrate. Strains cause the elements to stretch (or compress) along with the objects to which they are attached, and this produces minute changes in their electrical resistance, which are measured by sensitive electronic instruments. . . .

He's right, you know. I might have mentioned those things. ■

Readers may contribute material to the "Forum" by writing Jack Krefting, Technical Editor; 6034 Hamilton Avenue; Cincinnati, OH 45224.

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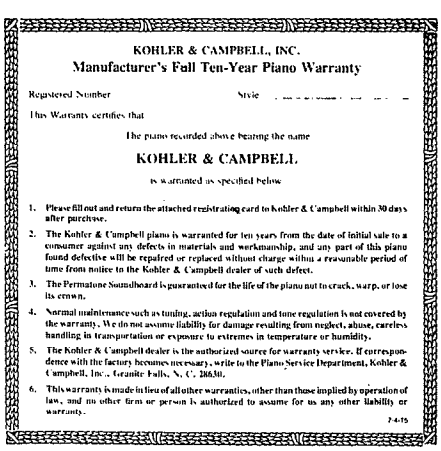

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NEWTON J. HUNT

ACCENT ON TUNING

HAMMER TECHNIQUE

When thought is given to hammer technique, consideration must also be given to the various elements that, taken separately, may not appear to be so very important; but a chain is made of many links and we all know the weakest one.

The tuning hammer, at first glance, seems to be just a tuning hammer — but there are a variety available. The first consideration is its length. The average hammer is 10 to 11 inches long without a head. I have seen hammers as short as 6 inches and as long as 15 inches. The short hammer feeds back information more directly from the pin and has less length for flexing, but requires considerable strength and endurance to operate. The longer hammers provide more leverage but tend to flex, causing poor hand-to-pin communication, and the increased weight bends the tuning pin a little more than desired.

There have been several variations on the standard "professional" tuning hammer — the very heavy hammer turned from a piece of drive shafting which gives considerable weight to the matter, and the impact tuning hammer which has gained favor with some for pitch-raising. (These are experimental or special application tools and do not, on the average, apply for fine tuning.)

Having an extension hammer is not entirely necessary for extending it introduces so much flex that all mechanical advantage is voided through lost communication. Extension hammers tend to flex at the tightening ferrule and the shaft turns in the handle. The only advantage they have is that the handle can be removed for stringing or other special applications. The ideal hammer, then, is one that is about 10 inches long, lightweight, rigid, one-piece construction, and made of nice wood if possible.

I should be talking — the disreputable hammer I use is only 7-1/2 inches long, but is extended to 11 inches overall for tuning. The balance is not right, it flexes like a rubber truncheon, and the shaft turns about 2 degrees in the handle. I am planning to get myself a better hammer when I can get around to it, or can find room for it in my case.

Head and tip lengths vary from 1-7/8 inches to over 7-1/2 inches; head angles are 5, 10, and 15 degrees. The ideal condition (extra short 5-degree head with a short tip) is not the most practical in terms of being able to adequately cope with the largest number of pianos. I have found that a 2- to 3-inch head of 10 degrees with a standard No. 2 tip is the most functional combination. (I also carry the same with a No. 1 tip for European pianos.) If you have the space and strength to carry more combinations, and have the time to change them around to find the best blend, **great**! The object is to get as low and as straight as possible without scraping the finish off the plate, piano, or fingers. Also, the force applied to the pin should be as in line with the axis of rotation as possible. Long tips tend to bend the pins and large angle heads apply turning force at that angle.

The tuning pin must never be intentionally bent, only turned. It should not be left in a twisted state and, of course, the tension of the string must be equalized throughout its length.

There are basically two hammer techniques when using a "standard" tuning hammer — the continuous smooth hammer motion and the discontinuous impact approach. There have been long-standing arguments between proponents of each of these techniques as to which is the best. I have not come to any definite conclusion myself because I have found that I use both. The piano will dictate which approach I feel more comfortable using.

The smooth technique is just that — smooth. The tuning pin is turned with a smooth even-pressured motion until the string reaches the desired pitch. The pin is then stressed both in an upward and downward manner to test for any undesired twist, and in an effort to determine the equality of the full string length tension.

The impact or click technique is used when a very small change is desired, but when the smooth technique cannot be used or when it will impart too much change. By applying less pressure than required to turn the pin, and then imparting a sharp loose jointed arm and wrist increase of pressure, the pin can often be moved minutely. The advantage of this technique is that when the pin is turning in the block it is virtually free-floating; therefore, it is very likely to come to rest in an untwisted configuration.

The type of pinblock quite often determines which technique will be most useful. With a multiple laminate block it is easier to control the finer motions by impact, except when the pins are very tight. The high-density blocks, and those blocks with only three or four laminations, seem to be more stable with the smooth approach. Generally speaking, if the tuning pin moves as smooth as glass, then the smooth technique works best. If the pin tends to washboard, even just a little, then the impact is the method.

Tuning pins that are supported close to the coil, either by a bushing or by the pinblock, are generally easier to tune smooth; but those pins that are too high or have no

plate bushings tend to be easier to tune by the impact approach. Overly tight or oversized pins are tuned any way possible, taking care not to ruin the pins or leave them twisted.

If one is an impact tuner, then most likely the arm is not supported except when being lazy or tired. The supported arm is most often coupled with the smooth technique of tuning. The difficulty with the supported arm is that many times the posture of the tuner is not the most comfortable; the trouble with the unsupported arm is that it gets tired quicker.

Hand position and grip vary widely and are dictated by what the individual finds most comfortable. The only real problem I have seen is the person who is so tense that his whole body is affected. The hand should be loose and flexible, tensing only when a particular motion is initiated; the remainder of the time the hand should be loose and easy, thereby conserving energy and reducing fatigue.

Because our bodies are often in unnatural postures for great lengths of time, we tend to develop back problems and tense shoulders and necks. Proper posture, good exercise programs, and the use of stretching exercises during the day can all help eliminate pains and aches and are important in preventing more severe problems later, as the demands of the work and age increase. Consult with your doctor or the people at your health club, or get out and run around the block two or three times a week. Endurance and strength come from using muscles until your heart beat and breathing rate increase and your body is tired. Our work is not the most stressful, nor the least, but we generally do not get enough of the right kinds of exercise.

Whether you stand or sit at the piano depends upon your height, the type of piano, and how you feel at the time. I will tune standing or sitting at a grand, but will only sit at a spinet and can only stand at the really tall old uprights.

One thing to avoid is bending over for hours at a time until your back becomes rigid. (This is called muscle spasm.) If this does happen, sit down and gradually relax. **Do not force your back to straighten.** Doing so can cause great pain and very expensive rehabilitation. Become aware of your body and how your work habits stress it. Develop good working postures.

All this is to say that good hammer technique (as distinct from pin-setting technique) is of the tools, the piano, the body, and the mind as well as the body of experience. Become perceptive and adaptive, allowing different approaches to help you to get better, more accurate, and more stable results. ■

PRISCILLA AND JOEL RAPPAPORT

VON DER WERKSTATT

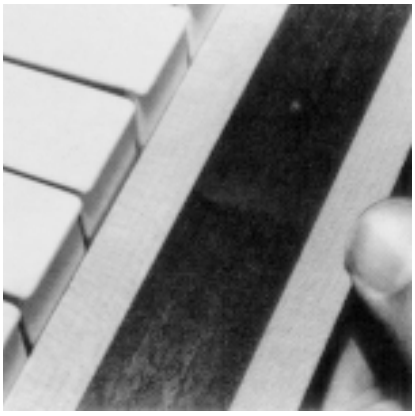
DOING THE "HOLE" JOB

A good workshop set-up is one in which the technician has the right equipment, space, and materials to do total units of work such as complete action rebuilding, pinblock work, stringing, soundboard repair or new installations, etc. Whether one does all of these operations or just action work, the routine and discipline one exercises in doing his work influences both the quality of work and the amount of time it takes to get the job done. We all are familiar with the situation of trying not to lose money on a particular job, realizing full well that the number of hours one takes to finish a certain unit of work is directly related to how much money we make. With today's shrinking dollar, it is extremely important that we take a close look at our work habits to make sure that we are working efficiently and effectively so that valuable time is not wasted by doing things over or in a roundabout way. Methods should be used that allow us to get the work done quickly and yet maintain standards of good quality.

A key that functions properly is a result of a combination of several units of work. During the past two months, our column has focused upon bushing principles and buffing the capstans. This month we would like to discuss another area of key work — balance rail holes and the condition called "pulley keys." When a piano has pulley keys, the center (balance) rail holes on the bottom of the key are too big or oval in a way that allows the key to be pulled in and out on the balance rail pin. If the holes are too big, the key will slap on the balance rail bushing with hard playing and, in extreme cases, cause unwanted noise. A sensitive pianist will feel this looseness and perhaps comment about "some" lack of control. In our work we wish to please the customer as well as do what is best for the piano. If good basic key work is done thoroughly (restoring the key so that it functions like a new key), then we establish a solid basis for a good regulation, and have a happy technician and a satisfied customer. Good key work involves all of the following: healthy bushings, center holes fitting on the balance rail pin, sharps glued on securely, no leads rubbing adjacent keys, buttons glued on, healthy backchecks, good end key felts, no cracked keys, no loose leads, keys cleaned, capstans buffed, and good key spacing. Check also the key frame pins — no burrs or loose or turned pins!

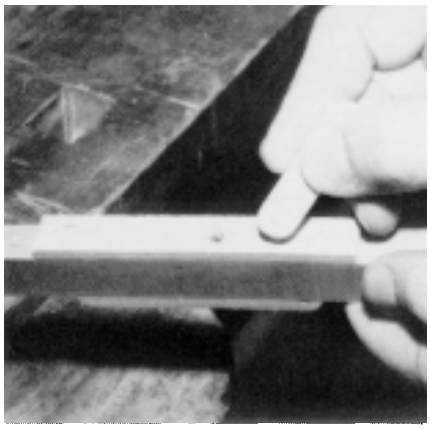
The hole in the bottom of the key contributes to the overall "feel" of the key. The hole positions the key on the balance rail pin left and right, front and back, and must "fit" the pin at the **bottom** of the hole. The top of the hole, which is inside the key (see diagram), must be a bit larger to allow the key to pivot freely from its resting position to its depressed position without the pin jamming against the wood in the key near the top of the hole. Jamming results in a mushy or springy feeling when the key is depressed. Eliminating the offending wood is done by either compressing the wood using an awl-like tool coming in from the top of the key where the balance rail bushing is, or by carefully using a small, fine, round file coming in from the bottom of the key, as shown later in the pictures.

The key should "slide" down the balance rail pin without hanging up from excessive friction. On the other hand, it should not fall with a clunk down onto the balance rail punching. If the key hole is judged to be too tight, the sides of the hole can be slightly filed, or the whole hole can be compressed from above with the awl-like tool coming into the key through the button. If the key hole is too big, the hole can be sized with a water and glue solution or it can be steamed slightly to swell up compressed wood. These are some of the many methods used to tighten holes in the bottom of the key. The method we use the most is shown in detail through the accompanying pictures. ■

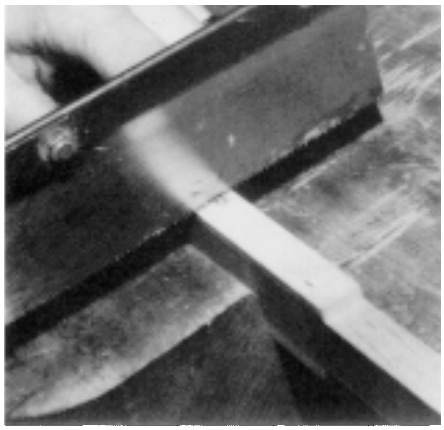


Picture 1 — Analysis of the situation. The key is a pulley key and the hole is oval. The key must come out to the straight edge to be even with the other keys.

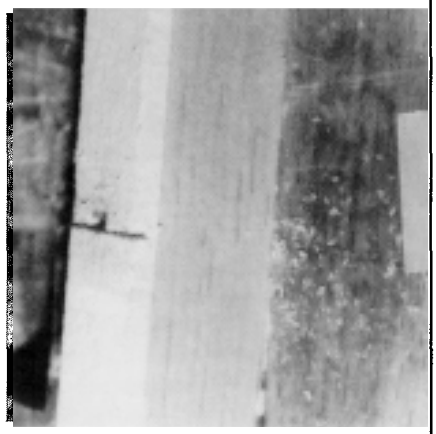
Picture 2 — Check the key by feel.



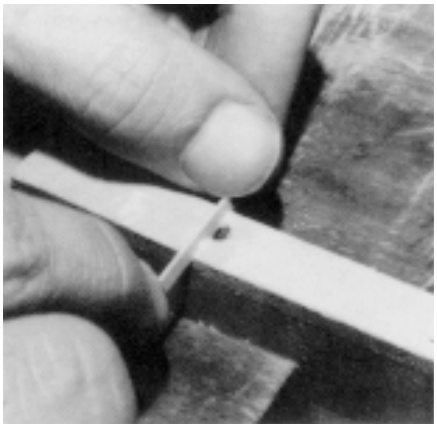
Picture 3 — Mark with chalk the side of the hole where wood is "lacking." (We are going to replace that missing wood.)



