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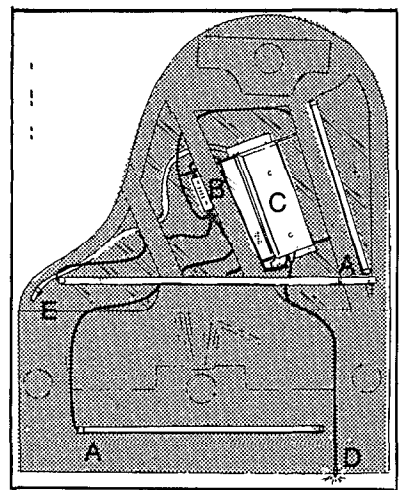
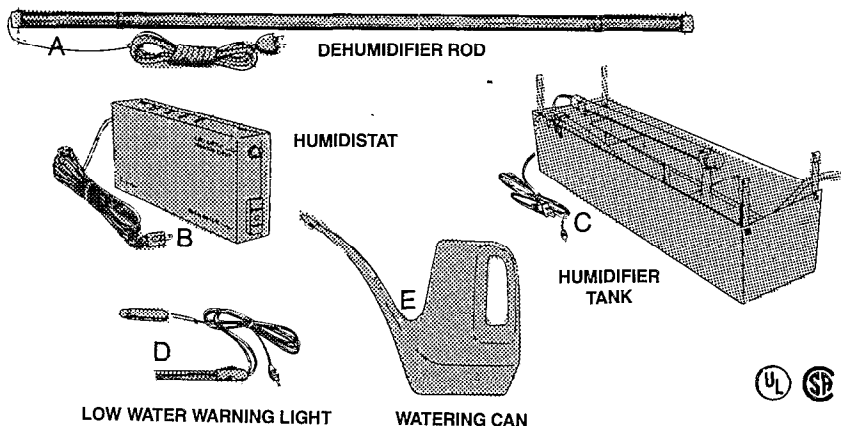
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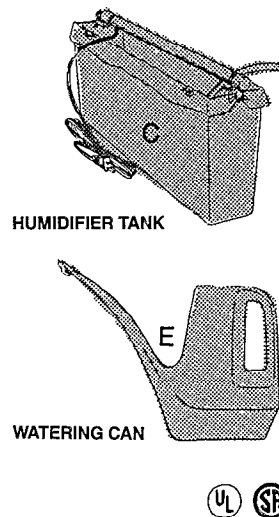
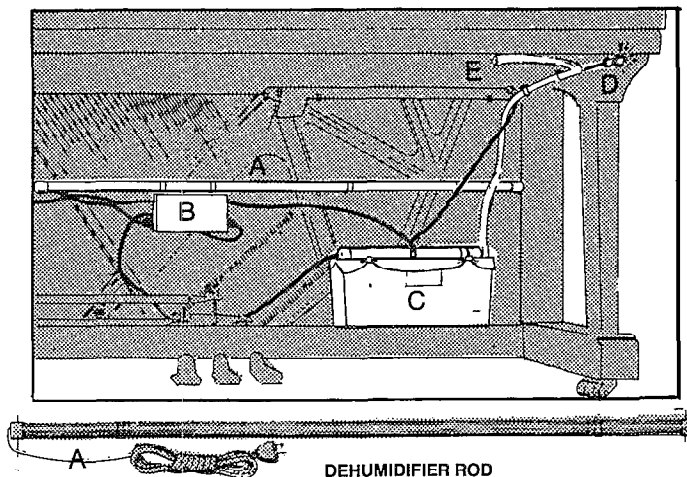
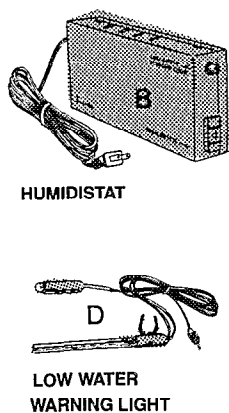
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Editorial Perspective

Tools 'R' Us

*"And all trades, their gear
and tackle and trim..."*

— Gerard Manley Hopkins

While tuning a piano a couple of weeks ago, I noticed a sort of rubbery feel to the tuning pin. It didn't seem to respond to the direction of the tuning hammer. I suspected a loose tuning tip, but it seemed to be tight. I suspected the tuning pin itself was about to break, but it seemed fine. At that point, having been down this road before, I suspected that my tuning hammer shaft was about to break off. No sooner had the thought formed itself, than the hammer suddenly gave and I found myself holding a tuning hammer with no head. The head and tip remained solidly atop the tuning pin in the piano.

Now, I've always believed that things happen for a reason, and within a few seconds of the great break, I was ruminating about those beautiful tuning hammers I'd been ogling at the Renner booth during the Dearborn convention. I knew I wanted one. Each had been custom-made by master woodworker/piano technician Keith Bowman. Problem was, they cost \$200 or so, and I felt I still had some mileage left in my current tuning hammer.

As these thoughts started taking hold (picture me staring at my broken tuning hammer), I realized with a grin that now I could justify buying that gorgeous new hammer. Within a few days, I placed the order.

My first contact with the tools of our trade came early in my tuning school course work. The instructor insisted that we buy a top-of-the line hammer and a number of other tools, all of which seemed to me, at the time, frightfully expensive. I remember hoping that this would be the last money I'd have to spend on tools!

Since those days, of course, I've become an inveterate tool nerd. A recent inventory of my tool case revealed that many of my favorite tools simply weren't around 10 or 15 years ago. For me, a trip to the annual convention would be wasted if I didn't return with an armful of new tools. As technicians, we learn to take pride in having beautiful, comfortable tools, knowing that the pleasure of doing fine work is enhanced by tools which allow us to do our best.

As this pride in our tools develops, most of us desire to protect, carry, and display



Steve Brady, RPT
Journal Editor

them in a suitable case, one which is in all ways the equal of the tools it houses. Dave Severance's tool case review in this issue is presented with these thoughts in mind. In the color article at the center of the magazine and on the cover of this issue, we see this idea raised to a nearly impossible level. Piano builder Henry Studley's tool chest is the apotheosis of the tool case. Thanks to editor Scott Gibson at Fine Woodworking, and crafts and trades specialist David Shayt at the

Smithsonian Institution (remember his fine article on the history of the U.S. ivory industry in the July 1995 issue), we are able to reprint this article in its original form.

The tools of the whaling trade captured my attention on a recent trip to Nantucket. These pre-industrial-age implements demonstrate abundant thought, experimentation, and creativity. The variety of harpoons alone is surprising, with patented single flue, double flue and toggle flue models adorning the walls of the whaling museum. The harpoons are just part of a vast array of instruments for catching, killing, moving, cutting up, and boiling the whale. Although the whaling industry was all but obsolete a hundred years ago (before the peak years of the "golden age" of the piano), its eloquent tools remain, and they speak volumes.

Sometimes tools can surpass the abilities of the user. After convincing myself that my golf game was being hampered by my old, secondhand clubs, I bought a nice new set of clubs that seemed to work incredibly well on the practice tee. I couldn't wait to surprise my golfing buddies with my drastically improved level of play, but I ended up being the surprised party — surprised to find that I played about the same with the new clubs as I had with the old ones, a phenomenon which continues to impress me some two years later. Similarly, owning a \$200 tuning hammer (or an Accu-Tuner) does not a tuner make.

Fortunately, though, most readers of this journal take their trade seriously. Most of us are perpetual students of what we do. But for all our training, formal or otherwise, for all our hours of study and experimentation, for all our best intentions — where would we be without our tools? ☞



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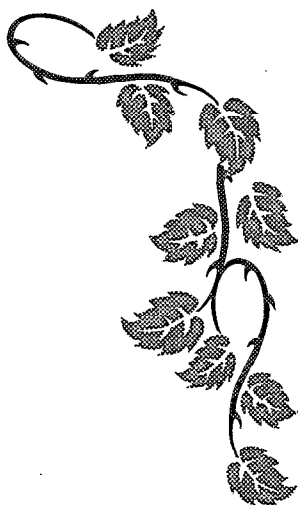
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Piano builder Henry O. Studley created this masterpiece to house his tools. Photo by Eric Long provided courtesy of the Smithsonian Institution.

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Visualize Success

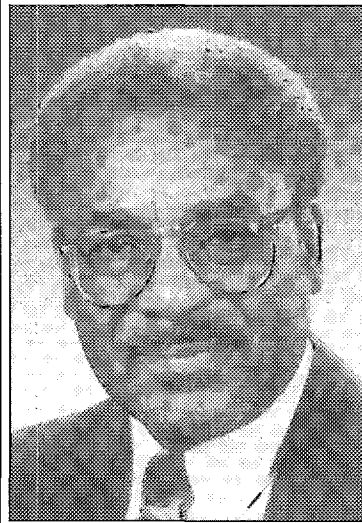
It has been said that thought turned into performance is enthusiasm. Let's call it the kinetic energy that propels us to our destination. One destination we all have is the completion of this calendar year. How we approach that is up to us.

What I would want for everyone is a great financial success to bring this calendar year to a close. In fact, that could become a great short-term goal.

Visualize if you will your business profits for the remaining portion of this calendar year being at a level beyond your current projections. This picture needs to be as detailed as you can make it. Image those things you will have to do physically in order to fulfill what will be required of you to make the picture complete. Example: Contacting clients, booking engagements, performing the work, collecting the checks, etc. Above all, keep the picture sharp. That is very important.

In other words, you've increased the size of the goal you eventually expect to reach. For some, real sketches on paper plant an image on the brain. If sketching is not for you, then put your vision into words on paper. Once an idea becomes a word, *look out*, because ideas take the form of the spoken word. And yes, there *is* incredible creative power in the spoken word. So, verbally describe your picture or read aloud what you have written down on paper.

Tremendous emotional power is released through the spoken word. Energy and enthusiasm begin to be



PTG President
Marshall B. Hawkins, RPT

released. After all, you have now declared your positive intentions. You really want to succeed, right? Begin to practice by declaring your intentions positively with enthusiasm and integrity on a regular basis. You'll never get started until you start advancing. It is suggested you advance with boldness. Take that first step forward and give your goal and dream all you've got! Time waits for no one and you can't fail unless you give up on your dream.