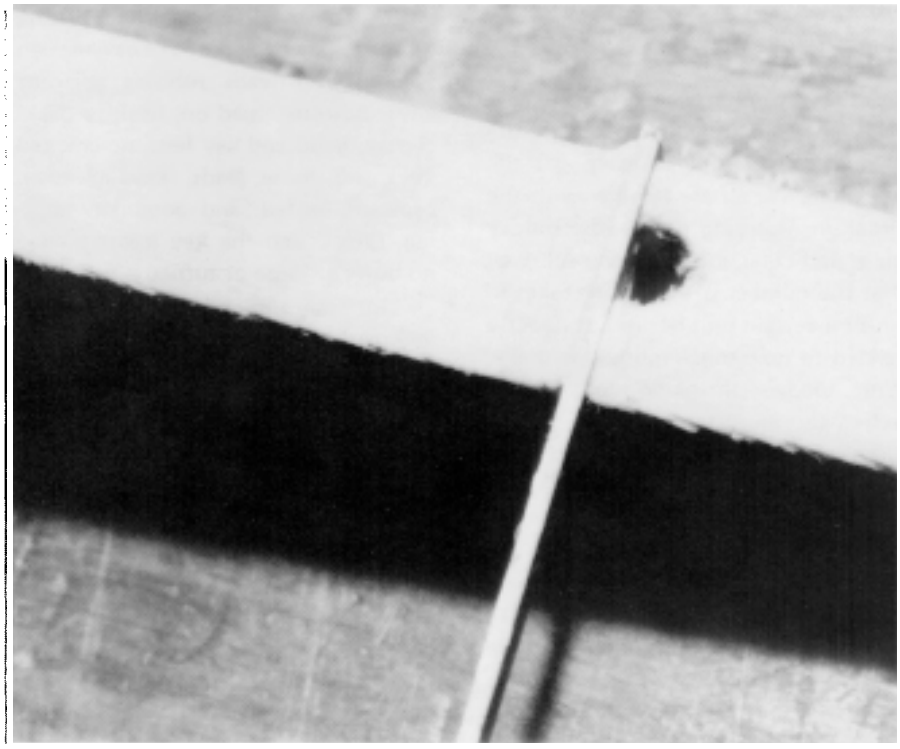
Picture 4 — Make a cut with a fine saw into side of hole as shown here.



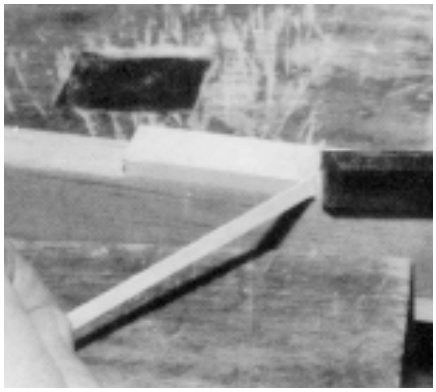
Picture 5 — Side of hole after being cut.



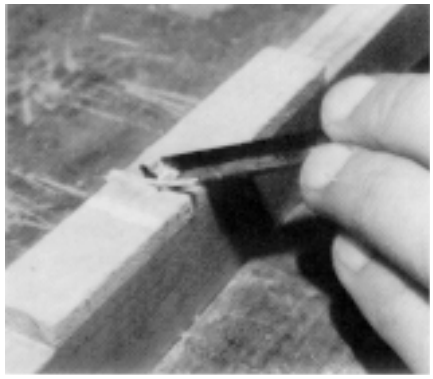
Picture 6 — A strip of maple veneer is inserted into the saw cut using a small amount of Tite Bond glue. From a sheet of maple veneer which is approximately 1 mm thick, we cut strips about 3 to 4 mm wide. It is important to note that the width of the saw cut must be compatible with the thickness of the veneer that is used. Using veneer that is about 1 mm thick is practical since it gives you some wood to work with. Maple veneer is practical for this work because it is tough and holds up well. Other veneers like pine, mahogony, or walnut may be too soft or porous to do the job effectively.



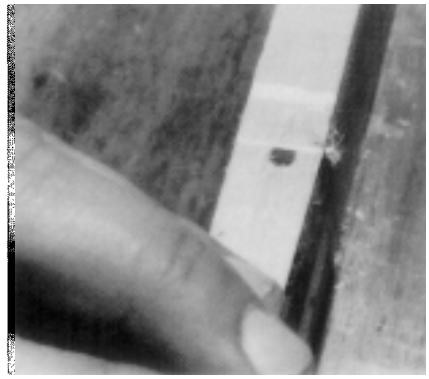
Picture 7 — Saw cut with veneer glued into it.



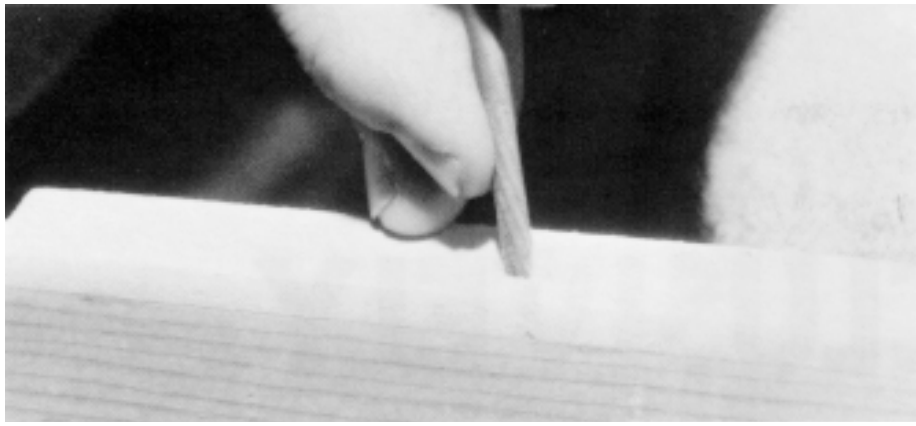
Picture 8 — Break off the strip of veneer.



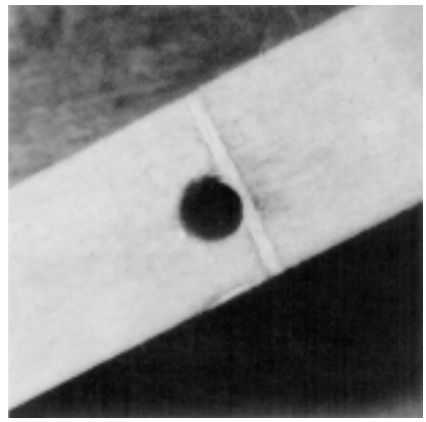
Picture 9 — Trim the veneer with a chisel so that insert is flush with the bottom of the key.



Picture 10 — Insert is shown before it is fitted on balance rail pin. The fuzzy ends of the shim **must** *be trimmed so as not to rub on adjacent keys, causing noise.*

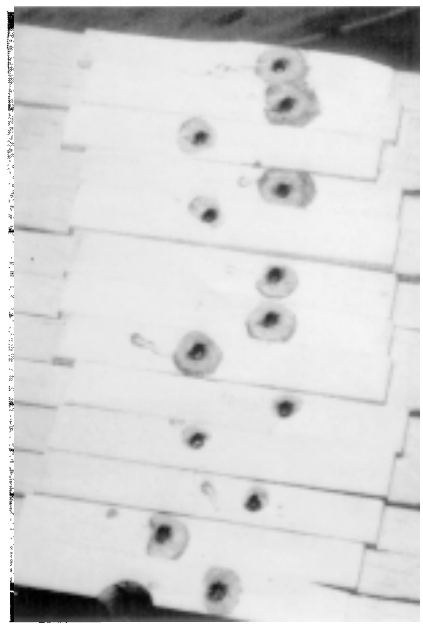


Picture 11 — Using a fine file and great care, the new wood is filed slightly so that the key hole is again fitted correctly on the pin.



Picture 12 — The finished result showing the hole restored to a round condition.

Picture 13 — Final check of the work. Fronts of the keys are in a straight line and the holes are restored and fit correctly.



Picture 14 — An attempt to lubricate the balance rail pins. Undetermined amounts of graphite grease were squirted into the holes. Picture shows the results: it leaked onto the punching and keyframe. (The graphite grease actually attracts dirt and diminishes the efficiency of the key movement rather than helps it.)

Picture 15 — Three methods of fixing the holes that did not prove satisfactory in the long run: a liquid tightening solution, graphite grease, and fiberboard washers. Pulley keys and loose holes still exist in this instrument.

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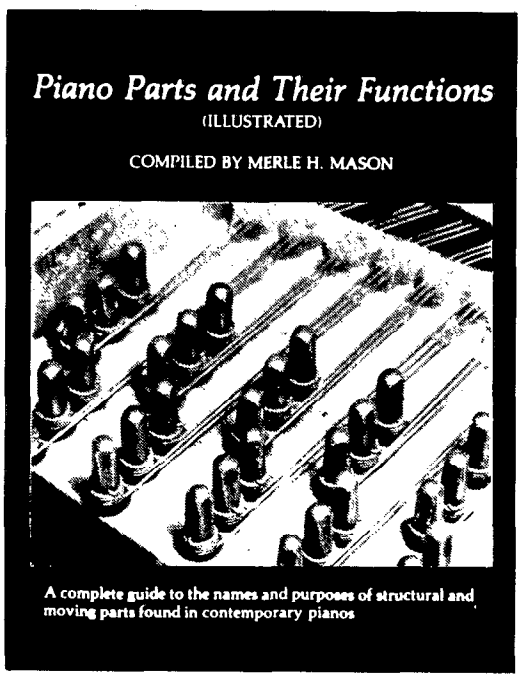

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BEN McKLVEEN

In the Field

This is the first of what we hope will be a series of bimonthly articles. I will be alternating writing chores in this space with my friend, Raye McCall. He will address the problems of the player piano and my column will be concerned with any problems that the working technician encounters out in the field.

Names are interesting things. Often, the background of a name makes an interesting story — for example, the way this column got its name. When Jack Krefting asked me to write for the JOURNAL, he explained that his column, the "Forum," was rather heavy with shop talk and readers' inquiries. He felt that a column devoted to fieldwork would be a valuable addition to the contents of the JOURNAL.

When I agreed to do the column, the problem of a name arose. In reflection about the problem, my thoughts were transported back to my days in the Army. For a year I was stationed at Oregon State College with an Army specialized training unit. Among my classmates was a very funny kid from New York, an embryonic comedian, who wrote a column for the college paper called "Thru Snell Hall with Gun and Camera." Snell Hall was our dorm. The contents of the column were droll commentaries on the life and times of a bunch of GI's living on a college campus in a former girls' dorm during wartime. The name was derived from an early travelog, now long forgotten, about life in the African jungle and veldt.

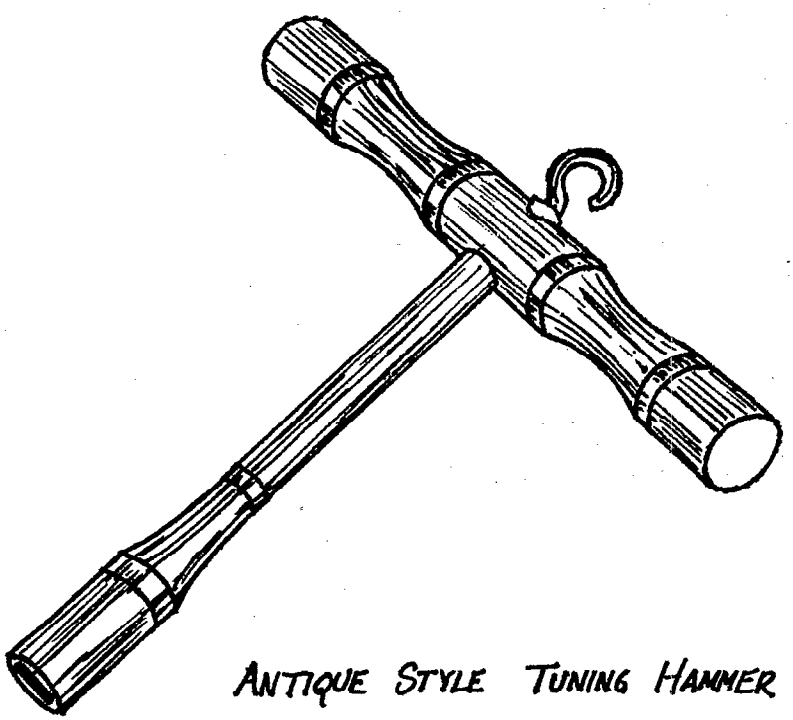
My initial effort at a name for this column came out "In the Field with Hammer and Tong." The "field" would be my area of operation; the "hammer" would be, of course, a tuning hammer. "Tong," however, is a verb meaning "to take hold of or handle with tongs." The word "tongs" (a noun) is plural because you use them in pairs like scissors. They are used "to take hold of something, as a hot coal or hot piece of metal." In my title I was suggesting hot "problems" in the field.

However, it began to get cumbersome and seemed to lack the dignity that Jack Krefting has tried to build into our magazine. Therefore, I have shortened the title to "In the Field. . . ." — hoping that the proofreaders and editors will respect the four dots after the word "field." Only you, the readers of this column, will know what the four dots really represent.

Speaking of names, have you ever wondered where the name "tuning hammer" came from? The wrench or tuning lever that we use to adjust the tension of strings through manipulation of tuning pins is really more related to a socket wrench than to anything else, so why the name "tuning hammer"?

Recently I was visiting the shop of Jim Campbell, our local harpsichord builder. Lying on the case of an unfinished harpsichord was a strange-looking metal tool. It looked a little like a small T-hammer with a peculiar little hook on the top. Jim explained that it was a T-hammer, and went on to point out that harpsichord pins were tapered in the dim distant past. If they got loose, the tuner used the T-hammer (as a hammer) to drive the pins a little farther into the block to tighten them — hence the name "tuning hammer."

The peculiar little hook in the top of the hammer was used to make hitch pin loops. The tapered pins had no eye drilled in them to accept the becket of the string as an anchor for a tuning pin coil. Instead, the coil was wrapped back on itself and tension had to be maintained on this type of coil until the pin was mounted in the block and tension put on the string.



ANTIQUE STYLE TUNING HAMMER FOR HARPSICHORDS

JEC

All of this required some exquisite hand-and-finger work. (I understand that this technique is being revived.)

Next month, at the close of the national convention in Minneapolis, I have been asked to give a tuning concert on a Bosendorfer Imperial concert grand. Therefore, I would like to write a few words about where I am coming from, where I am, and where I am going as a tuner.

I began my career as a left-handed tuner using an F-F temperament, tuning with fourths and fifths and checking with thirds and sixths. Many years later this is still my basic style of tuning. However, as a Guild member for most of those years, I met and was influenced by the Guild's fine national tuning instructors — past and present. From them I learned various hammer techniques and different approaches to tuning, notably different temperaments; i.e., thirds and sixths both ways from the middle, etc. A temperament is simply a scheme to get a beginning octave set so that one can tune the rest of the piano. I am convinced that one can improve his skills as a tuner dramatically by learning and practicing several different temperaments.

You have heard of the jerk tuning technique versus the smooth pull technique. I have never taken sides in this controversy. My preference is to move the pins in the block by making small accurate moves, sometimes called jerks by some people. I prefer to call these moves "ticks" (my term). However, I do find pianos that will not respond to that technique and then must go to the smooth pull style of moving the pin. Both techniques should be in one's group of skills.

How does one practice to improve one's skills as a tuner? Here are three suggestions: (1) Learn additional temperaments. When I taught tuning, I devised an "etude" (a study or an exercise) whereby I dropped one string of a three-string unison one-half tone (C down to B, for example). Then I asked the students to try to raise the string back to its original pitch by making as many small moves as possible. Fine tuning is based on the ability to make small moves and this exercise does wonders for high treble as well. (2) Try tuning blind. I raise pitch by strip muting the three-string unisons and after raising all middle strings the appropriate amount. I tune the unisons by "remembering" the feel of how much I moved the middle string pin and trying to copy that move without removing the felt strip. You would be amazed how fast and accurate you can become. (3) Try to tune three-string unisons without muting them. This is a problem in selective listening as much as anything, but it is excellent ear training.

What is meant by "concert tuning"? I think this was best described once by a colleague who said, "Concert tuning is tuning a piano for concert performance after it has been tuned!" I agree. When I do my tuning concert next month, I plan to "tune" the piano and then "concert tune" it so that the audience can hear something happening. It is more interesting that way. In his tuning presentation, one of my good friends says that anytime one raises the pitch by two beats or more he is, in effect, doing a pitch-raising and the piano should be tuned again. I plan to do this in Minneapolis. Further, I hope to do it in 2 hours (more or less), and talk to my audience from time to time so that sleep does not overtake my observers. I would like to make it look so easy that, when I finish, the audience will rise and leave saying, I can do that!"

See you in Minneapolis in July! ■

THOMAS M. BRADY

"Prepared" Pianos as Viewed by the Piano Industry

Music written for performance upon the "prepared" piano is believed by most people as having begun with the work of John Cage about 38 years ago. In a sense this would be correct in that his form of "preparation" calls for the **insertion** of different objects **between** the strings, rather than the form used by Maurice Ravel in his "L'Enfant et les Sortileges," which calls for the **laying** of paper **upon** the strings. Much earlier than this, however, pianists were having their instruments altered to produce different sounds.

Following the deaths of Bach and Handel music gradually changed, and with this change came a demand for more instrumental variety and a stringed keyboard instrument having a greater variance of tonal properties. The golden age of the harpsichord had disappeared after the 18th century as the piano filled the need of the masses; some harpsichords were even converted into pianos. During this period in music's history, the piano was known as the "grand pianoforte harpsichord," in order to ease the abruptness of the transition from harpsichord to piano; it was more robust than the clavichord and more expressive than the harpsichord.

During this transitional period, there were still those few musicians wishing to have attachments installed within their pianos which would produce sounds similar to the harpsichord (and other instruments) when lowered against the strings. One such "stop," consisting of a rod covered with a tube of paper, would produce a sound remotely like a bassoon. Others consisted of mutes made of wood, leather, and felt, but these devices had virtually disappeared by the end of the 19th century.

Many pianists are currently performing pieces written for the "prepared" piano, whether it be upon their own personal pianos or upon those found in schools, universities, music studios, etc. Before these pieces can be performed, a pianist is required to insert various items (nuts, bolts, nails, screws, felt, paper, etc.) between the strings at particular areas, thus providing a wide variety of buzzes, clinks, clanks, and noises as prescribed by the composer.

There is a growing concern among piano tuner-technicians as to the advisability of "preparing" the grand piano. Many feel that the piano should not be tampered with to produce sounds for which it was not originally designed; in many instances the so-called preparation damages strings, dampers, soundboard, etc. Some piano tuner-technicians are so strongly set against piano "preparation" that they will provide no services whatsoever upon those pianos which have had this treatment. In one instance, the Vancouver Chapter (British Columbia) of the Piano Technicians Guild has adopted the following resolution: "The members of the Vancouver Chapter of the PTG reject totally the use of pianos for 'prepared piano' performances. The chapter strongly urges members not to accept tunings of pianos for this purpose and will support member and nonmember tuners who refuse these tunings. The chapter also urges stores to void warranties on pianos abused in this way." [JOURNAL, February 1978, page 30]

From the piano tuner-technician's standpoint, the following are examples of some of the damage which can occur as a result of piano "preparation": misalignment of the dampers and possible damage to the damper felts should the objects contact them; sharp-edged objects (nuts, bolts, sheet metal, etc.) nicking the strings, thus increasing the chances of string breakage; rusting strings caused by moisture from the hands; increased tension upon the strings or lifting of the strings off the bridge slightly (causing faulty termination); and uneven string heights, causing uneven hammer wear and affecting the tonal properties of the instrument. No piano tuner-technician enjoys, or encourages, the damage caused by musicians who experiment upon their pianos.

From the piano manufacturer's point of view, as obtained by a recent survey conducted by the National Association of Musical Instrument Technicians (NAMIT), the "preparation" of the grand piano is not favorably looked upon. As one notable manufacturer stated in regard to "prepared" pianos, ". . . we think they are an abomination. . . our experience is that pianists in general know very little about the instruments they play."

Those pianists currently "preparing" their pianos — whether for personal or professional purposes — and those pianists who are considering doing this in the future would be well advised to consult the results of the NAMIT survey shown below. This list, arranged in alphabetical order, is made up of those manufacturers of grand pianos predominantly found in the United States, and gives their official position concerning their warranties in relation to the "prepared" piano. Hopefully, this article will be of benefit to those pianists who were not aware of the possible damage being caused by their "preparation" techniques, and inform them that their piano warranties may be affected.

Aeolian American Division
(Mason & Hamlin, Wm. Knabe & Co.)
East Rochester, New York

"Quite frankly, we were not aware that grand pianos in particular were oftimes tampered with by those who play them to the extent of interfering

or influencing the sound of the instrument by adding nuts, bolts, screws, nails, and other items, and naturally we would feel that where such was a proven case the piano warranty would of necessity have to be disallowed."

Baldwin Piano & Organ Company
(Baldwin, Howard)
Cincinnati, Ohio

"If a grand piano was damaged or adversely affected because of this type of doctoring, we would of course not consider this a warranty problem."

Kawai Piano (America) Corporation
Harbor City, California

"Since the goal of all piano manufacturers is to sell pianos, they are very reluctant to take a stand that would offend any person or group. Therefore, I am not speaking 'officially' for Kawai and I doubt that any manufacturer would want to write a special exception in his 10-year warranty. However, should any piano owner or dealer claim new strings or dampers under warranty and we found evidence of damage from 'preparing' the piano, the claim would be denied under the 'abuse' clause in our 10-year warranty."

Kimball Piano & Organ Company
(Kimball, Bosendorfer)
French Lick, Indiana

"In accordance with the warranty that Kimball supplies with all new pianos that they manufacture to the original purchaser, if the piano is neglected, abused, or altered that in effect changes its tonal resonating ability, action performance, or structural design, then the warranty will no longer be in effect, and those items mentioned above would be done at the purchaser's own expense and own liability."

Kohler & Campbell, Inc.
Granite Falls, North Carolina

"Anything done to alter the soundboard, bridges, and strings to make them perform in a manner not designed by the manufacturer would void any possibly warranty service."

Sohmer & Company, Inc.
Long Island City, New York

"If the damper system was thrown out or soundboard rattles developed because of extraneous material falling on the soundboard, our warranty would, of course, be void."

Steinway & Sons
Long Island City, New York

"... the warranty is a warranty against defect in material or workmanship, and as such does not cover what the customer does with the piano. If they choose to 'prepare it' by inserting hardware, etc., they do so at their own risk. It does not in any way affect the warranty nor is any damage done to the instrument by the preparation covered under warranty."

The Wurlitzer Company
DeKalb, Illinois

"... such a 'preparing' of the piano would completely void our warranty, since the warranty applies only on our instrument as it is manufactured and leaves the factory."

JOSEPH A. MEEHAN

IN THE MARKET FOR A PIANO - READ THIS FIRST!

The following article was published in Woman's Day, *May 1977. We thought* Journal *readers might find it interesting.*

You need professional help when you venture into the uncharted waters of the piano market. New or used piano, it makes no difference. Even if you are a virtuoso on the instrument, you need help. The purchase of a new or used piano can be one of the best investments you make. It can be a good financial investment or an investment in your child's musical development or simply an investment for your own pleasure.

Here is an action plan to help you buy an instrument that will give you years of musical service. First, decide what you want with respect to furniture style. Also consider size. Large pianos generally have a better tone. Measure the doorways and passageways to be sure the piano will fit through. It helps to picture a piano in you home so you can decide what you really want.

Next, determine how much you want to spend. Remember, a quality piano does not depreciate like an automobile. Pianos that are properly cared for and serviced regularly can last indefinitely.

Don't let the type of music to be played on it determine what you buy. A high-quality piano is an art form in itself. Whether it is for a child's first lesson or for concert work, you want the best piano your dollars can buy.

NEW PIANOS

Check the Yellow Pages to find out what brands are available. But don't stop there. Go on until you see "Pianos: Tuning and Repairing." Call all the local piano tuners and ask them which brand is the best investment. Chances are good that the field will narrow to two or three brands. Go to their dealers and try each piano. Listen to the tone. Try every key with the right pedal pushed down. This little trick really shows if there are any sticky keys. Every piano is different, so once you make a decision, be sure you get your chosen piano. Ask for the serial number and check it when the piano is delivered. There is a high markup in piano prices, so don't be afraid to talk price with the salesman. Check the guarantee and be sure to get some sort of service contract. Virtually all new pianos need four tunings the first year if they are to be kept at the proper pitch (A-440).

One last word of caution on new pianos: Beware of cheap spinets. These pianos suffer badly in both scaling and design. The result is an instrument that is all but impossible to keep in tune and usually sounds and works poorly at best.

USED PIANOS

Sometimes new-piano dealers have used instruments for sale. (The advantage of buying from a dealer is that you have a place to complain if the product doesn't measure up.) Piano tuner-technicians as well as rebuilders often have excellent used pianos for sale. But in most cases used pianos are purchased from private individuals who may or may not know what they are selling. These pianos can be located in various ways, ranging from index cards in launderettes to ads in local newspapers. In most instances small pianos (either grand or upright) will be more expensive than larger models. However, condition rather than size should determine the price.

Go to see the piano offered for sale and picture it in your home. Old pianos can be refinished, but it is tedious work. Look at the ivories. Are they chipped or missing? Try every key with the right pedal depressed. Open the top and, using a flashlight, look inside. Are all the hammers (the felt mallets that strike the strings) and the strings there? Even if you are satisfied that you can live with the way the piano looks and the way it plays — *do not buy it.* Go back to the Yellow Pages. All competent tuner-technicians offer, among their services, estimates and appraisals. Generally, for a modest fee a tuner-technician will be happy to look at a piano and give you an estimate in writing. This is most important even for new pianos. He should check: the pinblock to determine if the piano will hold its tuning; the action (the intricate mechanism that transmits your touch into musical sounds) for any broken or missing parts; the soundboard to make certain cracks do not interfere with the tone. Besides being able to tell you exactly what the piano needs and what it will cost to fix, he can advise you as to its true value. And in most cases he can determine the age by the serial number.

An estimate will cost eight to twenty dollars, depending on where you live. But this small investment assures you of success in a field where costly mistakes are made every day.

Keep in mind that dealers deliver; private owners do not. Sometimes it costs more to move than to buy one.

How can you be sure that you are dealing with a reputable technician in the piano-service field? The Piano Technicians Guild is recognized by the National Piano Manufacturers Association, and its members are highly recommended. The Guild registers as Craftsmen those who qualify after taking a rigid exam in piano technology. There are about three thousand members in all fifty states and abroad. A list of members nearest you may be obtained by writing The Piano Technicians Guild, 113 Dexter Avenue North; Seattle, Washington 98109. ■

JIM BURTON

Ingenious Tool Contest Featured

PTG's Pacific Northwest Conference held a contest for ingenious unmarketed tools at its convention this year in Olympia, Washington. Eight technicians entered a total of 17 devices in the three categories: (1) new tool, (2) improved tool, and (3) tool modified or adapted to a new use. All the tools were displayed and demonstrated during a special convention class.

1. **New Tool Entries:** A reverse countersink for imbedding T-nuts in a grand keybed from below, a jig for regulating damper spoons outside the piano, an end-lifter for verticals, a capstan-polisher drill attachment, a bridge strap gluing gun, and an electric flange-pin heater.

2. **Improved Tool Entries:** A tilt truck with latches replacing wing nut retainers, a jig-press for accurate duplication of key button position, a 6-inch belt sander improved for keytop trimming with a 3-inch belt and auxiliary stop, a screw gauge notched to be read by feel, and a wire dispensing jig improved to accommodate the small reloadable reels.

3. **Modified or Adapted Tool Entries:** Lineman's pliers modified to extract grand hammer heads, knurl shanks, insert key leads, bend wire, and cut wire; a router adapted to prepare key surfaces for recovering and cut notches in key tops; pliers modified to extract key leads; and a small table fork modified to lift punchings.

A panel of experienced technicians rated as most useful the entires submitted by **John Grace** of the Puget Sound Chapter, **Don Galt** of the Seattle Chapter, **Joe Garrett** of the Portland Chapter, and **Ed Solenberger** of the San Francisco Chapter. ■

Coming Events

Notice of seminars will be accepted for insertion in issues no sooner than six months before the event and will be continued until after the event.One free display ad of 2 columns X 2½ inches deep is available for all PTG seminars, etc. It is the responsibility of the advertiser to submit copy for ad to home office. MATERIAL MUST BE RECEIVED BY THE 1st OF THE MONTH PRECEDING PUBLICATION.