Enthusiastic energy drives forward when doubt, fear, frustration, distrust and worry have no forum. Hence, let's continue to improve ourselves constantly by adding to our knowledge. In addition to knowledge, it is most important to add self-control and to self-control add perseverance.

Let me close by saying . . . *be enthusiastic as you think success in whatever your personal endeavor happens to be.*

A handwritten signature in cursive script that reads "M B Hawkins". The signature is written in dark ink on a light background.

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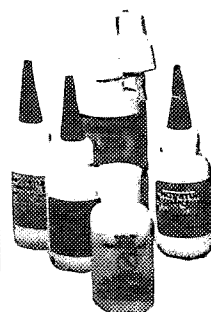
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Dear PTG Members

Thank you for the honor bestowed posthumously upon Danny at the Annual Convention in Dearborn. He would have been most appreciative of this expression of your esteem as you inducted him into the Guild's Hall Of Fame. How I wish he could have been there to receive the award in person! Fortunately, he was there at the Convention in 1994 (only 3 months before his death) to receive the Member of Note Award. That meant so much to him! Thank you for presenting that to him then.



Barbara Boone accepts the posthumous 1996 PTG Hall of Fame award for her husband, Danny Boone, from RPT Ben McKleeven.

As many of you know, Danny's heart was in PTG. As he had profited from the teaching and experience of many fine technicians in the Guild, he endeavored to pass on the knowledge and insights he had gained and skills he had developed along the way, hoping to assist new or less experienced technicians to continue to grow in their knowledge and develop their own skills. He had hoped that his teaching and the book and articles he had written would make a positive contribution to someone's life and career.

It was a joy for me to be able to visit again in Dearborn with friends we had known through the years. Many of Danny's very closest and most highly valued friends were PTG members. Thank you for your friendship to him and to our family, and a special "Thank you" for honoring him with the Hall Of Fame Award.

— Barbara Boone

The Ethics of Broken Strings

I read with interest Sid Stone's "Ethics in our Profession" in the *Journal* for July 1996. With reference to string breakage, Sid says, "...nine times out of 10 it is the tuner's fault. It is either putting the tuning lever on the wrong pin or improper use of the tuning lever." Sid goes on to suggest that nearly all string breakage is the fault and responsibility of the tuner, and that it is generally unethical to charge for replacing strings that break during a tuning.

Well, Sid, of the last ten strings that have broken while I was tuning pianos, not one broke because of faulty hammer technique on my part. Like you, I "put the lever on the right tip and know proper technique." However, strings will break, even if the first move with the tuning hammer is to decrease tension, even if the pitch is already a semi-tone low, even if the tuner has 40 years experience. Furthermore, the changes that take place in the wire just before it breaks happen so fast as to be imperceptible until the report hits your ears. Obviously, there are things we can see, problems we can feel with the tuning

hammer. We can identify strings that are rusty, and that do not move easily over friction points. The presence of replacement strings might also be noted. These indications should certainly be taken as warnings of possible breakage, and the customer should know this.

But what if the customer is not home? Am I going to stop tuning if I run into rusty strings? Or, should the owner (who magically returns just as the third string snaps) be informed that it would be unethical to continue tuning, since the tuner (that's me) is not willing to be financially responsible for the problem?

I do not expect an auto mechanic to be responsible when a rusty old bolt strips on my 1952 Buick. If I really thought I should be liable for parts and labor involved with any string that broke while I was tuning, I would have got out of this business decades ago.

By the way, nine times out of 10 I am able to successfully splice broken bass strings. There is, of course, a small charge for this service.

— Doug Rhodes, RPT
Victoria, British Columbia, CANADA

Response to Darrell Fandrich

I read with great interest Darrell Fandrich's article "On Humidity-Related Tuning Instability," in the July issue of the *PTJ*. It contained several intriguing insights, among them the notion that changes in humidity must affect the geometry of the soundboard/bridge assembly in such a way as to cause changes in the "elongation" of piano wires, and that this change in elongation is what produces changes of pitch. This being the case, Young's modulus of elasticity may be used to analyze the relationship between elongation and pitch change. If we know the geometric change, we can predict the pitch change, and, to some extent, vice versa. Fandrich made several interesting predictions based on equations derived from Young's Modulus.

Unfortunately the equations and their manipulations (presented in the Notes at the end of the article) contain several rather serious errors, some typographical, others presumably caused by oversight. I make no claim to a high degree of mathematical expertise, but in those equations I found the following mistakes: In Note 2, A is described as the cross sectional area of the piano wire. When that is made into a formula, it should be " πr^2 ", or π times $d^2 / 4$ (" π " is missing in the article). The formula should read $E = TL / \pi \times d^2 / 4 \times 29,000,000$, which simplifies as follows (taken in steps to avoid confusion, using 3.14 as the value for π): Simplifying $\pi \times d^2 / 4$, we get $.785 d^2$. Substituting that result into the formula: $E = TL / .785 d^2 \times 29,000,000$; Multiplying $.785 d^2 \times 29,000,000$, we get $22,765,000 d^2$, so $E = TL / 22,765,000 d^2$; multiplying each side of the equation by 22,765,000, we get: $22,765,000 E = TL / d^2$; The reciprocal of 22,765,000 (1 divided by 22,765,000) is 4.39×10^{-8} . Multiplying both sides of the equation by that figure: $E = 4.39 \times 10^{-8} TL / d^2$. This varies from Fandrich's result by approximately a factor of ten. (My math is rusty, so please check it.)

In Note 3, where it says the elongation equation of Note 1,

Continued on Page 10

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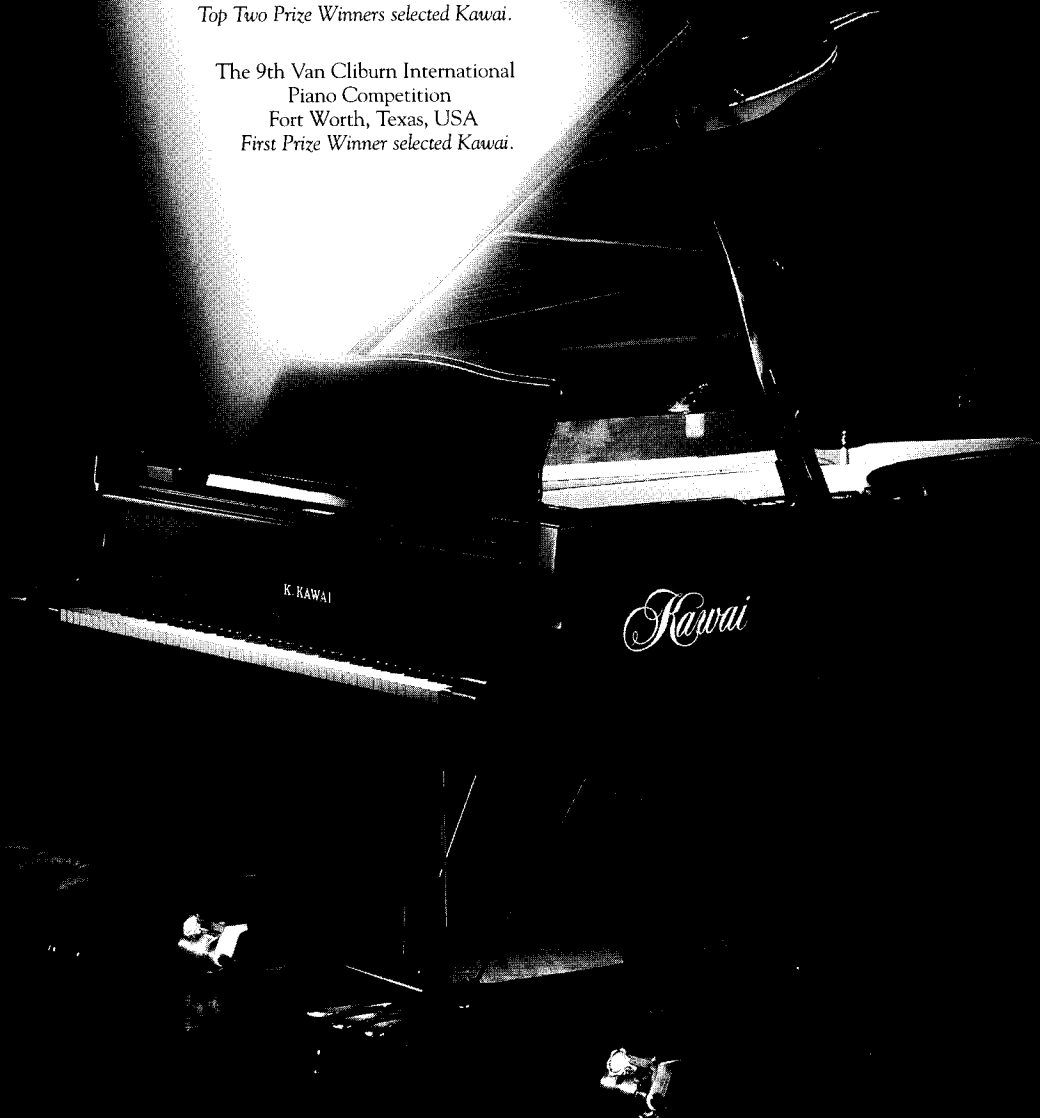
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Tchaikovsky Competition
Moscow, Russia
Top Two Prize Winners selected Kawai.

The 9th Van Cliburn International
Piano Competition
Fort Worth, Texas, USA
First Prize Winner selected Kawai.



It's becoming a familiar refrain.

Continued from Page 8

it should read the elongation equation of Note 2. The bold faced formula in Note 3 should show L as cubed rather than squared. And if my calculations above are correct, the formulae in Note 3 should read $E = .000000439 L (.0023 d^2 F^2 L^2) / d^2$, which simplifies to $E = 1.01 \times 10^{-10} F^2 L^3$ (once again approximately a factor of ten different from Fandrich's result). These discrepancies lead me to question the predictions in Notes 6-8 (although I'm afraid I don't have the expertise to make the calculations to offer any alternative predictions).