NOTE: All seminar dates must be approved by the Conference Seminar Committee. Please submit all dates to home office on the appropriate Request for Seminar Approval Form.

OCTOBER 5-6, 1979
WESTERN MASSACHUSETTS
CHAPTER SEMINAR
Sturbridge, Massachusetts
Write: Binese Goldberg
36 Kenwood Terrace 8
Springfield, MA 01108

OCTOBER 13-14, 1979
OHIO STATE SEMINAR
Columbus, Ohio
Write: Benjamin F. Wiant
865 Bryden Road
Columbus, OH 43205

OCTOBER 7-9, 1979
SOUTHWEST FLORIDA
STATE CONVENTION
St. Petersburg Beach, Florida
Write: Roberta Jacobs
627 Hand Avenue
Sarasota, FL 33582

OCTOBER 19-21, 1979
TEXAS STATE
ASSOCIATION CONVENTION
Fort Worth, Texas
Write: Tom Blanton
P.O. Box 8
Sherman, TX 70509

DENNIS KURK

CONVENTION '79

In this final report on the Technical Institute for 1979, I would like to pass on some general information relative to the classes that should be of interest to all.

Those of you who will be attending the Bridge Building class by Willis Snyder will again have the opportunity to purchase (at cost) the Peter Childs Sorby carving chisels used in this class — a rare opportunity to acquire a valuable tool.

If you plan to attend the class on Piano Scale Evaluation and Modification by Dave Roberts, you might consider bringing along your small calculator for the mathematics involved. You will be able to work at a table in this class.

As requested by Norman Neblett, who will teach Voicing and Tone Regulating, his class attendance will be limited to 90 persons maximum per class. This is the number with which he can work most effectively. So if you plan to attend, be there early. The door will be closed when this number is reached.

For those who are just entering our profession, I would again like to emphasize the importance of the Comprehensive Piano Survey class by Joel and Priscilla Rappaport. Attending this class first will really make your other classes more understandable and rewarding.

A late addition to our Institute scheduling is a class on Servicing the Story & Clark Piano with Dave Long and Jairus Barham. This will be a slide presentation and discussion of servicing and regulating procedures for the Story & Clark. Look for it under 37A in the General Interest section of your Institute Program.

Of course, you are again invited to bring along your tape recorders. We will make sure that sufficient outlets are available for your use.

In closing, a word of thanks to the many instructors, firms, and personnel who are contributing to what we are sure will be a very informative and enjoyable Technical Institute. It has been a very rewarding experience for me to have been a part of this program and I sincerely hope you will find the same reward in joining us at Convention 1979. ■

MINNEAPOLIS IS FINE IN 79!

PTG's Minneapolis '79 Convention will again offer **Owen Jorgensen** teaching Historical Temperaments. The popularity of his class in Cincinnati last year mandated further study. Our customers are purchasing European recordings performed in historical temperaments and this awakening interest will undoubtedly result in requests that we perform such tunings.

Many members have asked to hear Owen play more than the few bars of music permitted during an Institute class. This wish will be realized by a formal "lecture-recital" in which the musical performance dominates over lecture, and listeners gain insight into temperament from hearing the music. As there was no suitable time available during the seminar activities, the music will be heard Sunday evening, July 22nd, at 7:00 p.m. Publicity will enhance the Guild image and the public will be admitted by ticket. There will be no charge to convention attendees. Delegates, alternates, and spouses should not miss this opportunity. Those coming to the seminar are urged to come Sunday (a day early) in order to enjoy the evening of music.

On Monday you can sightsee the Twin Cities, enjoy Aquatennial festivities, and shop. Dayton's opens into the hotel lounge, and the 51-story IDS Tower is just a half block through the skyway. So that we may know if we should move Jorgensen's lecture-recital to a larger hall, those planning to come early and attend should drop a card to **Marion Seller; 208 Windsor Court; St. Paul, MN 55112.**

Monday night's Opening Session will bring us Kultur by the Twin Cities Schuplatlers. Their colorful dress is authentic, right down to the hats with badges and hunting trophies attached, the men in their lederhosen and the ladies in their dirndl skirts. Your feet will tap to the exciting gyrations of German and Austrian folk dances. This group meets and practices in the St. Paul Volksfest House. The group has been together nearly 30 years and has appeared all over the Midwest and Canada. Be prepared for a lively opening session. ■

JOHN BLOCH

CHIPS OFF THE OLD BLOCH

"The fine artistic grand, as well as the high-grade grand, is not on the way out. There is a movement underway to popularize the grand and get it back to the place it once occupied." That last statement (by Moderator Ted Gose) in the May issue of the JOURNAL has surely proven itself true. The grand piano has come into its own again and some of us in the Guild have more grand piano work than vertical. (Don't forget that this statement was made in 1956.) Now let's get into Part III and hear from Charles Frederick Stein.

CAN A SOUNDBOARD BE RECROWNED?

Moderator: Before we approach the next question, are there any questions from the floor?

Remark from the Floor: I wonder if we have forgotten to consider that the strongest form of architecture is the arch. I think that a piano soundboard with an arch in it is much more capable of standing the strain of the down-bearing of the strings. I would think that under this condition it would be more favorable in producing a better tone.

Moderator: Yes, you are right.

Mr. Stein: Let's discuss this a little bit more. We have only touched the top surface. Many of you boys don't quite know what it means to put a new soundboard into a piano. I want to impress one thing very firmly on you. For the past 100 years manufacturers have crowned the soundboard. Do you gentlemen think that these men were too stupid to try something else, or to try to find other ways of producing good tone? No, they were not. In making soundboards, everything that could be tried has been tried. Soundboards have been crowned both ways (and any old way). This way and that way have been tried to hold that crown and at the same time to get better tone from that board. If we could get better tone from a flat board it would be cheaper for us to do it that way. We can say that the manufacturers of good pianos are very careful, and it is very important to them that the board is crowned right. Now, gentlemen, when we talk about crowning a board, it is not the board that we crown — it is the ribs that are being crowned. One must crown the ribs in order to get the crown of the board; then one must crown the bridge to fit the board.

I have worked for a good many manufacturers, and have made a good many pianos myself. Many of you who have visited my factory in the past will verify what I am going to say. There isn't anything about a soundboard that I haven't tried. I've tried boards without ribs, boards with double bridges, and boards that were not glued on the lining (all that was glued to the lining was the ribs). I've tried everything possible — much bearing, little bearing, little crown, low crown, etc. When we crown the lining and ribs correctly, and crown the bridges correctly, there is nothing else that will beat that form of building a piano for good tone. I would like to hear more from Mr. Hoffman. I talked with him yesterday and he is a fine piano-maker.

Mr. Hoffman: This is a difficult subject — the soundboard. Everyone knows that, as the soundboard goes into the piano, it is arched in the middle. The string pressure which goes on after the piano is strung will depress the board to some extent. The main thing to watch for is the bearing, as Mr. Johnson so correctly pointed out. As long as there is bearing over the bridge, I think nothing should be done at all with the board unless it is completely cracked and has loose ribs. As you know, I mentioned before that the plate can be dropped. When we put a plate into the piano we put the plate on the original acoustic dowels. Then there are what we call bearing bolts in the piano casing. We have, in our Steinway, two bearing bolts. These bearing bolts have collars on which the plate rests.

In order to establish the proper bearing, the bellyman foreman will check that part very carefully after the soundboard and plate have been put into the case. Then these bolts are turned until the proper bearing has been established. The board may need more bearing in the bass section and less in the treble or middle, etc. If buzzes develop later (and assuming that the board is intact), it is possible to lower the plate a trifle to get more down-bearing by turning the nose or bearing bolts slightly — perhaps at the most only a quarter turn. It can also happen that, when a piano goes out (let's say in the summertime), the lag screws that hold the plate to the case may have become loose. This is another thing to watch for. These bolts must then be tightened with a T-wrench or socket wrench. After the bearing bolts have been tightened and there is still insufficient bearing or buzzes, only then would we recommend that the bearing bolts be lowered to get more bearing. **Do not attempt to do this unless you know how or there may be serious damage.***

As I said before, when the question came up as to whether or not a board could be recrowned or the crown restored, I doubt it very much. Neither am I familiar with any method of trying to raise a fallen crown. I personally wouldn't try it. Whenever a board is so badly gone that it doesn't

* Technical Editor's Note: I would like to amplify Mr. Hoffman's warning and will do so in next month's "Forum." — JK

warrant repair, we always put in a new board.

To install a new board is likewise a delicate job. The shop must be equipped with a crane to lift the plate in and out. It is not at all uncommon for a plate to be lifted in and out 15 to 20 times before it will fit correctly according to our standards. With proper equipment and skilled help it is routine — like any other job. I do want to mention here that Steinway lays much stress on the correct installation of a soundboard and plate, and we do not sell a single board to anyone in the world — not even to our biggest dealers. This is because the rib arrangement in older pianos may differ, and to get correct scale the bridge arrangement must follow the same pattern of placement as the former bridge. If this is not done with precision, the scale is not correct and the tone will not be what it was intended to be.

We request that the piano owner or technician send us the rim with plate and soundboard intact, and we install a new board. We feel that this is the better way to do it, and you will agree that this is in your best interest to settle the matter all the way around.

Mr. Trefz: There has been a great deal said about the down-bearing of the strings on the bridge and the way this affects the soundboard. There is one thing that must be considered — the length of the lead on the hitch wire. It is quite natural that the shorter the hitch wire, the less up-bearing there has to be. One can visualize that quite easily in observing a bridge approach being constructed. (I am talking about a bridge over a river now.) Suppose the bridge level is 50 feet over the ground level and the approach is less than a 10-percent grade. It is more like a 4- to 5-percent grade. In other words, the approach to the bridge is quite long for the height to be climbed. The same sort of approach would follow through in the same category or form with the lead which approaches the piano bridge. The longer the lead, the higher the bearing should be — so as to obtain a good solid down-bearing. A short lead would not have to be quite as high in bearing to obtain a solid down-bearing.

I also quite agree with Mr. Hoffman that a shop must have a crane for lifting the plate. The method we use is a crane with a sturdy beam across the top of the shop. We use a chain hoist and attach a very heavy webbing to the plate at such points where the strap would balance the plate. One man could (if necessary) take out and replace a plate. For safety we use two men.

Dear Reader: Another break. See the next issue of the JOURNAL for Part IV of the symposium. ■

LESLIE J. HOSKINS

STRAY THOUGHTS

When an important firm like Tiffany (New York) spends good money on advertising that draws attention to our national economic problems, it behooves us taxpayers to take notice. Tiffany's ads have appeared in papers from coast to coast and it is likely you have seen one or two, but their import is so great that wide repetition is justified. Consider this excerpt:

> Is inflation the real problem? No. Inflation is the inevitable result of our follies. The real causes are (1) spending exhorbitant sums of taxpayers' money unwisely by our government, (2) frustrating bureaucratic relations, (3) taxing savings and capital formation to death, (4) giving away billions of dollars to foreign governments, (5) wasting money on foreign wars, and (6) forsaking our religious heritage everywhere, thus accentuating crime, immorality, greed, and selfishness.

That, briefly, is from one reprint I have seen. Do you agree?

Immorality, greed, selfishness — Do we find them in big government? President Carter sanctioned a nice salary hike if the senators would limit their moonlighting to no more than $8,000 a year. (This was after the Korean "gifts" furor.) The legislators quickly agreed to this. Now it is alleged that at least some of them are back to their old tricks and are making up to $25,000 a year in moonlight money. How good is a promise?

How does Congress feel about President Carter's plans for the immediate future? Former Senator John Tunney commented in a television interview that "Congress seems more interested in the next election than in the next decade." Then he added, "I think Congress has been remarkably gutless for the last decade."

Governmental problems have existed as long as government itself, many far graver than those which trouble us now. All have been solved sooner or later, so we may expect those of today will be solved; but if we ignore them they may become greater before a solution is found. The first step to resolving a problem is to recognize it; therefore it is not a fault to discuss problems freely, critically, and often. The fault lies in believing they do not exist.

Settlement of the long-standing feud between Israel and Egypt is hailed as being of great significance. Time alone will tell. One thing about it that puzzles me is, after supplying those two nations with billions of dollars worth of military equipment, why must we now give more millions not to use the equipment on each other? Similarly, we are reported to be about to give $400 million to North Yemen (north who?) to resist aggression by South Yemen. It sure costs money to mess around in the backyard quarrels of other nations, playing **U**ncle **S**anta, or maybe **U**ltra **S**tupid.

I live and learn. The Orange County (California) PTG chapter has determined that a jiffy is 1.6 seconds. Eventually I may learn how soon "eventually" is. I learned something about noise, too. An article in the current issue of *Lutheran Digest* is titled "Noise Can Kill You." It cites the United States as being the noisiest country in the world and says that over 1500 physicists, doctors, and mathematicians are working full-time on this growing problem. Here are a few statistics from the article:

(Each decibel upwards from zero represents a 26-percent change in sound intensity.)

The rustle of leaves	10 dB
Ventilating fan	55 dB
Average conversation at 5 feet	62 dB
A road drill at 4 feet	130 dB

Perhaps you can now estimate the decibels of a crying baby at 30 feet, an enthusiastic canary at 10 feet, or a vacuum cleaner anywhere in the house when you are tuning a stubborn piano.

Is nothing sacred from the prying eyes of science? Two probing University of Illinois professors estimate that if the energy required to maintain the fat on overweight Americans was used to generate electricity it could supply the annual residential needs of Boston, San Francisco, Chicago, and Washington D.C. — and if all overweight adults dieted to their proper weight the energy saving would equal that of 1.3 billion gallons of gasoline.

Ponder that, you guys with "German goiters," and the gals too. Let them look forward and aft — especially aft!

Of more interest perhaps is the finding of anthropologists that the Haya people of Tasmania were able to produce carbon steel as far back as 2000 years ago. Heretofore, it was believed that this process was not discovered until 19 centuries later. I once read that the American Indians knew how to temper copper, but the knowledge was lost before the white man took over.

Headlines should be brief and descriptive, but I felt some uncertainty about this one in the aforementioned *Music Trades International*: "Bull Leaves Steinway."

Thought for the Month: "Some fellows who slap you on the back are trying to help you swallow what they just told you." — Anon ■

ELOISE M. ROSS

YOUR SECURITY BLANKET

Do you, or do you not, favor a national health insurance tax? Why ask you? You're too busy with your own profession and the problems inherent with your self-employed status. You're too busy pleasing customers, filling out the myriad of government forms, and paying taxes (federal, state, and local) to have time to answer questions. Well, we must ask you because this is of vital importance to you and your future. **Can you, or anyone, really handle another tax that could mushroom like the social security tax?** Remember the phrase, "Everybody wants to go to heaven but nobody wants to die to get there"?

To get to the point, if those who say they favor a federal law providing adequate health care for all Americans (utopia) were asked to fund the national health insurance tax (cost not yet computed but estimated in the billions of dollars), their answer would be a resounding **No!** At a time when the economists agree that there is no positive solution to the "multiheaded monster" (inflation), our country and its citizens cannot stand the impact of another tax. England is an example we must avoid. The one deterrent to inflation is less government spending.

Therefore, please become informed so you may discuss the ramifications intelligently with your peers, friends, and especially your family. What impact will another governmental agency have on you personnally — on your privacy, family, and business?

Now for the good news. In case you haven't had an opportunity to read and absorb the impact of "Your Board in Action," published in the April "Update," effective April 1 the death benefit insurance was increased to $1000 — at no additional cost to you. You will receive an individual "special notice" to attach to your certificate. It may be awhile, however, as the printing press is practically exhausted trying to keep up with all the government changes, let alone this one.

See you in Minneapolis! ■

AILSA THOMPSON, CPP, PRP

PARLIAMENTARY WISE

Question: *Why is it incorrect to "lay a motion on the table" until the next meeting?*

Answer: RONR states that the motion to "lay on the table" should only be used to lay the pending business aside temporarily because something more urgent has arisen which should be attended to first.

Question: *Then how do we put the motion off until the next meeting?*

Answer: Postpone the motion to the next meeting. It then becomes an order of business for that meeting and should be brought up for consideration automatically.

Question: *What if we want to "kill" a piece of business and not discuss it anymore? How can we do that?*

Answer: Do not use the motion "lay on the table," for the reason given above. Either vote the motion down or move to postpone indefinitely which, if adopted, does kill the motion. Note, however, that the motion is not killed permanently, may be proposed again at any subsequent meeting of your chapter. ■

JESSE LYONS

LYONS' ROAR

Regulating Upright Dampers

Right off, let me explain that I am now employed as a piano tuning instructor at Grayson County College, Denison, Texas. I came here the 19th of February and started teaching my class of nine students on March 1st. This is a new field for me, but I am beginning to feel at home doing this type of work.

The first thing I did was introduce the piano to the students. I let them take off the boards and acquainted them with the names of different case parts. Then we removed the action and placed it on a bench. There was an abundance of flange repinning to do, so I let them get their hands into that. (Flange repinning will be taken up in a subsequent article.)

We found out the damper system wasn't correctly regulated. I knew this was rather advanced, but the problem was there so we proceeded to remedy it. After all, if a piano is not playable, it is not tunable. The immediate problem we encountered was that the dampers were not lifting quickly enough from the strings. Before making any adjustments to the dampers, we determined if the key dip was a good 3/8 inch and if the hammer travel was 1-7/8 inch. This is a **must**. (These are standard measurements for most pianos but, if the specs on certain pianos call for different measurements, use those.)

We then determined if the damper felts were lying flat on the strings. Some were—many were not. I showed them how to correct this by bending the damper wire just below the damper block. I did this with the dampers at the top and bottom of each section of dampers. I then showed them two methods of bending the damper spoon on the same whippens to get the correct lifting point on the damper lever.

First, I showed them how to use a damper spoon bender. Problems were encountered with this method, mostly in locating the spoon. Then, another problem arose with the possibility of putting excess side pressure on the whippen flange to the point of having to remove and repin it. This was valuable experience for the students. Sometimes we even had to replace the flange because of breakage. Some of the students became very proficient at this operation; others didn't.

Then, I showed them another method I like to use. We removed the screwdriver blade from the combination handle and placed the point of the blade under the damper spoon after depressing the key. Firmly holding the whippen at the front end, we pressed down on the whippen until the spoon bent to the point we wanted it to lift the damper lever. (I like the damper lever to start lifting when the key is depressed one third to one half of the key travel. This corresponds very closely to the same travel distance of the hammer to the string. I do these measurements while the action is in the piano, and take the action out and place it on the work bench. I now have guides for measuring in each section of the damper action.)

We placed the action in an action cradle, then fixed a jig for placing under the whippens to take up the slack between the jacks and the hammer butts. This is the identical situation you have when the action is sitting on, or connected to, the keys with an extension. We used a furniture wood clamp for this purpose. The wooden blocks were about 1 foot long, and could be moved to a new batch of whippens after the first batch had been regulated. The bolts were held tight in the lower block of wood by lock nuts. The top block of wood could be raised and lowered on the same bolts, and adjusted to the correct height by a tap nut. (Then, you are ready to start bending damper spoons to the pattern you set before you removed the action from the piano.) Personally, I prefer this method to bending the spoons in the piano individually. For me, the risk of flange damage is held to to minimum; however, I show students both methods and urge them to use the one most adaptable to them. So far, they seem to think the latter method is easier and more accurate.

I pointed out that they have to assume that on older pianos it is very possible, and probable, that someone ahead of them has used incorrect methods of trying to get the dampers to lift from the strings. I reminded them that it is their responsibility to correct the mistakes by knowing how much to bend the spoons and wires, ensuring that the dampers will lift from the strings at the proper time and that the damper felts will lay flat on the strings at rest. This sounds simple, but it isn't easy to do on uprights. It is somewhat easier and quicker to do on grand pianos, but we will talk about that in another article later on.

I then showed them how to adjust the sustaining pedal where it would lift the damper lever at the same point that the key began to lift the damper spoons. ■

Welcome Aboard New Members!

ATLANTA CHAPTER
NOWIK, VETE – Apprentice
389 8th Street NE
Atlanta, GA 30309

CONNECTICUT CHAPTER
MOREHOUSE, ROBERTA – Apprentice
19 Colonial Drive
Weatogue, CT 06089
PEARSON, ERIC K. – Apprentice
43 Indian Hill
Wilton, CT 06897
SEETE, MICHAEL V. – Student
34 London Lane
Stamford, CT 06902
ZEINER, RAYMOND E. – Craftsman
209 Wintonbury Avenue
Bloomfield, CT 06002
ZIKO, NADIA C. – Student
131 Old Dyke Road
Trumbull, CT 06611

DAYTONA BEACH CHAPTER
KUSOTA, KEITH G. – Student
110 Aqua Court
New Smyrna Beach, FL 32069

FALLS CITY CHAPTER
COMPTON, STEPHEN E. – Student
Box 236
New Salisbury, IN 47161

INDIANAPOLIS CHAPTER
KOLBUSS, WALTER – A. Trdsmn
715 East 52nd Street
Indianapolis, IN 46205
RICE, FRED, SR. – Craftsman
5504 West Rinehart Avenue
Indianapolis, IN 46241

KANSAS CITY (MISSOURI) CHAPTER
BRADLEY, GERALD – Apprentice
508 Lindley Drive
Lawrence, KS 66044
BURDICK, KARL D. – Apprentice
4104 SW Emland, No. 3
Topeka, KA 66606
KIRTON, CLIFTON W. – Craftsman
3921 Terrace Street
Kansas City, MO 64111

LANSING CHAPTER
WIEGAND, DANA – Craftsman
7756 Arcola Drive
Waterford, MI 48095

LAS VEGAS CHAPTER
MAYO, MARILYN P. – Craftsman
4280 Escondido, No. 316
Las Vegas, NV 89109

LONG ISLAND-SUFFOLK CHAPTER
IZZO, VINCENT – Apprentice
260 William Street
North Menick, NY 11566

LOS ANGELES CHAPTER
HAINES, F.L. ROY – Student
7726 Jamieson Avenue
Reseda, CA 91335
HARRIS, MARGARET M. – Student
3357¾ Overland Avenue
Los Angeles, CA 90034
HINTZ, FOREST L. – Student
1230 Dominion Street
Pasadena, CA 91104
TAYLOR, WILLIAM E. – Student
428 Third Street
Manhattan Beach, CA 90266

MONTANA CHAPTER
HOLLOWAY, JIM – Craftsman
410 4th Avenue North
Great Falls, MT 59401

NASHVILLE CHAPTER
MANGANO, JAY W. – Craftsman
2945 Berry Hill Drive, No. 3
Nashville, TN 37204

NEBRASKA CHAPTER
BOTTGER, SAUNDRA M. – Student
911 2nd Street
Columbus, NE 68601

NEW JERSEY CHAPTER
ALESSI, TODD A. – Apprentice
57 Conover Street
Freehold, NJ 07728
GREGA, STEVE – Craftsman
15-44 Parmelee Avenue
Fairlawn, NJ 07410

NEW ORLEANS CHAPTER
WARD, RICHARD A. – Craftsman
219 Little Bayou Black
Houma, LA 70360

ORANGE COUNTY CHAPTER
BUCHANAN, MURLE D. – Student
16732 Goldenwest, No. 1
Huntington Beach, CA 92647
GEIB, LYNN E. – Craftsman
1642 Larkellen
Fullerton, CA 92635
ROBERTS, TERRAL – Student
3040 Ranchview Drive
Orange, CA 92665

POMONA VALLEY CHAPTER
DeGROAT, DENNIS G. – Craftsman
137 East Orangethorpe
Fullerton, CA 92632
VERMILLION, COLEEN – A. Trdsmn
137 East Orangethorpe
Fullerton, CA 92632

SOUTHERN FLORIDA CHAPTER
CLARK, RICHARD E. – Craftsman
1500 NW 11th Street
Homestead, FL 33030

VANCOUVER (B.C.) CHAPTER
ALLISON, KEITH – Craftsman
1308 Gladstone
Victoria, British Columbia
DELPARTE, DAVY D. – Student
3900 27th Avenue
Vernon, British Columbia V1T 156
ROSENTHALL, STEVEN – Craftsman
74 Vickery Road
Victoria, British Columbia

WICHITA CHAPTER
HERRING, CHRISTOPHER – Associate
704 East Douglas
Wichita, KA 67202

WILMINGTON CHAPTER
JAMISON, PHILIP D., III – Craftsman
104 Price Street
West Chester, PA 19380
RHEA, BYRON L. – Craftsman
13 White Clay Drive
Newark, DE 19711

MEMBER-AT-LARGE
HUNGER, R.B. – Craftsman
808 North Gray Street
Caldwell, TX 77836

BOB RUSSELL

Get Hooked With PTG!

Everyone wants a chance to receive prestigious President's Club awards or to sport a Booster/Restorers Club ribbon at the 1979 Annual Convention. To ensure that every Booster Club point is credited to your account, and that every Restorer of a former member is recognized, the Membership Services Department requests the following:

1. Please **print** your name after your signature when you endorse a person's membership application. (Many signatures are difficult to read.)

2. If the member is a restored member, please **write this fact on the application.** (Many of the Membership Services Department's "inactive files" are inadequate and only retained for a certain number of years.)

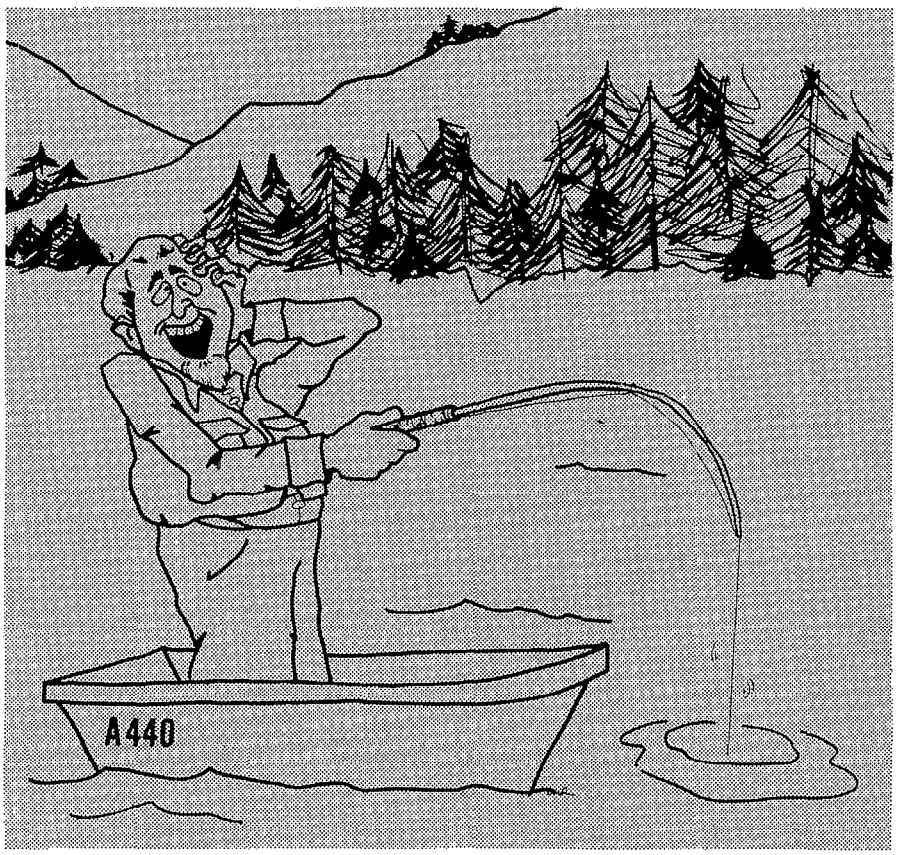
The following points are scored for signing up the various ratings: Craftsman, 6 points; Apprentice, 5 points; Allied Tradesman, 4 points; Associate, 3 points; Affiliate, 2 points; Student, 1 point. When you get a total of 24 points you become a member of the President's Club; all others are Boosters.