In addition to these errors, some of the abbreviations used were unintelligible to me. In the table for Note 1, what is Br.? (I gather that Br. L means bridge length, but can make no sense of the figures under Br.) What are the cosines (i.e., of what are the given figures the cosines)? What is "l(coif.)"? Some others were puzzling at first, but I managed to figure them out.

On a related subject, I agree wholeheartedly with Ken Churchill's view that what we need is experimentally verified facts rather than endless speculation. For example, although most of us "know" through experience that the lower end of treble bridges is where pitch changes the most in response to humidity change, I am unaware of any systematic measurements that have been taken to verify that "fact."

Even that "fact" doesn't seem to hold true in all cases. I just tuned two pianos that had risen in pitch consistently along the entire treble bridge: a Gulbransen spinet 60 cents (!) and a Steinway studio 20 cents. In each case there was a much smaller pitch rise on the bass bridge. Also, in each case, the piano had previously been tuned three months ago, when humidity was measured at 30 percent to 40 percent lower. I mention these examples only to make the point that while my own experience leads me to believe that the lower end of the treble bridge is — usually — the place where pitch changes the most in response to humidity change, I have noticed exceptions. There seem to be other strange quirks as well. I have noticed on several occasions that areas just above breaks in the treble bridge also have large jumps in pitch change due to humidity. On other occasions I have noted that high trebles of some pianos go flat while the rest of the piano goes sharp and vice versa.

These are interesting observations, and could provide fodder for considerable speculation, but we don't have enough information on which to base speculation. Several questions need to be answered first. On what particular pianos were these observations made? How much did pitch change at specific points along each bridge? How much did humidity change? Was the change constant, or did the humidity level go up and down? Over how much time, etc.?

As soon as my time permits, I plan to start a project of measuring pitch on a few pianos from month to month, and measuring humidity fluctuation as well. I plan to measure the unisons on each end of each bridge, on both sides of each break, and at midway points as well. The pianos will all be fairly old so that string stretching is not much of an issue (University setting). I will try to track humidity on at least a biweekly basis. If anyone else is interested in engaging in such measurements, please let me know so that we can pool results.

I also plan to try to find out empirically how much pitch is affected by raising strings up from the bridge. I

think I will remove the bridge pins of a few unisons and try to insert brass stock between the bridge and strings, lining the brass up with the bridge pin holes. I'll measure pitch, then remove the brass and measure pitch again, perhaps repeating a couple more times to ensure that I'm not measuring string stretching or tension equalization.

This sort of data would provide a start for some more rigorous experimentation and calculation. What would be ideal, though, would be for someone with access to high resolution measuring devices (preferably using laser technology) to undertake some experimentation. Perhaps there is a physicist out there with an interest in this sort of thing. For example, put a piano in a climate-controlled room, measure the position of various points along the bridges relative to fixed positions on the plate. Then raise or lower the humidity, allow the piano to acclimatize, and remeasure. Better still, measure several times while the piano is acclimatizing. The aim would be to find out how much the bridge actually rises and falls, and/or distorts or elongates, and how much the speaking lengths are changed. Pitch should be measured as well to try to correlate its change with the physical measurements.

This sort of experiment could be repeated with the bass bridge unstrung (to determine the effect of the bass strings on any rise and fall or distortion) and with the piano entirely unstrung, or at least with the tension released, to see how much strings under tension affect the movement of the soundboard/bridge assemble. It would be interesting to repeat measurements with a Damp-Chaser system installed. Other measurements and experiments would doubtless come to mind as well.

A concerted effort over a period of years would establish a body of raw data that could make it possible to come up with some real and practical answers to the question of what humidity does to the belly of a piano, how various designs are different from one another, and how a particular piano could be made more stable. Anyone interested?

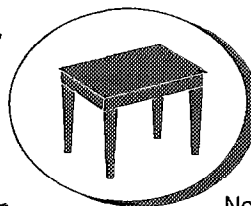
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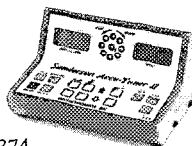
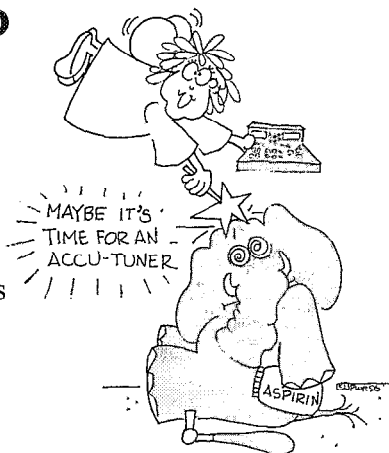
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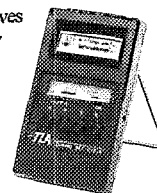
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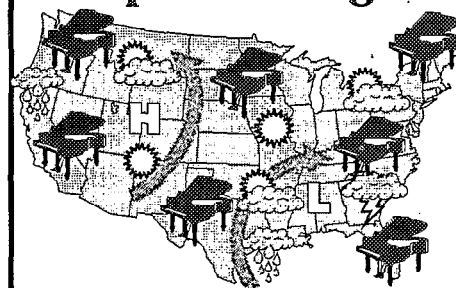
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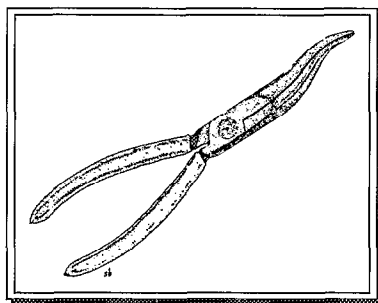
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TT&T

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No need to run and get your glasses — there's nothing wrong with this picture. These unusual pliers, which look like they might have been caught in a nuclear meltdown, are actually



Offset needle-nose pliers.

very useful when it comes time to remove that last little bit of the bridle straps you're replacing. Because they are offset, the pliers can reach around the catcher and grab the little stub that refuses to come off. Just a quick tug and the job is done. Well, okay, you still have to repeat it 87 times.

— Isaac Sadigursky, RPT
Westlake Village, CA

TT&T

Torch That Heat Gun!

When my venerable heat gun gave up the ghost last year, I replaced it with this butane-powered torch which I first saw demonstrated by Kathy Smith, RPT, a few years ago. I've been so delighted with it that I would like to share it with *Journal* readers as well.

The brand name is "Master," and the model is "Ultra-Torch UT-100si." It's available from Jensen Tools at 1-800-426-1194 or FAX 1-800-366-9662. The Jensen catalog number for this item is SG10B400, and the price is normally US \$103. Jensen can take a credit card number and have this beauty in your hands in a couple of days.

The unit is called a torch, but actually produces flameless heat by catalytic reaction. The temperature at the nozzle is adjustable up to 1202 F. It lights automatically at the touch of a button (piezoelectric ignition), and makes a really cool whistling sound (at no extra cost) when you first turn it on. The handle stores enough butane to power the torch for 180 minutes, or more than enough time to burn-in a new set of shanks. It weighs only 5.5 ounces fully charged with butane, and requires no cord or electricity.

Compared to the Ungar "Princess" heat gun shown in the Jensen catalog (\$139), the Ultra-Torch wins hands down. It's lighter, cheaper, and, at just under 10 inches in length, smaller and less cumbersome.

— Steve Brady, RPT
Seattle, WA



Master Ultra-Torch

TT&T

Tune the Piano to the Organ

When tuning a piano in a church I like it when they tell me to "tune it to the organ," because it gives me an excuse to turn the organ on and try it out.

Unless the church has an older Hammond organ (they are always at A=440), don't assume that the organ is at A=440. Electronic organs can drift out of tune and pipe organs are considerably affected by the temperature in the room.

If you are dealing with a pipe organ, first determine if the room is at the temperature at which it will be on Sunday. If it is, draw an Oboe 8'. The pitch of the reed pipes is not affected by air temperature nearly as much as the Diapason or Flute pipes.

On an electronic organ, find a stop that has relatively high harmonic development, like a Diapason 8', String 8', or Trumpet 8'. Stay away from Flute stops because their relatively low harmonic development makes it difficult to match the piano's A to the organ. On both pipe and electronic organs, avoid stops with the word "Celeste" in them. These stops are purposefully mistuned to create a special effect.

Once you've set your A on the piano, tune the piano to itself as you normally would. Don't attempt to transfer the temperament on the organ to the piano. I tried this when I was a beginning tuner — it doesn't work.

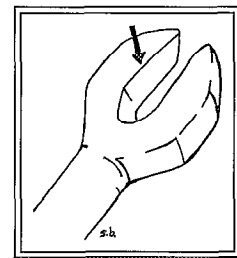
— Matt Dickerson, RPT
Danville, IN

(Reprinted from *Indy 440*, Indianapolis Chapter newsletter.)

TT&T

Klaatu Barada Nickto

When spacing keys, we are always told that in order not to nick the front rail pins, we must lift the punchings and use the tool at the bottom of the pin. That is indeed true — but it is also a pain in the neck. Since the reason for all this is that most key-spacing tools have sharp edges that cause all the nicking of the pins, why not modify the tool? That can be easily accomplished by using a Moto-Tool with a small grinding stone and later polishing it with a polishing wheel (also with a Moto-Tool). Now you can space keys without damaging the front rail pins, and without suffering.



Key spacer to be modified by grinding and polishing sharp corners.

— Ernie Juhn, RPT
Forest Hills, NY
(Reprinted from *NewsL.I.N.C.*, newsletter of the Long Island Nassau chapter.)

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Q: **Protecting Your Chemicals**

As piano technicians, we all use chemical products, such as glues, solvents, cleaners and lubricants. During the extremely cold times of winter (or during extreme heat, for that matter) keeping these kinds of things in the trunk of the car can be dangerous to the insides of the vehicle, or at least likely to cause damage to the chemicals themselves. What are some of the ways technicians can protect these items from freezing, both in the garage at night and when out on calls during the day?

—Anonymous

A: **Keith A. McGavern, RPT**

I have one smaller tool box that houses all the freezables. It goes where I go along with the main tool case.

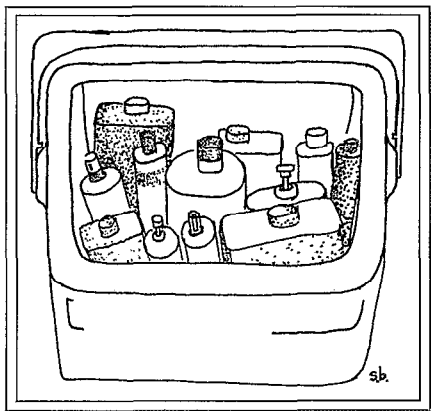
A: **Ken Burton, RPT**

My solution is to have a thermostatically controlled interior car warmer in my car. I plug it in on cold nights. If the sun is shining during working hours, there is no problem but if it is cold and cloudy, I ask the customer if I may plug my car into the plug on the side of their house or garage. It's great to come out and get into a warm car and, of course, my tools and liquid supplies are protected.

Works for me!

A: **Laura Kunsy, RPT**

I keep all my chemicals in an Igloo® cooler. Not only does it keep things cool in the summer heat, but it's insulation keeps things from freezing in the winter. I only leave the cooler in the car during the day while I'm working, and it's one of the things I bring into the house with me when I get home. This encourages me to keep all my chemicals in one place, which means I have to plan ahead a little better and some times run out to the car, but my Tite-bond® runs a lot better these days!



Solvents and other piano-related chemicals in a small ice chest.

A: **Doug Hershberger, RPT**

A friend of mine, Alan McCoy, one time showed me that he carried all his solvents, liquids, etc., in a small Igloo® (or something like it) ice chest. I thought it was a good idea at the time not so much for keeping things warm, but just for keeping it all together and maybe holding back fumes which can be a problem in summer. Who knows it may help keep things from freezing as well. If that doesn't work, try moving to a warmer climate. Just kidding.

A: **Jim Harvey, RPT**

This is an old discussion from a Q&A session at a Los Angeles chapter meeting.

The discussion began when it was determined that several chapter members had recently purchased Tite-bond®, supposedly "fresh" from Pacific Piano Supply. The glue was unusable, taking the form of a stringy, gooey mess.

Investigation by Pacific Piano determined that this shipment had been delayed, having sat in a box car in snowdrifts during a midwestern storm. This was new information for us, since southern Californians don't normally concern themselves about things freezing.

One of our members later found out (presumably from Franklin International) that Titebond® will go through twelve (12) freeze/thaw cycles before it rolls over and becomes unusable. I've always thought that 12 cycles sounded too convenient, and would really like to confirm this (anyone around Columbus, Ohio that could call?). Either way, although this is interesting, most techs don't count the number of times our car goodies drop below the freezing mark, so having a "count" wouldn't necessarily help anything.

Like Laura and others, for a long time I have kept glues and other potential freezables in a cooler. Mine is one of the soft-side lunch coolers with a shoulder strap. Unfortunately, with my California mentality, I have not been transporting same inside at the end of the day. This discussion has provided me cause to investigate my existing stock and take appropriate action, especially considering the way we've been hit in the South this winter.

Q: **Troubleshooting Buzzes**

Buzzes and other noises are at the same time some of the most frustrating and most satisfying troubleshooting we do. I am writing today because I would like some suggestions for tracking down a buzz I have been seeking for months. This is on an older grand, original strings, and resonates at F5-A5. It appears to be coming from the bridge, right at about the plate strut, and has that "bridge buzz" sound, although it is close enough to the edge of the soundboard at that point that it could be emanating from there.

Continued on Page 16

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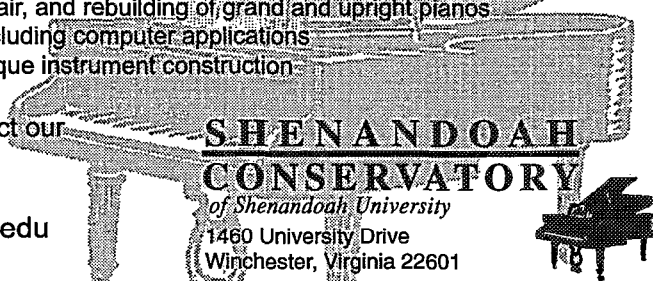
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Continued from Page 14

I have tried examining the edge of the soundboard, but it is difficult to access or view, being wa-a-a-y up over the action cavity. As far as I can tell there is no separation, loose glue pieces, etc. I have even drilled a hole through the rear of the keybed in order to tighten an unreachable soundboard screw, to no avail.

The thing that is curious about this buzz that may be a tip-off to someone more knowledgeable than I is that I can get it to stop by pressing *down* on the bridge at the point where it crosses under the plate strut. In fact, my temporary solution has been to jam a wooden wedge between the plate strut and the bridge, thereby applying pressure down on the bridge. Takes care of the problem, but needless to say is not a piece of work I want to sign my name to. (I have assured the customer I will find a solution someday).

Anyone have any fresh ideas? I've run into lots of bridge-area buzzes, but never one that was relieved by pushing down. Any help will be greatly appreciated.

— Randy Rush, RPT
Seattle, WA

A: **Rick Florence, RPT**

You've probably already tried this, but the few times that I have been able to stop a buzz by pressing down on a bridge the problem was loose plate bolts (screws). On one Mason & Hamlin that we have here at ASU, I have to do this yearly as the buzz returns every December (the start of our dry season).

Have fun!

A: **Laurence Beach**

Has anyone tried locating buzzes with a stethoscope? The biggest problem I have with buzzes is that the source can be at the opposite end from where the buzz seems to be coming from. I would think the use of a stethoscope would pinpoint the source more accurately.

A: **Keith A. McGavern, RPT**

There is a tool I purchased years ago designed specifically for using like a stethoscope in finding noises. It is based on an old idea I learned in the Sixties.

You take a long screwdriver blade and handle, place the blade where you think the problem is and place your ear against the handle. When you locate the position of the offending noise, it will travel through the screwdriver blade and handle to your ear audibly.

This tool I purchased uses the stethoscope concept ex-

cept there is a pointer type device (about 9" aluminum) that is connected to a crude diaphragm device which is connected to a clear plastic tube which splits into a "Y" that goes to your ears.

Bought it via a mail-order catalog like Brookstone, etc. Haven't used it too much, but it definitely works. Very effective, almost too much, as there is no volume control.

Sounds like something is separated ever so slightly from its counterpart ... bridge from apron ... apron from soundboard ... rib from soundboard. Pushing on it closes the separation just enough to make it go away.

A: **Danny Dover, RPT**

Have you checked for loose bridge pins under the plate strut, and/or minimal clearance between the bridge pins and the plate?

A: **Ed Foote**

I have found several times that a buzz like that mentioned was originating in the bridge.

Steinway and many others join bridges to soundboards with dowels. On the treble bridge, you will see a small peg in the top of the bridge where it passes over each rib. Drilling a small hole directly into the bridge, through this plugged vent hole, deep enough to contact the dowel, allows you to inject a very thin mixture of hot hide glue, I fill a syringe and keep it in the glue pot until ready. Plug the hole with a round toothpick and finish off with a touch of graphite.

While this doesn't always address the problem, it has in the past solved several situations where nothing else worked.

Much larger dowels are anchored by wooden nuts under the cut-out of the lower treble bridge. They are often loose, and should be glued or replaced. Good luck.

A: **Doug Hershberger, RPT**

Randy, have you ever tried reaching your hand up from underneath the piano to where the soundboard is glued to the rim and felt to see if there was any hard thin pieces of glue that squeezed out when the piano was built? It may or may not have anything to do with the bridge but it is worth a shot. I've seen this problem on a brand new quality piano as well.

A: **Paul Dempsey**

We all know that these buzzes can often come from somewhere entirely different than where the sound sounds like its coming from. If the buzz is going away when you push

Continued on Page 18

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Continued from Page 16

down on the bridge you may want to check the extreme tenor end of the long bridge. There often is an extension of the bridge beyond the last unison on the bridge. I have seen this area come unglued and buzz while the body of the bridge is glued tight. Very deceptive.

A: **Tom Rush**

I had to find a buzz in a brand-new Steinway that acted similarly, in that just pushing down very gently on the top of the bridge stopped it. After some time spent looking, I finally found that the edge of one of the bridge notches was — barely — touching the non-speaking portion of a string.

It was difficult to isolate because the problem notch was located in the section under the bass strings, and the contact was so light that touching the bridge top at some distance away would stop the buzz.

A: **Scott Thile, RPT**

The recent thread on buzzes reminds me of all the time I have spent troubleshooting unwanted sounds. Unfortunately much of that time has been unpaid, because I have not been able to form any kind of consistent pricing policy for troubleshooting. Most of my encounters with buzzes are part of other work I have been hired to do, such as tuning, voicing, regulation, etc. Most clients have not hired me specifically to fix the buzzing, but will mention it as an aside, sometimes I notice it before them, and sometimes it is the dreaded call-back situation where the client calls to inform you of the buzz that you caused somehow last time you tuned the piano. (I really hate that one).

I have always had a problem in the area of charging for work where I am not sure what the actual time involved will be, and in some cases if I will be completely successful in solving the problem, (or the only real solution is more involved and/or expensive than your client wants to pursue.

What are your pricing policies for the following:

Hired directly to fix buzzes or other unwanted sounds?

Client mentions buzzes or other unwanted sounds as an aside after hiring you to do other work?

You find the cause, but the repair involves more work than your client wants to pursue?

You fail to find the cause of the unwanted sound?

I would appreciate any thoughts or policies you have regarding these situations, in terms of both client communication-information and pricing.

A: **John Musselwhite, RPT**

I've lost clients over their embarrassment on that one. One lady gave me an earful for 10 minutes over the phone about how her new Steinway was "ruined" when I'd tuned it the day before. After I pulled the child's small toy out of a

sound hole (not charging her for the service call) she was visibly embarrassed at her tirade. That happens...

To answer the questions posed by Scott Thile:

1. *Hired directly to fix buzzes or other unwanted sounds.*

I charge for a regular service call plus additional time if needed....