PRESIDENT'S CLUB

McVay, James
Schoppert, Robert

BOOSTER CLUB
(1 to 23 points)

Aguirre, Julian — Member-at-Large 1
Atherton, Olan — Dallas 1
Avolese, Frank — Long Island-Suffolk 11
Bach, Philip F. — Twin Cities 7
Ballard, William — New Hampshire 6
Baskerville, Henry — Richmond 18



Bell, Hamilton — Cleveland 1
Berg, Stephen — Kansas City 5
Bible, Dana — Greensboro 5
Bittinger, Dick — Reading-Lancaster 17
Bloch, John — Denver 1
Boyd, Thomas W. — Philadelphia 1
Brandom, William S. — Kansas City 12
Brookshire, Jerry — South Florida 6
Brownfield, Gary — Boston 6
Buck, Gene — Sacramento Valley 1
Carbaugh, Bob — Chicago 5
Carr, R.V. — Central Florida 6
Caskey, Ralph — Greensboro 5
Cate, Allan — Los Angeles 1
Churchill, Ken — Orange County 6
Coleman, J.W., Sr. — Phoenix 1
Coleman, Loring — Las Vegas 1
Conner, J.S. — Hampton 6
Crabb, Larry — Atlanta 7
Crowe, James — Washington D.C. 1
Croy, Ronald — Nashville 6
Cunningham, Jess — New Orleans 20
Dante, Richard — Cristofori Brotherhood 15
Dege, Ernest — Los Angeles 5
Deptula, Walter — East Texas 6
Desmond, Frank — Dallas 17
Dightman, Richard — Montana 6
Donelson, James H. — San Francisco 1
Drewa, Edward — Twin Cities 1
Duncan, David — Greensboro 5
Dye, William — Santa Barbara 11
Eaton, Wendell — Washington D.C. 1
Edwards, William E. — Detroit-Windsor 1
Epman, Lawrence — Wisconsin 5
Erlandson, Robert — Nebraska 6
Evans, Dan — Los Angeles 6
Finger, Chris — Denver 1
Flegle, R.H., Sr. — Twin Cities 6
Freeman, Marion — N.C. Louisiana 6
Garrett, Joseph — Portland 5
Gaudette, Oscar — Daytona Beach 1
Geiger, James — Dayton 11
Giller, Evan — New York City 10
Goetsch, Lawrence — Dallas 1

Gold, Jimmy — Texoma 6
Grace, John — Puget Sound 1
Griffith, LaVerne — Buffalo 8
Haino, Henry — Western Michigan 18
Hanson, Lynn — Utah Valley 1
Hanson, Sigurd — Houston 1
Harris, Vaughn — Las Vegas 6
Harvey, Jim — Los Angeles 1
Hauck, Jack — Phoenix 1
Hayes, James — Connecticut 11
Heischober, M. — L.I.-Nassau 5
Hendrickson, William — Santa Clara 1
Herbert, Curtis — Falls City 1
Hershberger, Ben — South Bay 1
Higby, James — Tri-City, Iowa 4
Higgins, Richard — Hawaii 11
Hipkins, David — N. Virginia 6
Hopperstad, J.M. — Sacramento Valley 1
Howell, Dean — Connecticut 1
Hulme, Gregory — Kansas City 6
Jeffers, James — Phoenix 5
Johns, B.J. — Northeast Florida 1
Jones, Joel A. — Madison 6
Joseph, Paul — Philadelphia 17
Juhn, Ernie — Philadelphia 6
Kast, Frank — N. Virginia 5
Kelley, Allen — W. Massachusetts 12
Keller, William — Reading-Lancaster 6
Killberg, George — Twin Cities 5
Kimball, Richard — New Hampshire 6
Krefting, Jack — Cincinnati 5
Krystall, Darwin — Los Angeles 1
Kuraya, Ben — Hawaii 12
Lake, Robert — Santa Barbara 1
Lamb, D.E. — Los Angeles 5
Lawrence, Paul A.U. — Blue Grass 12
Leach, W.F. — Richmond 10
Macchia, Allen — NW Indiana 5
Macchia, Frank — NW Indiana 6
MacConaghy, Henry — San Diego 12
MacKinnon, Karl — Nebraska 1
Marciano, Bill — New Jersey 16
Marten, Gilbert — Central Iowa 6
Martin, Barbara — Indianapolis 4
McAninch, Daniel — Falls City 2
McCollom, Angie — Kansas City 6
McDonald, Robert K. — Mississippi-Gulf Coast 5
McGuire, Michael — Detroit-Windsor 1
McIntyre, John — Lansing 6
McKlveen, Ben — Cincinnati 5
McNeil, Thomas — Lansing 6
McVay, James — Vancouver, B.C. 35
Mehaffey, Francis — Pomona Valley 1
Mensing, Daniel — Chicago 5
Miller, D.L. — Minnesota-North Iowa 6
Monroe, Paul — Orange County 7
Moore, Donald — Fresno 6
Morton, W. Don — Los Angeles 4
Murdaugh, Rodney — SW Missouri 1
Neie, Gary — N.C. Louisiana 5
Novinski, Tony — Wichita 12
Persons, Glenn — Tucson 6
Peters, Patricia — Central Florida 1
Peterson, Clarence — Santa Cruz 1
Peterson, Gerald — Western Michigan 6
Peterson, Jerry — Western Michigan 7
Pizza, Anita — Miracle Strip 6
Preuitt, Ernie — Kansas City 6
Ralon, Carlos K. — Washington D.C. 7
Reineck, Ed — North Central Wisconsin 6
Richardson, J.W. — Idaho West 10
Richey, Charles — Dallas 1
Rooks, Michael — Ozark 5
Russell, Bob — Cleveland 5
Sankey, Lee M. — Houston 1
Schneider, William — Lansing 3
Schoppert, Robert — S. Dakota 24
Scoville, Glenn — Pomona Valley 5
Seabern, Paul — Pomona Valley 10
Seller, Marion — Twin Cities 6
Seitz, Al — Alaska 6
Serviss, Ken — Portland 6
Sierota, Walter — Philadelphia 7
Sims, Willard — Cincinnati 3
Sinisi, Mario — Long Island-Suffolk 5
Snyder, Cecil — South Bay 6
Stegeman, W.J. — Minnesota-North Iowa 1
Stern, Walter — St. Louis 6
Story, Everett — E. Washington 6
Tandberg, Ralph — Orange County 1
Tapp, Kenneth — West Memphis 18
Thatcher, Walter — St. Louis 6
Tinker, Mary — St. Louis 6
Tipple, Robert — Member-at-Large 6
Truax, Richard — South Central Pennsylvania 4
Welton, Scott — Connecticut 6
Wheeler, Clifford — Boston 6
Wheeler, Richard — Portland 5
Whitby, Elmer — Paducah 6
White, T.E. — Northwest Florida 6
White, Walter — Baltimore 6
Wiegand, Robert — Lansing 6
Willis, Aubrey — Central Florida 11
Winslow, Allyn — Boston 6
Witting, Edward — South Bay 1
Zehme, Uwe — South Florida 7
Zellman, Adelaide — Connecticut 1
Zeringue, Nolan — New Orleans 1
Zoller, Richard — Norfolk 5

RESTORERS CLUB

Juhn, Ernie — Philadelphia
Macchia, Frank — NW Indiana
Preuitt, Ernie — Kansas City
Welton, T. Scott — Connecticut

Reclassifications

CRAFTSMAN

ALLISON, IRENE F.
San Diego Chapter
COFFEE, BARBARA
Dallas Chapter
DeBEE, GARY E.
Dallas Chapter
DOWLING, EDWARD D.
Long Island-Suffolk Chapter
DRISCOLL, THOMAS H.
Southwestern Florida Chapter
ENOCH, NORMAN R.
Wichita Chapter
FOYE, GERALD F.
San Diego Chapter
*HIORNS, RICHARD
North Central Wisconsin Chapter
HUNSICKER, DENNIS A.
Northeastern Florida Chapter
MAUL, RICHARD K.
Denver Chapter
NEUBERT, JOHN R.
Connecticut Chapter

APPRENTICE

ROTH, DONALD M.
Buffalo Chapter
LIPOFSKY, NATHAN B.
Connecticut Chapter
SIMMONS, ROBERT J.
Pomona Valley Chapter
COLLIER, COLETTE I.
Washington D.C. Chapter
MATTSON, RICHARD V.
Wichita Chapter

* Incorrectly shown as Student in May issue

CHAPTER NOTES

Note: *Technical information submitted in chapter newsletters has been forwarded to Jack Krefting, Technical Editor, and will be included as part of the Technical Tip section of the Forum, as space permits.*

BOSTON

The Boston Chapter is making great progress on their Webster Upright Player. The keytops and bushings are almost completed. The player was brought to pitch by Brown Pulliam and the action is ready to receive new hammers.

The chapter is forming a library for the use of its members. The library will be housed in a portable bookcase which can be taken to their meeting place every month for members to use. Members are asked to make book donations. Books donated will be returned to members after others are purchased in the fall. Books will be bought for the library from the expected sale of their project player piano. — G. Brownfield.

CINCINNATI CHAPTER

In an effort to both make money for the chapter treasury and provide Cincinnati's Student and Apprentice members with some experience in piano reconditioning, the Cincinnati Chapter is reworking an upright piano (which is also a player) that will ultimately be sold to a proud owner-to-be. The work is being done each Tuesday evening with Jack Krefting supervising and Bob Mollard in charge of the player mechanism. With all the work being put into it, this player piano should be a very good instrument—and a good buy for someone. The profit made is slated to be used for their annual dinner meeting and for sending their delegates to Minneapolis this July. Should there be any extra money left, there could be several options for spending the money. Suggestions are: 1) another piano to invest in, 2) the minisupply house for emergency parts could be started, 3) they might inaugurate the tool pool they have talked about, perhaps getting some tools that no one alone would buy, but that would be useful to borrow once in a while, or to 4) expand the chapter library or buy some communal advertising. — Cincinnati Newsletter.

CONNECTICUT CHAPTER

Attending a two-day seminar at Hartford, Connecticut, were 151 men and women piano tuner-technicians from 12 states, plus Canada. The event took place April 27-28 and included 38 classes taught by a faculty of 22 volunteer professionals. Instructors were from Baldwin, Wurlitzer, Yamaha, Sight-O-Tuner, Ronson Piano Hammer, Pratt Read & Company, Ford Piano Supply and, of course, the Connecticut Chapter and various other chapters. Subjects ranged from piano and harpsichord tuning to grand rebuilding in the shop. The innovative "minitechnicals" received high praise. A 10-minute speech was given by 18 piano technicians on their favorite subject or a service technique that would do a better job.

Connecticut reports that their new chapter project, the rebuilding of a Sterlin grand Model 41551, got off to a good start. Wally Brooks and Chris Robinson led the 18 persons present in an inspection of the instrument and a discussion as to what has to be done to put it in excellent condition. It was decided to remove the plate; repair and refinish the soundboard; recap both bridges; install a new pinlock; refinish and replace the plate; restring; install new hammers, shanks, and damper felts; do all necessary action, damper action, key, and pedal work; and, of course, complete regulation, tunings, and voicing. It was agreed that the case would not be refinished.

The chapter recently elected their officers for the coming year. They are as follows: President, Christopher Robinson; Vice President, Charles Nilson; Secretary, Gino Bonfietti; Treasurer, David Tyrrell. Wally Brooks, Jim Hayes, and Sully Childs have been elected as NominatingCommittee members.Scotty Welton was elected to serve as their delegate to the national convention in Minneapolis with Wally Brooks as first alternate and Ken Strick as second alternate.

The Stephen S. Jellen Library is now open to members. All that is needed for a member to borrow a book for a one-month period is his signature and the the date on the withdrawal card.

The Connecticut Chapter has their chapter Constitution and Bylaws completely up-to-date. Copies will be on file in the library.

Connecticut's Annual Chapter picnic will be held at Donnellan's Riveredge in Modus this year. This year's picnic date is June 10 and the cost $12 per person (tax included) If interested, call Joe Merando for details and make your reservation. His phone number is 268-3886 or 255-2332. — The Keybed.

DALLAS CHAPTER

Tom Blanton acted as president during our recent Dallas chapter meeting. Members were very pleased to have the opportunity to see and hear a fine-tuning demonstration by Mr. Jesse Lyons, writer of "Lyons' Roar," a monthly article published in the JOURNAL.

Our Dallas chapter project piano is well underway and we feel the project is a good way for us to brush up on various areas of rebuilding. — Mike Sonnenburg

DENVER CHAPTER

On the weekend of April 21-22, the Denver Chapter held their second technical seminar of the year. This seminar featured James Coleman, Sr., of Tempe, Arizona. Technicians came from the Denver area, surrounding states, and as far away as Albuquerque (Dick Burnam, New Mexico Chapter).

The Saturday afternoon session was held at Denver Piano Rebuilders. It was an informal workshop period devoted primarily to supertuning, precision electronic measurement, and electronic testing procedure. After dinner Jim met at John Bloch's home with a somewhat smaller group who wanted to discuss string scale computation, design, and improvement.

The formal Sunday sessions centered around the published topics of high-level aural tuning, voicing for the concert stage, and harmonic analysis of damper problems. Each of these topics was presented in considerable depth, and with a wealth of illustrative material. The Coleman A-to-A Temperament was introduced and demonstrated, as well as a number of not too well-know facts about octave tuning.

All in all, those who attended found it to be a most fruitful and technically stimulating weekend. — Lucius Day

LOS ANGELES CHAPTER

President Dan Evans opened our April meeting with 40 or more present. The treasurer reported a good working balance and a phrase was added to the bylaws of our constitution concerning the monthly meetings. It states that all monthly meetings shall be held "unless deferred by the Board for good cause." The Nominating Committee submitted its slate of new officers, which will be reported next month after the election.

An important item which had previously been introduced to our chapter was discussed and enthusiastically received. It might be called the "Southern California Honor Awards." These honorees will be carefully surveyed, selected, and honored at an all-Southern-California Banquet to be held July 8 — probably at the Grand Hotel in Anaheim. (It was the South Bay Chapter that presented the idea, which originated with one of their members, Ed Whiting.) Awards will be given to (1) the Guild member who has done the most **within** and **for** the Guild during the past year, and (2) the Guild member who has done the most **outside** the Guild that has brought honor to the Guild through his individual work.

It was noted that many years ago we had annual banquets and we have been missing these since the state conventions began. Our program on this occasion will be a musical drama already scheduled by the hotel (to be presented there). This will be something really good to look forward to in July.

Our delegates to the convention in Minneapolis will be President Dan Evans, with Alternate Allen Cate and Second Alternate Elwyn Lamb. — Harry Berg

NORTHERN VIRGINIA CHAPTER

Recently our chapter's public image was given a hefty boost when a panel consisting of Bill Pealer, Orville Braymer, and Carl Root met with a local piano teachers' association for a discussion of various topics of interest to piano teachers and their students. Bill opened the talk with a demonstration of how a piano is put together — using his miniature vertical piano (no more than a foot wide). The miniature includes (among other things) a removable action, pedals (damper spoons), soundboard, lid, and sides! Orville's discussion of service requirements beyond regular tuning concentrated on voicing and regulation as an ongoing process rather than the extensive work often necessary when this phase of piano work has been neglected. Orville has had to deal with all kinds of piano service in his work at Wolf Trap (open air) and at the Capital Center ("heavy metal" rock-and-roll). The third topic for discussion — general advice on new and used piano purchase — was postponed to a later date.

It came to our attention that several teachers had had their pianos serviced for a number of years, yet had no idea that the technicians with whom they were so well pleased were Guild members. Several chapters in the area have been encouraging the more extensive use of our logo on jackets, tool cases, stationery, etc. Members have also been encouraged to take more time to discuss PTG with their clientele. — Carl Root

SACRAMENTO VALLEY CHAPTER

In March the membership of the Sacramento Valley Chapter voted to reduce the quorum needed to conduct chapter business from 51 to 25 percent. The argument was made that some members might object to being represented by only 25 percent of the Craftsman members. To this argument the rebuttal was offered that if they want to be represented they should show up at meetings! — Yvonne Ashmore

SOUTH CENTRAL PENNSYLVANIA CHAPTER

Throughout the past year or so, our small chapter has been making a conscious effort to improve the efficiency, and shorten the length, of our business meetings. As a result, our business meetings are more concise and interesting. There has also been a concerted effort to improve the quality, duration, and frequency of technical sessions after the monthly meetings. Coincidentally, perhaps, we have added five new members to our chapter over the same period of time. We now have nine members.

These extra "hands" were appreciated when we acted as host chapter for the Fifth Annual Pennsylvania State Convention at Gettysburg this spring. We would like to thank State Chairman Dick Bittinger, his staff, and everyone who contributed to the success of this convention. Our new Auxiliary did an outstanding job with their "women's activities" and contributed a great deal to this success.

There was a pall of apprehension cast over the whole weekend by the operational crisis at the Three-Mile Island nuclear generation plant. As grave as the situation might have been, the contradictory statements made by the officials involved at the time, plus our hyperactive news media, had many people frightened beyond good reason. For our many friends around the country, be assured that we all fared alright and, as far as we can tell right now, there has been no serious threat to our health or environment by this nuclear accident. — Dick Truax

SOUTH FLORIDA

We are happy to note a significant increase in our membership, along with improved attendance.

For our educational programming, instead of a committee, members state subjects or techniques they would like demonstrated. Experienced technicians then work as volunteers and schedule the educational programs for subsequent meetings.

Recently long-time member Cliff Nelson explained, and demonstrated, his method of grand damper installation. Cliff is a top technician with Bobb's Piano and Organ Company where all our meetings are held. Former President Jerry Brookshire brought us up-to-date on ideas for increasing our personal income. — M.L.Zack.

RHODE ISLAND

Mr. Christopher S. Robinson, President of the Connecticut Chapter, was the principal speaker and guest at a recent meeting of the Rhode Island Chapter. His topic dealt with the repair of ribs and bridges of verticals and grand pianos. Each member was furnished a printed copy outlining the foregoing subject for reference during the program. Mr. Robinson's illustrations and ability to impart his practical/technical knowledge were keen, clearly presented, and well understood. One of the most amazing and impressive features of the program dealt with repairing the soundboard. All operations were fully explained; opening the doors to new fields of thought, application, inspection, and workmanship that lead to definite and rewarding results. — R.R.Gaudreau.

WICHITA CHAPTER

Treasurer Chuck Wasgburn warns members that dues (in some cases) are overdue. Slapping of hands and/or pocketbooks will result if the situation persists.

The proposed Bosendorfer technical session with television coverage looks like it might happen in May or June according to Don Hough, our contact in this matter.

Members are reminded that if they want in on the Guild Yellow Pages ad, and haven't talked to Wayne Clevenger yet, they had better do so! It is being wrapped up quite soon.

The Wichita Chapter reports that they have passed a proposal that gives any member of an Examining Committee power to remove any disruptive factor (person) from the testing area. The proposal also limits the time for a tuning test to 3 hours. — Voicing Tool

To Drink or Not to Drink: That is the Question

Dear Rosette:

This problem may not be common enough for you to put in your column, but my husband does not know how to handle it and he asked me to write to "Rosette." My husband does not drink coffee, but almost every day he is offered a cup of coffee. It is embarrassing to refuse such hospitality and at times he feels like he is insulting the lady of the house, especially if she brings in a tray with coffee, sugar, and cream — without even asking him. — Awaiting

Dear Awaiting:

I'm sure most piano tuners are not worried about this "problem" of refusing coffee — especially my husband, Flange, who drinks coffee like some 100-year-old pinblocks drink pinblock restorer. If it is lunch time, Flange not only gets coffee, but usually gets something to eat by telling the customer he can't drink coffee on an empty stomach. If that fails, he asks if there is a restaurant nearby where he can get a bite to eat. Then, if that doesn't work, he has been known to ask the customer out-and-out for a sandwich to go along with the coffee. That's my Flange!!

Your husband deserves a better answer than that. You did not give the reason for his dislike for coffee — health, religion, or personal choice; but whatever the reason, he might eliminate embarrassment by expressing appreciation for the customer's thoughtfulness and then asking for a glass of water. By doing this he does not deny her the joy of being hospitable to him. As for the situation where she suddenly appears with a tray of coffee, etc., I'm not sure what is the best way to handle that. Your husband may have to drink and bear it.

LUELLYN PREUITT

Wives' Lives

NOMINEES FOR AUXILIARY POSITIONS

Here is the slate of officers, as presented by the Nominating Committee, for consideration at the Minneapolis Council meeting in July: President, Jewell (Mrs. Jack) Sprinkle; First Vice President, Julie (Mrs. Ron) Berry; Second Vice President, Kathryn (Mrs. Willis) Snyder; Recording Secretary, Bert (Mrs. Walter) Sierota; Corresponding Secretary, Agnes (Mrs. Charles) Heuther; Treasurer, Dessie (Mrs. Paul) Cheatham.

A MESSAGE FROM PRESIDENT HELEN

The slogan "Take A Giant Step Forward" reminds me of a game we often played as children called "How Many Steps May I Take?" "How many steps may I take?" is a question each Auxiliary member should be asking herself. It is only by each one of us taking individual steps that the Auxiliary advances.

One of the steps your president has taken has been to increase the number of classes available at this year's convention. Sociability is fine; but many of you who are active from day to day, who are employed, or who share in the work of your spouses feel you would like to make the week spent at the convention more beneficial. With you in mind, seven RTT instructors have been commissioned to conduct classes. Do avail yourselves of this wonderful opportunity to capture at least one good idea that will make convention attendance well worthwhile. If some of the classes cover subjects on which you are well informed, be prepared to submit written comments so that next year's instructors will know what to cover in their lesson plans. Sometimes, even though we may not have learned anything new, it is helpful to know that the way we are doing things is the right way. It is in this manner that we build self-assurance.

Be prepared to take a step into the entertainment field. A talent show is scheduled and everything will be acceptable — from the sublime to the ridiculous. If you are an experienced opera star, let us be favored with an aria. If you cannot sing a note you might dress in the costume of Madame Butterfly and attempt to sing an aria — who knows, you might win an Oscar for the best comedy! What I am trying to say is that, even if there isn't much you can do, there is **something** you can do. You have a few more weeks to plan your contribution! Come prepared and bring your costume, music, props, or whatever you may require. Doug Denham, who is Little Theatre and has had much experience, has agreed to help us put something together. The first meeting will be Sunday afternoon. If you cannot be there, get in touch with Doug as soon as you register so that he will know what is available.

If this is to be our best convention yet, it will be because you decided how many steps you can take. How many steps may I take? Not many if I have to carry you. If we are stepping together, the going will be easy. By the way — since we are in Paul Bunyan country, we should be taking "giant steps."

A FINAL INVITATION FROM VIRGINIA SELLER, PRESIDENT OF THE TWIN CITIES CHAPTER

This is our last opportunity to welcome you to the July 1979 convention in Minneapolis — and to the Auxiliary events in particular. We want all of you to share in everything President Helen Pearson and the Twin Cities Chapter have planned. There will be meetings and classes, a tea and luncheon, a tour or two, and many more activities. We urge you to become involved in all we have to offer. The more you participate, the more you will get out of the convention. As a result, you will find it has all been worthwhile.

There will be time for you to pursue your own interests — shopping at some of the fine stores, eating at interesting restaurants, or doing "what most appeals to you."

One of the scheduled events is of unusual interest. Wednesday evening, July 25, at 8 p.m., we will be visiting Olivet Congregational Church, which has two recent additions — a tracker organ and a dossal (altar) screen. The organ, as well as the needlepoint screen (6 x 6 feet), has attracted national attention. The organ, which is of outstanding design and fine sound, was built by a talented 27-year-old man. The dossal screen was designed and needlepointed by the women of the church. As my husband, Marion, plays his recital, you can see the beautiful altar screen. This recital was requested by our president and others. I think you will find the experience a very special one — one you won't forget. We will have buses to take you over and back. After the recital, refreshments will be served by some of the women who worked on the screen and you can learn more about it. I felt honored to be one of the 29 persons working on this beautiful creation.

This is, of course, just one of many fine events. We feel your stay will be one you will long remember. Come one, come all. The Twin Cities Chapter wishes to make this the best time ever for you! ■

CLASSIFIEDS

Classified Advertising Rates: Classified ads are 15 cents a word, with a $3 minimum. **Copy due** the first of the month preceding publication. **Address:** Managing Editor-Art Director/Charlona Rhodes, PTG, 113 Dexter Avenue North, Seattle, Washington 98109. Telephone: (206) 283-7440.

HELP WANTED

HELP WANTED — Expert piano tuner-technician wanted. Full time, salary open, prestigious store in business over 25 years. Write details to: **Bernard Comsky; Artist Pianos; 5818 West Pico Blvd.; Los Angeles, CA 90019.**

HELP WANTED — Experienced piano technician-tuner, full time. Excellent wages and working conditions, Anaheim, CA. Mailing address: **Piano Warehouse; 8081 Starr Street; Stanton, CA 90680. Phone (714) 821-3311.**

HELP WANTED — Quality piano manufacturer is seeking qualified piano technician to head Technical Services Department. Send resumé and salary history to: **General Manager; Kawai America Corporation; 24200 South Vermont; Harbor City, CA 90710.**

HELP WANTED — Position open for full-time piano tuner-technician with at least 15 years experience. $8000 per year plus benefits. Must be equal in qualification to PTG Craftsman. Contact: **Dr. Robert Cowan; University of Montevallo; Montevallo, AL. Phone: (205) 665-2521.**

HELP WANTED — Piano tuner-technician. Must have at least five years experience on all style pianos. Some travel involved. Leading piano manufacturer. Send resume' to: **The Wurlitzer Company; 403 East Gurler Road; DeKalb, IL 60115; Attn: Norene Yopst.**

FOR SALE

PIANOS FOR SALE — Always on hand, 150 to 300 uprights! Plain case, art case, and players. Also 50 to 150 grands at all times, as is or rebuilt. Excellent brand names — no junk! All set up for inspection. Lowest possible prices. Call for quotes: **Owen Piano Wholesalers; 2152 West Washington Blvd; Los Angeles, CA 90018. Telephone (213) 883-9643.**

FOR SALE — Original, classic museum quality, reproducer player piano. Burled walnut, Art Du Lux Grand (4' 10" x 5' 3") with original matching bench. P.A. Stark (Chicago)/ Welte Mignon, Serial No. 72119, circa 1925, $18,000. Excellent enjoyable investment, photo $5. Contact: **M. Bieber; 83 Glenview Lane; Rochester, NY 14609. Phone: (716) 654-8825.**

MISC.

WANTED — Action parts for old model Steinway uprights (Models K, V, or N). Whippens, hammer butts, double flanges, and damper levers. Contact: **Glenn A. Brown; 1108 West 19th Street; Tempe, AR 85281.**

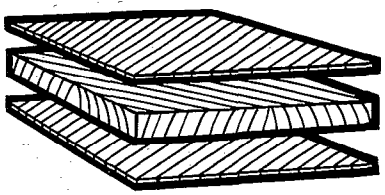
PRICE CHANGE — Retail price of *The Piano Owner's Guide* in soft covers has been changed to $3.95 per copy. The hard cover price of $6.95 stays unchanged, as do all discounts accorded our many quantity distributors. **Piano Publishers; 2621 South 8th Street; Sheboygan, WI 53081.**

advertisers index

POSITION DESIRED

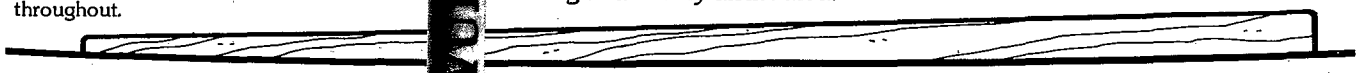
WANTED — Student of Aubrey Willis School seeks apprenticeship working with, and observing, an experienced Craftsman tuner-technician. Is interested in rebuilding, as well as tuning and regulating. Would prefer Washington D.C., Baltimore, Anapolis, Northern Virginia, suburban Maryland area. Contact: **Bruce Conley; 4316 Knott Street; Beltsville, MD 20705. Phone: (301) 937-1231.**

Pencil point proves performance of new Wurlitzer Soundboard



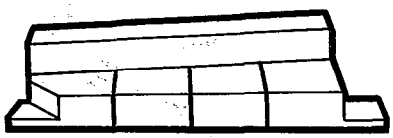
The grain of the wood in both top and bottom layers of the new soundboard runs parallel to the general direction of the treble bridge. The fine grain of the inside layer runs in the direction of the ribs.