2. *Client mentions buzzes or other unwanted sounds as an aside after hiring you to do other work?*

That depends ... I've fixed many buzzes in a few seconds ... I don't charge unless it takes more than five minutes or so ... I had one today that from all appearance had been in the piano for well over 20 years and no one had caught it. The second damper head up from the bass-tenor break was too low on the wire and buzzed and muted the last wound string. It had been that way a *long* time. No charge for that, and now I have a client for life.

3. *You find/notice unwanted sounds?*

That happens all the time. I identify it and inform the client and it's up to them, unless it's an easy fix and I just do it.

4. *You find the cause, but the repair involves more work than your client wants to pursue?*

Let them decide ... I do *not* tell them exactly what it is though as I've had clients who, once they are privy to the information, have just gone ahead and fixed it themselves.

5. *You fail to find the cause of the unwanted sound?*

It hasn't happened for years — I've found picture frames, light bulbs, heating ducts and all sorts of *other* things rattle and buzz, too, so those things should be investigated as well. ☺

Statement of Ownership. 1. **Publication Title:** Piano Technicians Journal. 2. **Publication No.:** 0031-9562. 3. **Filing Date:** 9/30/96. 4. **Issue Frequency:** Monthly. 5. **No. of Issues Published Annually:** 12. 6. **Annual Subscription Price:** \$85. 7. **Complete Mailing Address of Known Office of Publication (Street, City, State, Zip+4) (Not Printer):** The Piano Technicians Guild, 3930 Washington, Kansas City, MO 64111-2963. 8. **Complete Mailing Address of Headquarters of General Business Office of Publisher (Not Printer):** The Piano Technicians Guild, 3930 Washington, Kansas City, MO 64111-2963. 9. **Full Names and Complete Mailing Address of Publisher, Editor and Managing Editor (Do Not Leave Blank):** Publisher, Larry Goldsmith, The Piano Technicians Guild, 3930 Washington, Kansas City, MO 64111-2963; Editor, Steve Brady, 205 McGraw St., Seattle, WA 98109; Managing Editor, Joe Zeman, The Piano Technicians Guild, 3930 Washington, Kansas City, MO 64111-2963. 10. **Owner:** The Piano Technicians Guild, 3930 Washington, Kansas City, MO 64111-2963. 11. **Known Bondholders, Mortgages, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or Other Securities:** None. 12. **For Completion of Nonprofit Organizations Authorized to Mail at Special Rates. The Purpose, Function, and Nonprofit Status of This Organization and the Exempt Status for Federal Income Tax Purposes:** Has Not Changed During Preceding 12 Months. 13. **Publication Name:** Piano Technicians Journal. 14. **Issue Date for Circulation Data Below:** July 1996. 15. **Extent and Nature of Circulation**
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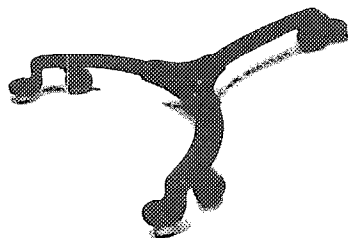


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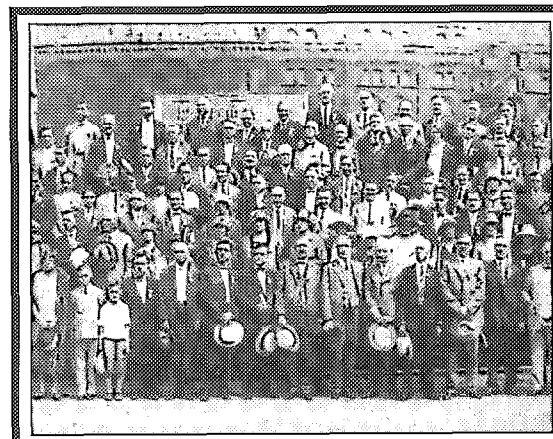
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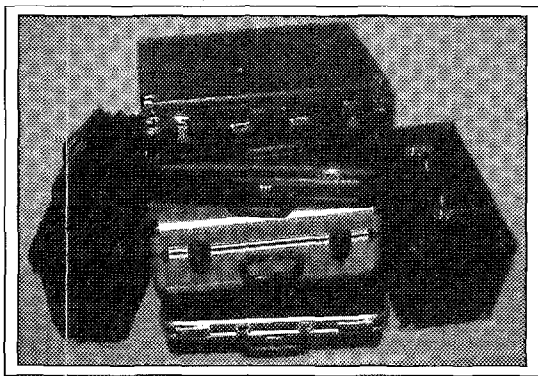
The NAPT 17th annual convention August 9-12, 1926 in Chicago

Tool Cases for Piano Technicians

*By David Severance, RPT
Inland Northwest Chapter*

The subject of this article holds particular interest for me since I'm looking for a tool case to replace the one I've used for the last 10 years. Since these products are available to most of us only through mail order, we really don't get to see what we are buying. What a treat it was for me to actually have all these cases in my shop to try out. Whether you like to carry one large case or several smaller ones, something here should work for you. I prefer to carry everything to the job I'm likely to need. Other technicians use a smaller case with less tools and various other "satellite" cases. As with all tools, which case or cases work best for you depends upon your needs and preferences. Only two of the following lines of cases were actually specifically designed for a piano technician's tools. They are the Genck case, designed and built by Bruce Genck, RPT, and the tool roll and case Emil Fries Piano Hospital makes available to technicians on a very limited basis, which was specifically designed for their students. I hope the following pictures and descriptions can assist you in choosing your next tool case.

I looked at three cases and two tool rolls that are sold by American Piano Supply. The attaché case (Cat # 10058)

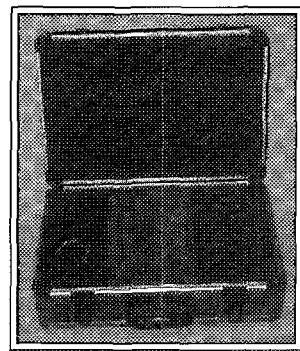


is just that, a reasonably priced attaché case. This is similar to what I carry my paperwork in. Although I didn't receive them for this article, I see in the catalog that two wire-framed fabric pallets are available as an option. In addition to the keyed latches, it also has a combination lock. The aluminum case (Cat. 10048) holds one vinyl-covered pallet that has 17 pockets for tools. This is again a very attractive, lightweight and reasonably priced case. The brown "Pilot's case" (Cat. # 10025) is what is usually called a salesman's catalog case. It's basically a box with overlapping flaps closing over the top. Again, this is a very reasonably priced and well made case. The tool rolls are constructed of canvas and have generous pockets. The stitching and overall construction appear to be durable.

Ken Serviss of Emil Fries Piano Hospital sent a unique case and tool roll that are designed to be used

together. I have seen these cases used by graduates of the Piano Hospital and even built one for myself years ago. I have also used one of their tool rolls. Ken said that Emil Fries copied the case from his instructor, Walter Dry, in the 1920s. Since the case is primarily designed for the visually impaired, it features three removable trays with dividers so that tools or supplies all have a place. Also, the case is carried in the same

position as it sits in when opened, which lessens the chance for tools to spill and mix. The case has a tackle box type opening on one side only and also serves as storage for supplies. A shallow tray can be pulled out after the lid/storage combination is opened. Two larger divided trays sit on top of each other in the bottom of the case. The tool roll fits on top of

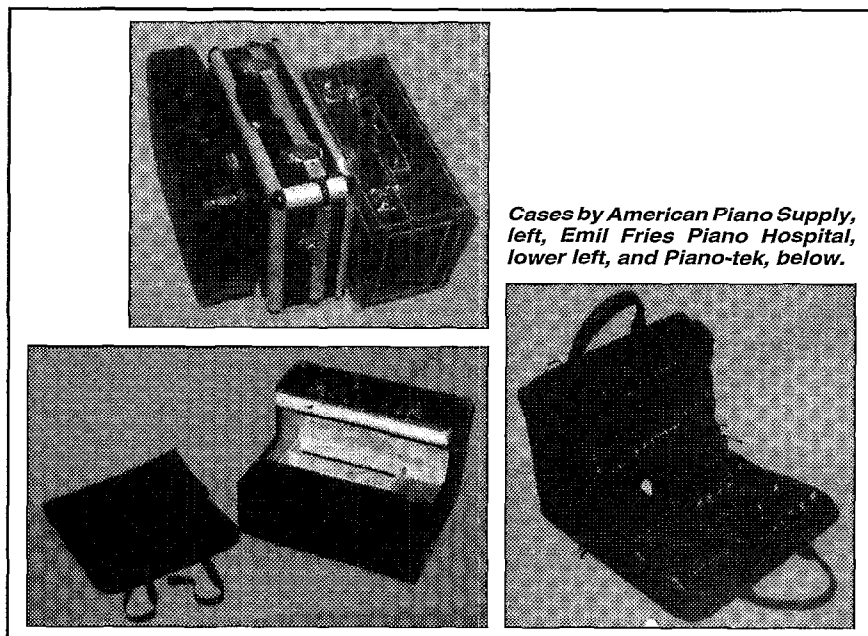


Inventronics

these trays underneath the shallow tray in the top of the box. Ken says he has a difficult time in finding craftsmen and parts to build these cases. The leather tool roll uses a pair of parallel leather straps that can be tightly drawn through slots from one end to accommodate different sizes of tools. Both the case and the roll appear to be very durable.

Inventronics supplies a case that is primarily designed to hold the Accu-Tuner®. Paul Sanderson tells me that this is a camcorder case that has been adapted for this use. The Accu-Tuner® lays control panel up on a foam space in the center of the case. On one side of the case are adjustable foam dividers and on the other side is a perforated block of foam that can be customized by selectively removing small cubes of the foam. The case is aluminum and comes with a shoulder strap.

Pianotek sells a soft-sided black fabric (Cordura®) case that is like a large soft-sided attaché case. It features



Cases by American Piano Supply, left, Emil Fries Piano Hospital, lower left, and Piano-tek, below.

Continued on Next Page

Tool Cases for Piano Technicians

Continued from Previous Page

two zippered openings that expose three tool pallets and one pocket for paper work. The three tool pallets have 75 pockets of various sizes for tools. One side of the case has a large Velcro® closed pocket and the other side has two smaller Velcro® closed pouches. It appears to be very durable

with large zippers and leather-covered Cordura® handles. A shoulder strap is included.

San Francisco Piano Supply sent a small underarm vinyl-covered case that would be similar to a small attaché case with no handle. A zippered opening exposes two tool pallets that have 34 pockets of various sizes. The other case is what Schaff has sold for years as the

"Datamaster" case. This case has two removable pallets with a total of 50 pockets for tools and one large pocket in the lid for paper work. The plastic body is very durable and will hold lots of tools and supplies.

Finally, Schaff sent the complete line of Genck cases to be reviewed for this article. Herb Johnson told me that Schaff has been the exclusive distribu-

Tool Cases for Piano Technicians

Company	Cat #	Dimensions Lgth/Wdth/Dpth	Description	Construction	Comments	Price
American Piano Supply Co. 242 South Parkway Clifton, NJ 07014 Phone (800) 457-4266 Fax (201) 777-0481	10058	17.5" x 13" x 4.5"	Black attache case	ABS Plastic	A, R, U	\$27.00
	10048	18" x 13" x 6"	Square black and silver technician's case	Aluminum	A, E, G, L	\$56.00
	10025	16" x 11" x 7"	Brown "Pilot's case"	Vinyl-covered fiberboard	A, R	\$30.00
	10050	28" x 13" (open)	Brown roll with two rows of pockets & pouch	Fleece-lined canvas		\$10.00
	100455	44" x 10" (open)	Brown roll with one row of pockets & pouch	Fleece-lined canvas		\$12.00
Emil Fries Piano Hospital 2510 E. Evergreen Blvd. Vancouver, WA 98661 Phone (360) 693-1511 Fax (360) 693-6891		11" x 15" x 8" 25" x 12"	Square black technician's case Black tool roll	Vinyl-covered plywood Leather	B, N, P	\$120.00 \$60.00
Inventronics, Inc. 9 Acton Road Chelmsford, MA 01824 Phone (800) 327-8440 Fax (508) 250-9293		18" x 13" x 7"	Silver and black technician's case	Aluminum	A, E, L, O, R	\$110.00
Pianotek Supply Co. 401 W. Marshall Ave. Ferndale, MI 48220 Phone (800) 347-3854 Fax (810) 545-0408	CFE-13	17" x 13" x 7"	Black fabric technician's case	Black cordura	B, C, D, E, K	\$138.95
S. F. Piano Supply Co., Inc. 657 Mission St. # 507 San Francisco, CA 94105 Phone (800) 247-0702 Fax (415) 896-2866	10046	13" x 11" x 3"	Brown soft sided under-arm case	Vinyl-covered fiberboard	B, C, H, Q	\$48.65
	10038	18" x 13" x 6.5"	Black attache style technician's tool case	Molded polyethylene	A, J, M	\$98.77
Schaff Piano Supply Co. 451 Oakwood Rd. Lake Zurich, IL 60046 Phone (800) 747-4266 Fax (708) 438-4615	275	15.5" x 10.5" x 4"	Black attache-style technician's tool case	Vinyl-covered hardwood	A, I, M, S	\$219.00
	276	15" x 16.5" x 6.5"	Black string case	Vinyl-covered hardwood	A, T	\$229.00
	2663	18" x 12.5" x 5"	Black attache-style technician's tool case	Vinyl-covered hardwood	A, I, M, O, S	\$229.00
	2664	15.5" x 11" x 4.5"	Black soft sided technician's tool case	Nylon Cordura	B, C, F, I, M	\$189.00
	2667	18" x 12.5" x 5"	Black attache-style technician's tool case	Vinyl-covered hardwood	A, I, M, S	\$234.00

* Measurement taken across handle side and perpendicular to handle

Comments:

A	Keyed locks
B	Not locking
C	Zippered
D	Velcro closed pouches
E	Shoulder strap included
F	Shoulder strap optional
G	One tool pallet, removeable
H	Two tool pallets
I	Two tool pallets, one removeable

J	Two tool pallets, removeable
K	Three tool pallets
L	Adjustable foam covered dividers
M	Fixed dividers
N	Removeable trays
O	Foam lined space for Accu-Tuner
P	Designed to be used with optional tool roll
Q	No handle
R	No tool pallets
S	Protective cover optional
T	Storage for bass strings and wire
U	Tool pallets optional

tor of these cases for 12 years and that they have sold over 1000 units. These cases are designed and manufactured by Bruce Genck, RPT, specifically for piano technicians. They are black attaché-type cases with two tool pallets, one removable. The bottoms of the cases feature molded dividers. The corners all have brass hardware and the outer edges have reinforced binding. The Model 275 and 2664 are the smallest of the four tool cases. The 2664 is a soft-sided version of the 275. The pallet under the lid has 10 pockets

for tools and the removable pallet has 13 pockets. The molded plastic bottom is divided into 4 compartments. The Model 2663 and 2667 are the largest of the four Genck cases. The 2663 has a molded foam-lined space for the Accu-Tuner® and the removable pallet has a Velcro® attachment to the molded bottom. The pallet under the lid has 12 pockets for tools and the


removable pallet has 13 pockets. The molded plastic bottom is divided into five compartments including the space for the Accu-Tuner®. The Model 2667 is identical, except the removable pallet completely covers the molded space for the Accu-Tuner®. The Model

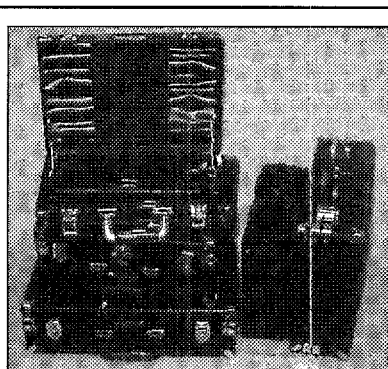
276 is designed primarily to hold 1/3 lb. coils of piano wire and sets of universal bass strings. In addition, there is one compartment for stringing tools.

Renner USA sells three different sizes of tool cases. Although I didn't get to see them because they are currently out of stock, Lloyd Meyer described them to me over the phone. Model 1622 is an attaché type of case with pallets and is available in either vinyl- or leather-covered wood. It sells for \$125. Models 1623 and 1627E are

multi-level tackle box-style cases and are also available in vinyl or leather. They sell for \$170 and \$310, respectively. Lloyd said that Paul Monachino of Mason and Hamlin, whose lectures many of us have attended, uses the Model 1627E and loves it.

Various other companies sell tool cases that can be adapted to fit our needs. These are primarily

suppliers of tools and tool cases to the electronics industry. The companies I am familiar with are: Jensen Tools (800-426-1194), Specialized Products (800-866-5353), and Techni-Tool (800-505-8665). The catalogs are free upon request. 



Cases by Genck/Schaff, top, and San Francisco Piano supply, above.

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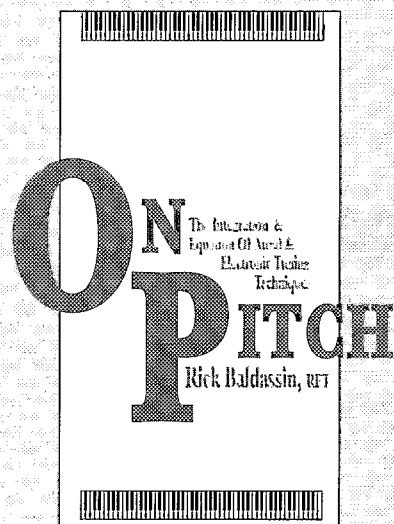
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Grand Action "Pitch Raise"

By Ken Eschete
New Orleans

We all know what to do when we tune a piano that is a 1/2 step flat. A "pitch-raise" followed by a 2nd tuning works a lot better than just tuning over and over again. The same thing is true when regulating a grand action which is wildly out of adjustment, particularly if you have just replaced the hammers, shanks and flanges. Using the standard regulating procedure can be very frustrating. First you turn the let-off button, but the hammer continues to block against the strings; then you try to adjust the repetition spring, but the hammer will not rise when released from the backcheck; then there's the hammer line that changes every time you play the keys.

The principal problem in these situations is the relationship between let-off, drop and backcheck. Normal regulating procedures require that the following

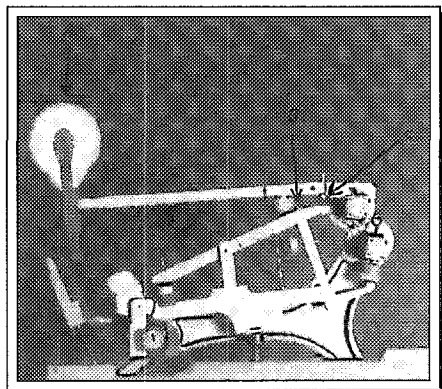


Photo 1 — If the drop screw is set higher than the let-off point (C), the hammer will appear to block against string (A), even after the let-off button has forced the jack to escape from under the knuckle (B).

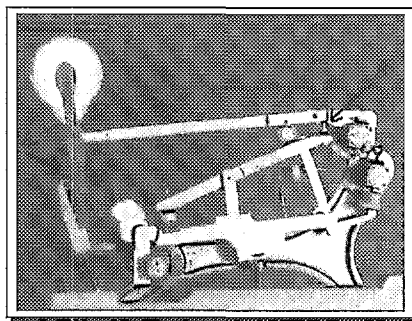


Photo 2 — If the backcheck height (A) is set higher than the drop position (B), the repetition spring adjustment will appear to have no effect.

conditions exist:

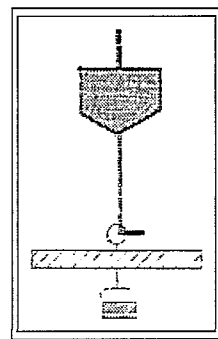
1. The key dip must be deep enough to raise the hammer to the let-off point.
 2. The let-off point must be below the string height.
 3. The drop position must be lower than the let-off point. (Photo 1)
 4. The backcheck height must be lower than the drop position. (Photo 2)
- It doesn't matter if any of these heights are "correct," as long as they are in the proper relationship to each other.


This is a quick method to "pitch-raise" a grand action so that these relationships are established. The work is done on the work bench using a let-off rack.