Picture below shows relationship of crowned rib to soundboard. Putting a crown into the underside of the ribs holds a crown in the soundboard. This soundboard is of uniform thickness throughout.

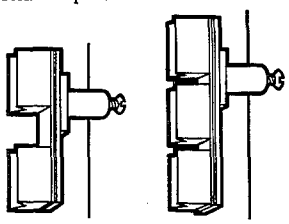


Wurlitzer's new all-spruce Duraphonic Multi-radial™ Soundboard transmits string vibrations more efficiently than any other.
To prove its responsiveness, touch the point of a sharp pencil to any area of the board and strike a note as you hold the pencil gently against the surface. Test it top, bottom, sides and center. You will feel vibrations that are both strong and evenly distributed.

Further enhancing tone production is a new Quadrasonic™ bass bridge built in four sections. Low notes do not oscillate the whole bridge, but transmit more directly into the soundboard.



Dynamic response of the new soundboard is so much greater, Wurlitzer has increased the damper size by 30% to control the greater tonal output.

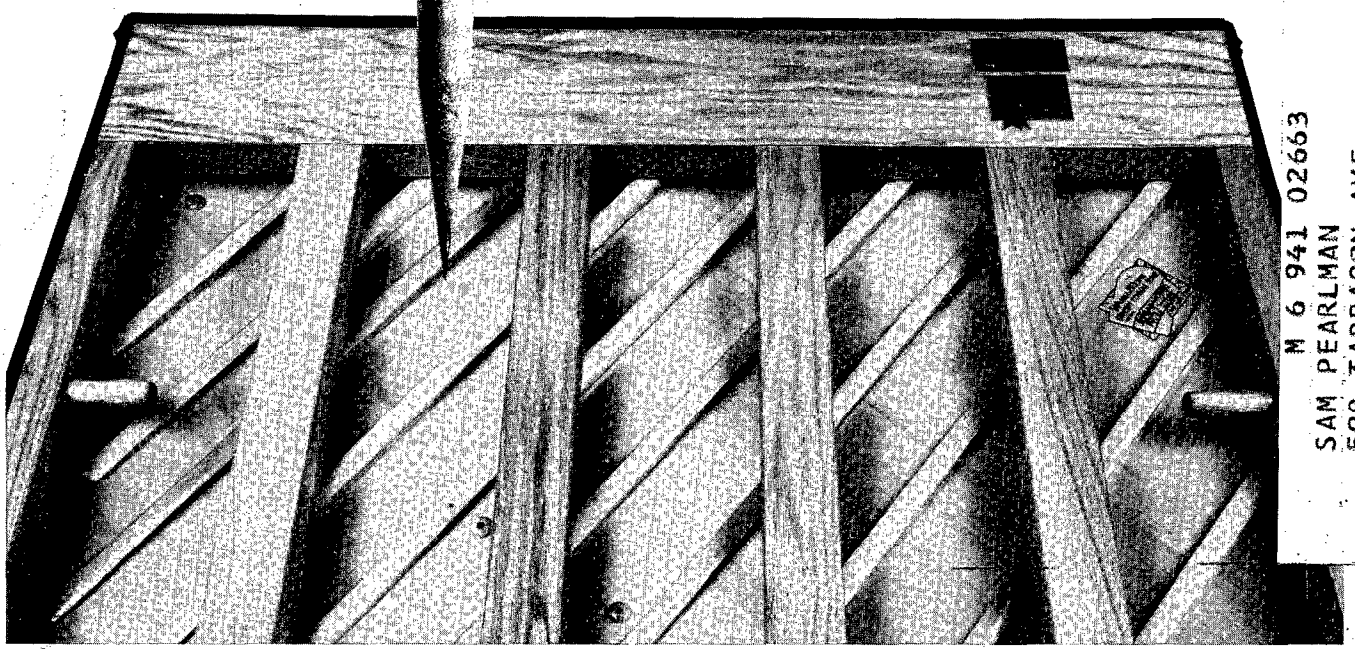


That is because Wurlitzer now uses three separate layers of mountain-grown spruce in all of its finer pianos. These layers are placed at scientific angles so they transmit string vibrations (which travel mostly with the grain) to all corners of the board. The result is more volume, richer tone, and greater dynamic range. Crowning of the soundboard is achieved by crowning both ribs and soundboard liners. The soundboard itself is of equal thickness throughout and is therefore more capable of equal response in all areas.

Of still greater interest to technicians, this new soundboard is more stable, with a coefficient of expansion/contraction that is 80% lower than that of solid spruce. This means truer tuning and fewer problems caused by moisture or temperature variations.

If you would like assistance from Wurlitzer technical staff, call 800/435-2930 toll-free between 8:00 AM and 4:30 PM. For parts, call Code-A-Phone 800/435-6954. In Illinois call 815/756-2771.

WURLITZER®
The Music People
DeKalb, Illinois 60115



PIANO TECHNICIANS GUILD

1979 JUNE UPDATE

Special Notice! New Registered Craftsman Certificates

The new registered Craftsman certificates, especially designed for PTG, are now being engraved in blue and gold. Each Craftsman whose dues are fully paid for 1979 will receive a certificate engraved with his name and the year 1979. Each year thereafter, the member will receive a new annual seal which may be placed on top of the previous date. In this way the certificate will clearly show whether a Craftsman is a current member with dues paid and in good standing.

The certificate with name engraved will be mailed to all Craftsmen with their 1979 annual dues paid in full. Those who pay dues quarterly will receive certificates when the final dues payment has been received.

1,524 certificates are being engraved now - is your name on that list?

SEE YOU AT THE CONVENTION!

Thank You

Many thanks to the chapters who responded to home office's request for assistance in updating the prospect lists. Your help was much appreciated and we will announce when the new list is available in a later issue of the Journal.

Change of Address and PTG Journals

The current month's Journal is printed in the middle of the month preceding publication (i.e., the June issue goes to press no later than the 15th of May). When an address change is received by home office, it is entered in the records the same day and an individual notice is prepared for the computer system.

If the new address is received before the 12th of the month, the next month's publication will be mailed to the new address (i.e., if address changes come in before the 12th of May, the June publication will be mailed to the new address). If the change of address is received after the 12th, the July publication would be mailed to the new address.

Members are urged to arrange with the Post Office to have their publications forwarded to the new address because PTG sends Journals to the address in the computer and the mailing system will continue to send Journals to the old address unless the Membership Department is notified by the 12th of the month.

We print Journals for each member and subscriber with an overrun to cover home office records, special mailings, etc. We regret that it is not always possible to provide back issues to members whose regular Journal mailings have been sent to an old address.

Drop and Reinstatement Procedures

All members are sent an annual billing each December and many send in the full payment within a week or two after receiving their billing. A number respond promptly by sending a partial payment before the end of January.

The home office must maintain records of all members and whether they are in good standing with PTG and if their chapter dues are paid up-to-date. Members whose dues are two months delinquent must be sent another interim billing and if there is no response they are mailed a special notice or reminder.

We appreciate that some members may have financial problems and are always ready to do everything possible to aid a member who is eager to continue membership but who needs a short extension in time in which to pay the amount due.

We do not like to drop a member for any reason but the PTG bylaws require us to do so after three months of no payment and no response to our mailings. A dropped member is costly to PTG in the added postage, paperwork, and overhead. Additionally, by the time a member is finally removed from the computer and home office records, at least three months of Journals have already been mailed and no payment has been received.

A number of members who receive the final notice of dues being in arrears and who are dropped from the membership rolls will then send in the dues payment. Once a member has been dropped, however, the process of reinstatement can be lenghty as home office must write to the member's chapter for reinstatement approval before the process can be completed. A chapter must meet before that approval can be officially given.

When the chapter approval is received the postage, paperwork, and overhead once again commence in order to reinstate the member. We regret the delay which must ensue but reinstatement is similar to processing a new member and requires similar office procedure.

PTG and all members benefit from those who are able to pay their dues promptly. The expense of dropping a member and of reinstatement are also paid by all the members.

We hope this explanation will help those who have inquired about the procedure.-DLS

Rosette

For the next several months space will be devoted in the Journal to those members who have special non-technical problems. "Rosette" stands by waiting for such correspondence. Please write to home office, addressing letters to "Rosette;" Piano Technicians Guild; 113 Dexter Ave. N; Seattle, WA 98109.

HELP!

The Convention Committee Concerned with Women Technicians is gathering material relevant to helping small-statured technicians overcome size problems. DO YOU HAVE ANY TOOLS OR SUGGESTIONS THAT MAY BE HELPFUL? If so, please share them. CONTACT: Convention Committee; 106 SE Arthur Ave.; Minneapolis, MN 55414; ATT: Christi Mickel.

CONVENTION 1979

"Dormitory style" rooms are available at Augsburg College to take care of overflow from The Radisson Downtown Hotel.

The economy of the low-cost housing may make the few minutes travel time to the convention site and the lack of air-conditioning seem insignificant.

Clip and send the registration form below.

AUGSBURG COLLEGE
Optional Housing-PTG Convention
Available July 22-27, 1979 only.

Reservations must be in by June 30, two nights lodging deposit required. CONTACT: Cindy Ragan; c/o Augsburg College; 732 21st Ave. S.; Minneapolis, MN 55454. Phone (612) 332-5181.

Single $8.10
Double (per person) ... $6.50

*Prices are subject to 7% tax.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Arrival _____ Departure _____

PHONE _____

Publications

Do you have a series of past issues of the JOURNAL which you could donate to the Guild? Do you know someone who might be willing to do so?

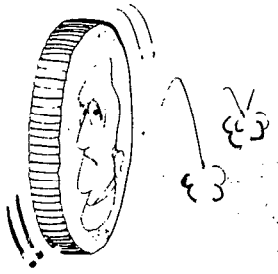
Home office is shy some of the past issues of the JOURNAL and we would welcome receiving a complete or partial set. We will gladly pay all postage cost and will be pleased to acknowledge the donation.

MILESTONES

We are printing this column in memory of the valued members whose combined years of service to the piano field and to the Piano Technicians Guild have been an inspiration to us all.

ATCHISON, MELVIN; died 8/1/78
CURREY, WALTER C.; died 10/26/78
DUNLAP, SHAN: died 1/2/79
FINK, PAUL E.; died 3/27/79
KAUFMAN, PHILIP; died 9/7/78
LEWIS, WILLIAM T.; died 4/19/79
McKAY, KEITH H.; died 7/25/78
MOON, EDGAR W.; died 11/13/78
MOELLER, CARL J.; died 12/7/78
MARTIN, ROY J.; died 12/27/78
MOLDREM, KARL; died 3/8/79
NICHOLAS, SAMUEL; 4/25/79
NEWLIN, ROY; died 1978
PREUITT, JOSEPH N.; died 3/19/79
SCHMIDT, OSCAR; died 10/78
STAPLES, ROSS L.; died 1/23/79
SEGER, ARTHUR A.; died 4/12/79
VERHULP, PAUL A.; died 12/20/78
WOODWORTH, HAYDEN; died 12/78
WATSON, W. VERDE: died 8/29/78
WOODRUFF, ALBERT E.: died 1/29/78
WALLACE, RICHARD T.: died 2/21/79

RUBBER MONEY



THE HOME OFFICE ACCOUNTING DEPARTMENT REPORTS THAT SOME CHECKS RECEIVED FROM MEMBERS ARE BEING RETURNED FROM THE BANK MARKED "NSF." HOME OFFICE PTG IS CHARGED $5 ON EACH RETURNED CHECK. WE WOULD APPRECIATE RECEIVING THE $5 REIMBURSEMENT WITH YOUR REPLACEMENT CHECK. THANK YOU.

Resolution to Discourage the Use of the Word "Chairperson"

WHEREAS, Parliamentary Law has a language all its own; and

WHEREAS, In olden times the one presiding was the only person provided a chair, while others sat on benches, hence he was called the chairman; and

WHEREAS, No Parliamentary Law authority or dictionary recognizes the word chairperson; and

WHEREAS, Robert's Rules of Order Newly Revised provides that the word "chairman" be used to designate presiding officers who are not presidents or vice-presidents; and

WHEREAS, Since time immemorial the term "Mister" chairman or "Madame" chairman has always been employed to differentiate between sexes; and

WHEREAS, Further effort toward sex differentiation is redundant and contrived; now therefore be it

RESOLVED, That organizations and parliamentarians of the National Association of Parliamentarians must use the term chairman and should encourage the use of this term instead of "chairperson" in all organizations where they have influence; and be it further

RESOLVED, That all NAP members should habitually stress the principle that the word "chairman" belongs to the title of the office the same as the title of president or secretary.

Adopted in convention 10/75 bv the National Association of Parliamentarians.

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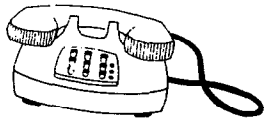
The term "man" in chairman, lineman, postman, etc., describes the position, training, qualification, etc., and does not refer to the sex of the person performing the task or holding the position.

Where the term "person" is used in such cases the invariable rule is for males to continue to use the term "man" and for females to assume the term "person." Thus, the term "person" signifies a female and is itself a sexist term. - Ailsa Thompson, PTG Parliamentarian

Help



In June all chapters will receive a current computer printout for review and we ask your cooperation in adding phone numbers to the printout before returning it to home office. This will enable us to include the phone numbers in the new PTG membership roster.

NOTE

PLEASE NOTE THAT I AM NO LONGER CHAIRMAN OF THE COLLEGE & UNIVERSITY TECHNICIANS FORUM I RESIGNED IN JULY 1978 WHEN ELECTED CENTRAL EAST RVP.- George Peters