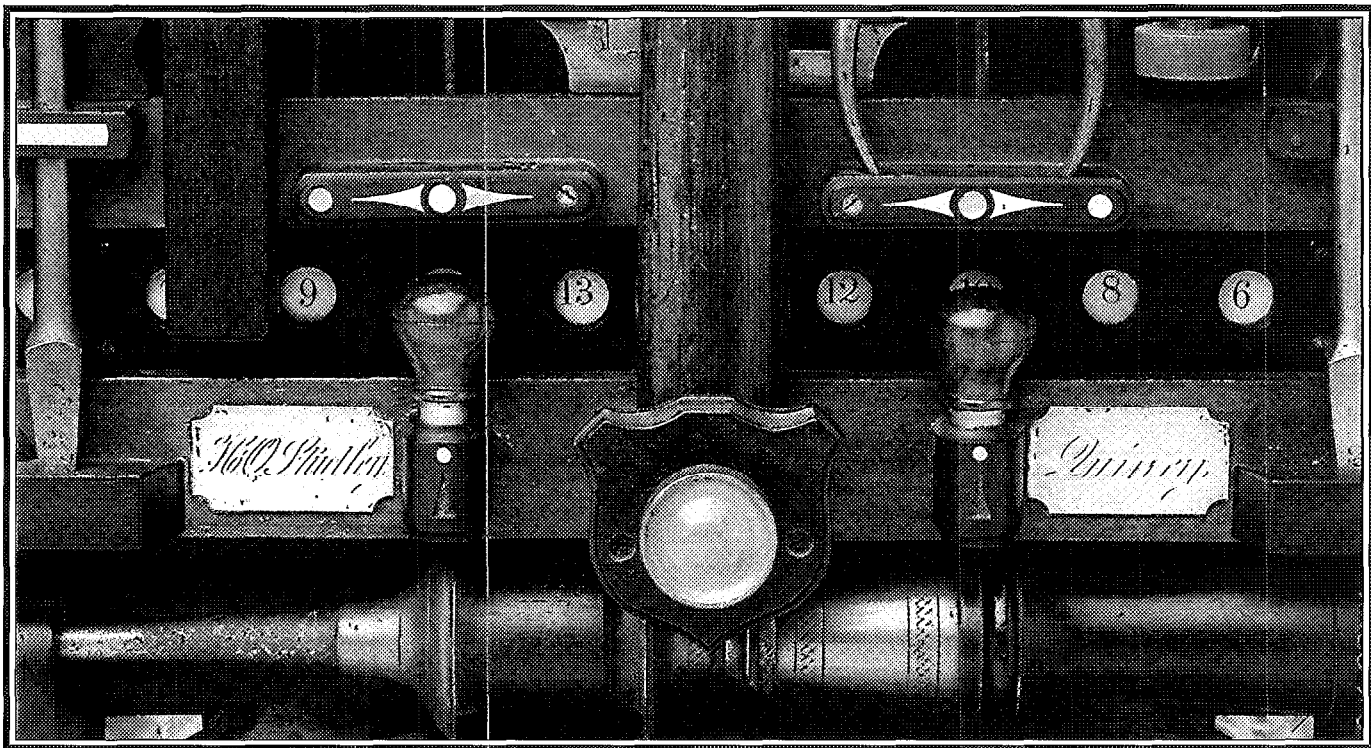
1. Make sure key dip is deep enough to raise the hammers to the string height. If there is insufficient dip, put cardboard shims under the balance rail.
2. Adjust the backchecks so that the hammers check in a lower than normal position. The hammer tail should be contacting the leather at least half way down the backcheck. It doesn't matter if they are too low as long as they check.
3. Adjust the capstan screws to make a rough hammer line. It is not necessary to set a strike-blow distance, but the hammers must not be resting on the hammer rest rail (and a relative line aids in spacing).
4. Roughly space hammers to the backchecks. This will provide a usable spacing and doesn't require putting the action back in the piano.
5. Turn the drop screws all the way down. This will eliminate any possi-

bility that drop position is higher than the let-off position, and will allow the escapement to be seen clearly by watching the hammer.

6. Adjust the let-off to about 1/8". (If the adjustment is wildly off, try using your electric screwdriver equipped with drill chuck.) A short piece of wire bent at a 90-degree angle can be used to catch the hole in the let-off button.



7. Adjust the drop screws so that the drop position is 1/8" below the let-off position.
8. Adjust the repetition springs so that the hammers are lifted firmly to the drop position when released from the backcheck.
9. Adjust the jack under the knuckle so that the distal edge of the jack lines up with the distal edge of the knuckle molding.
10. Adjust the height of the repetition lever so that when the jack is forced to escape by your finger, the hammer gives a firm "wink." Then make sure that the jack barely returns under the knuckle when released. If the repetition lever is left too high, the hammers will not always return to the same height, making the hammer line very unpredictable.
11. **Regulate action.** The eleven steps listed here are arranged in an order that will result in a good regulation.
 1. Fit the key frame to the key bed
 2. Level the keys
 3. Space the hammers to strings, then space the wippens and backchecks to the hammers
 4. Adjust the repetition springs
 5. Position the jack under knuckle
 6. Adjust the height of repetition lever
 7. Adjust the let-off distance
 8. Adjust the drop screws
 9. Set the hammer blow distance and hammer line
 10. Adjust the backchecks. 



An incredible depth of detail is the hallmark of the H.O. Studley tool case on display at the Smithsonian Institution. The maker's name and hometown appear on engraved silver plates below drill index numbers.

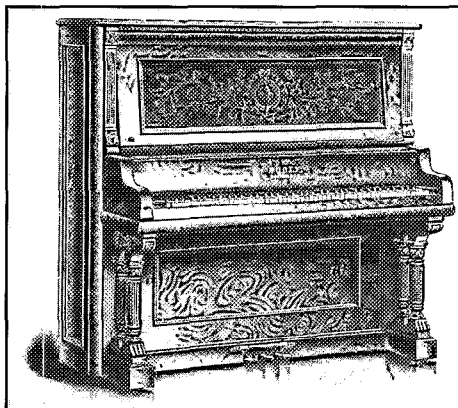
Studley Tool Chest Makes Smithsonian

Research reveals more about the man and his tool chest

By William Sampson

*Reprinted from Fine Woodworking
Photos & Illustration courtesy of
Smithsonian Institution
Photos by Eric Long*

The lasting legacy of most woodworkers usually is in what they produce with their tools. But it is the tools themselves that have brought wider recognition to a turn-of-the-century Massachusetts craftsman named Henry O. Studley. Now the highlight of an on-going display at the Smithsonian Institution's National Museum of American History, Studley's wall-mounted tool chest packs some 300 tools into a space not much bigger than one of those folding carry-on garment bags. But quality is as much the story as quantity: The case and its contents display master workmanship and premium materials, such as mahogany, rosewood, ebony and mother of pearl (see the photo above).



Pianos with fine detail, as shown in this 1900 catalog illustration, were the product of the Poole Piano Co. of Boston, Mass., where Studley worked.

It is those things that make the tool chest reach out of its display case at the Smithsonian and grab passersby, stopping them and holding them rapt and transfixed on its myriad of detail. A photo of the chest, its first public appearance, ran on the back cover of *Fine Woodworking* almost five years ago. Since that time, over 20,000 posters of Studley's tool chest have found their way onto woodshop walls and into homes all over the world.

Despite the fame of the chest, its creator was still an enigma. But research by the Smithsonian is now beginning to shed light on the man who left his mark as "H.O. Studley, Quincy" on engraved silver nameplates in the chest.

Who was H.O. Studley?

A carpenter, Mason, machinist, organ and pianomaker, Studley was born in 1838 in Lowell, Mass. When war broke out between the states in 1861, Studley joined the Massachusetts infantry, listing his occupation as carpenter. He was taken prisoner at Galveston, Texas, in 1863 but was later exchanged to rejoin Union troops. After the war, he returned to Quincy and eventually married. He became a member of the Rural Masonic Lodge; records show he achieved first, second and third degrees in 1871.

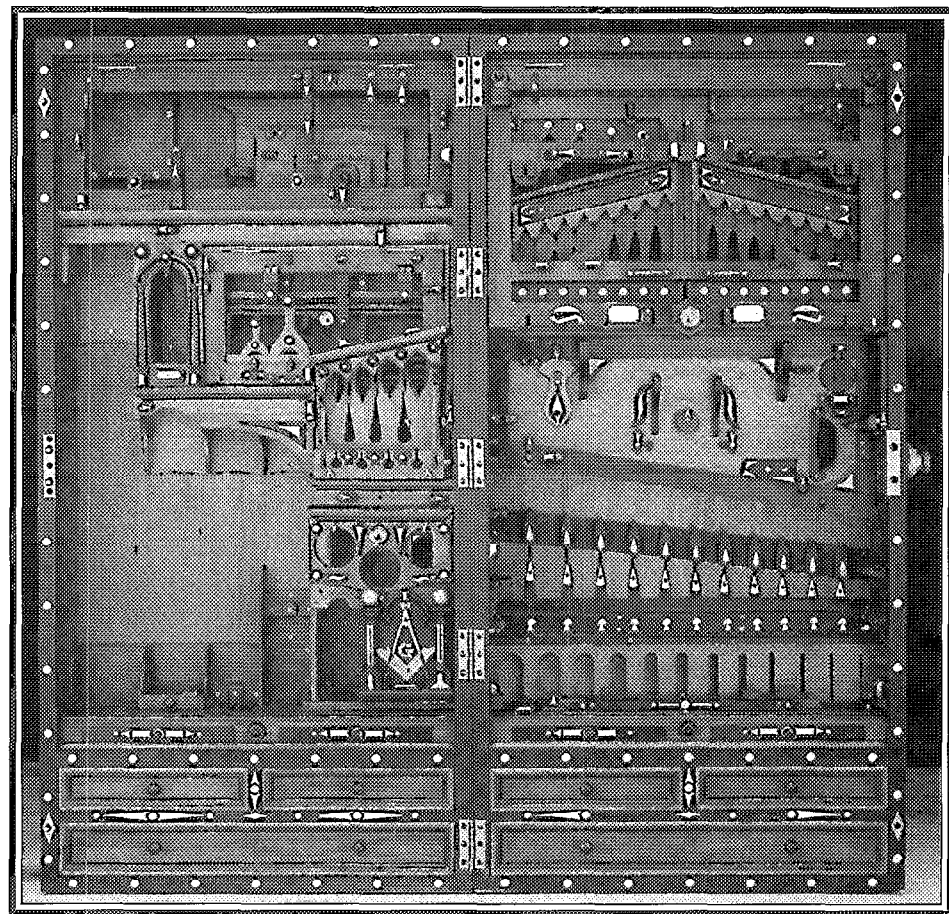
He worked for 25 years for the Smith Organ Co. and then joined the Poole Piano Co. in Boston as the popularity of the piano began to surpass organs, according to Studley's obituary published in 1925 in the *Quincy Patriot-Ledger*. Even that obituary gives testament to the legacy of Studley's tool chest: "One of the most remarkable things of his creation is a tool cabinet, a most ingenious contrivance containing multitudinous number of tools of all sizes and kinds."

It was apparently at Poole where Studley created his tool chest between 1890 and 1920. David Shayt of the Smithsonian, a museum specialist in crafts and trades who has charge of the tool chest, notes that the materials used to construct the case were also once common to pianomaking: ebony, ivory, rosewood, mahogany and mother of pearl. A 1900 Poole catalog from when Studley worked for the firm speaks of highly figured woods and displays a variety of finely detailed upright pianos (see the illustration on the facing page).

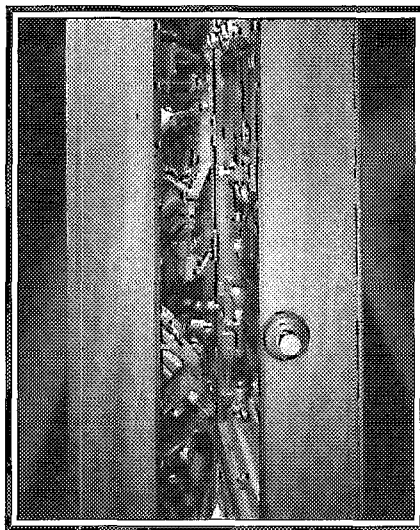
As to the products of H.O. Studley's craft, little can be attributed to the man without question. The pianos and organs he made carried company nameplates. The owner of the tool chest, Peter Hardwick of Maine, has a mantelpiece Studley built, but the tool chest remains as the craftsman's masterpiece.

A special place for every tool

The basic casework for the tool chest is dovetailed mahogany. Measuring 19 1/2 in. wide, 39 in. long and 9 1/2 in. deep, the chest is designed to hang on the wall, opening like a book along its five butt hinges and closing with a dial combination lock. A 1903 issue of *American Machinist* describes patternmakers wall-mounted tool chests that are similar in function to the Studley case. But the mastery of this case is in the ingenuity of the holders for the tools, which are stored up to three layers deep with trays (or tills)



With the tools removed, the intricate woodwork of the Studley tool chest is revealed. Masonic references, such as the square and compass in the lower part of the left half of the case, also stand out. Smithsonian conservators spent 245 hours gently cleaning and making minor repairs to the chest.

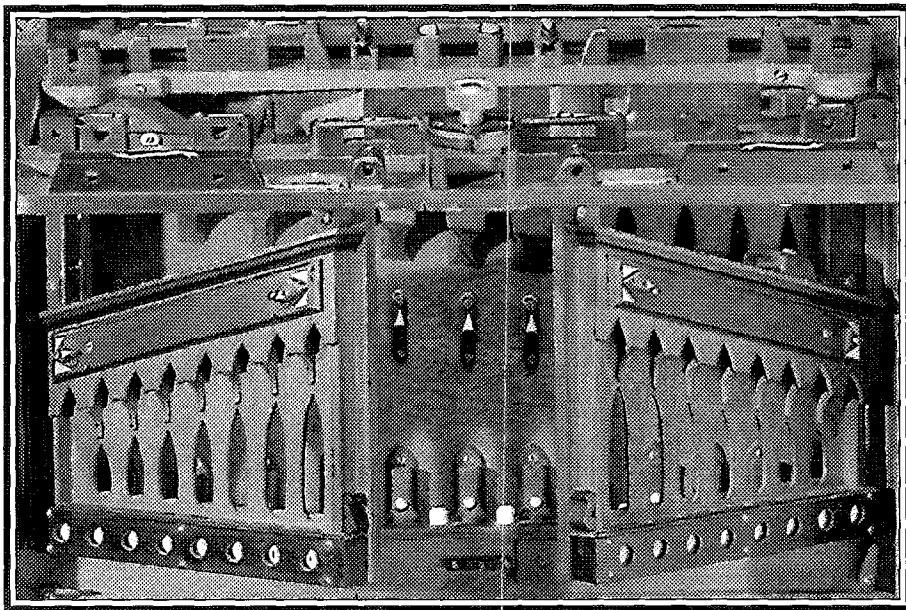


Close tolerances and the precision fit of the tools are apparent as the chest is closed. The Smithsonian's David Shayt suggests part of Studley's inspiration may have come from the way upright pianos pack many parts into a tight space.

and special holding fixtures for each tool, as shown in the photo on p. 27.

Studley's craftsmanly precision can be seen in the tight clearances that allow a gouge to pass within 1/8 in. of a plane handle (see the bottom photo above), and it can also be heard in the soft click tools make as they snap into place. A rosewood handled screwdriver is not only held by exactly sized ebony receptacles for its blade and ferrule, but a small rounded recess provides extra clearance for the side of the handle. That same fitting technique has helped Shayt and

Smithsonian conservators find the proper locations for a number of tools tucked incorrectly into various nooks and crannies of the chest when the museum received it. Shayt noted that a pair of calipers were oddly placed an inch away from three unused ebony holding devices that turned out to fit the tool exactly. Adjustable tools such as marking gauges must be set to certain lengths to fit exactly in the case. Where one marking gauge was installed, Shayt noted evidence of wear, but when adjusted slightly, the gauge rests securely with no unneces-



Going three layers deep in the upper right half of the tool case, the lift-up and swining-door sections provide easy access. The doors that normally hold bits echo a gothic cathedral motif and may have roots in Masonic lore, researchers suggest. This part of the case may also follow a Masonic idea of putting the most complex or precious things in the northeast corner of the lodge.

sary contact with the case.

There is no wasted space in this chest. A hollow cavity above a set of chisels is there only to allow room to raise the tools out of their pockets. Ebony keepers, inlaid with mother of pearl, swing into place to secure many of the tools. Hidden swinging butterfly catches keep the drawers from falling out of the case. As Shayt reached into a drawer to trip one of the catches, he commented about the maker, "He must have had small fingers, that's for sure." Whole sections of the case swing or lift out to reveal more layers and tools behind them (see the photo above). Some of those moving sections have ebony braces to prop them open. In the top portion of the right half of the chest, one panel lifts up to allow two panels of drill bits to open like temple doors, revealing yet another layer. What seem like decorated columns or long cylinders can be removed and opened like canisters to reveal small lengths of metal stock.

The temple motif of that section falls in line with the many Masonic symbols that fill the chest. The most obvious is the square and compass Masonic emblem formed from real tools in the left half of the case (see the top photo on p. 26), but throughout the case there are more symbols significant to Masons. The numbers seven, five, three and eleven repeat throughout the chest. Even the way the chest opens and closes, Shayt believes, reflects the Bible, "opening to reveal truth and beauty." A section of the case built to hold a Stanley #1 plane may be fashioned after the archway over the throne of Solomon, Shayt speculates.

The tools themselves

The hundreds of individual tools in the chest include both manufactured items and things obviously made by Studley himself (see the list on the next page). They range from large bench planes to tiny screwdrivers and taps. Planes by Stanley and measuring tools by L.S. Starrett make up much of the chest, but the maker's own handiwork can be seen in such things as rosewood, brass and ebony marking gauges. A whetstone rides in an ebony box with mother-of-pearl inlay and a silver plate engraved "H.O. Studley." A couple of tools feature handles crafted from horn. "He was into bits, no question: twist drill bits, center, auger, spade," said Shayt, as he displayed not only the ordered racks of bits in the case but the contents of several drawers filled with bits.

Those familiar with pianomaking have helped Shayt identify a number of the key-action regulators and other specialty tools, but mysteries remain. There are four brass capstan tools. Each has a center point that can be lowered by turning an arm, then another part of the assembly has internal pawls to ratchet. Shayt speculates the devices were for tensioning piano wire.

Long road to Smithsonian

Studley's obituary reports that his wife died nine years before he did and mentions no surviving children. In fact, the only direct kin listed in the obituary was his brother, Charles Studley, who was then 76 and ailing. The chest apparently was bequeathed to an attorney who was the grandfather of the current owner, Peter Hardwick. The tool chest was handed down in the family and belonged

to Hardwick's brother until Peter traded a 1934 Ford for it. Not a woodworker, it had been Hardwick's original intention to sell the chest, but as more was found out about its historical importance, he loaned it to the Smithsonian for research, conservation and display.

Once at the Museum, a conservation team of Clinton Neuguth, B.A. Richwine, David Todd and Nikki Horton took the case in hand. They described the case as being in overall good condition with the exception of a few cracks and broken pieces of trim and inlay. Heavy dust covered the chest, so all the tools were removed for cleaning. The conservation report lists more than 50 steps taken to make minor repairs to the case, ranging from reassembling a saw handle broken into four pieces to turning a new ebony drawer pull knob. The work took 245 hours.

Today, the results of all that work is enshrined in a glass display case as part of a long-term exhibit that opened in 1991 on the first floor of the Smithsonian's National Museum of American History in Washington, D.C. The Studley tool chest shares space with other tool chests from the 19th- and 20th-century trades. Stretching the definition of a tool chest, the display includes a seamstress' needle box, a urologist's surgical kit and even a contemporary shoe-shine box. Chests of the machinist and cabinetmaker contrast with those of the farrier and child woodworker. The chests are all filled with the tools they were built to carry, emphasizing the utilitarian importance of each box. Common to virtually all of the tool cases featured in the exhibit is wooden construction and detailing, but none compares to the masterpiece crafted by H.O. Studley.

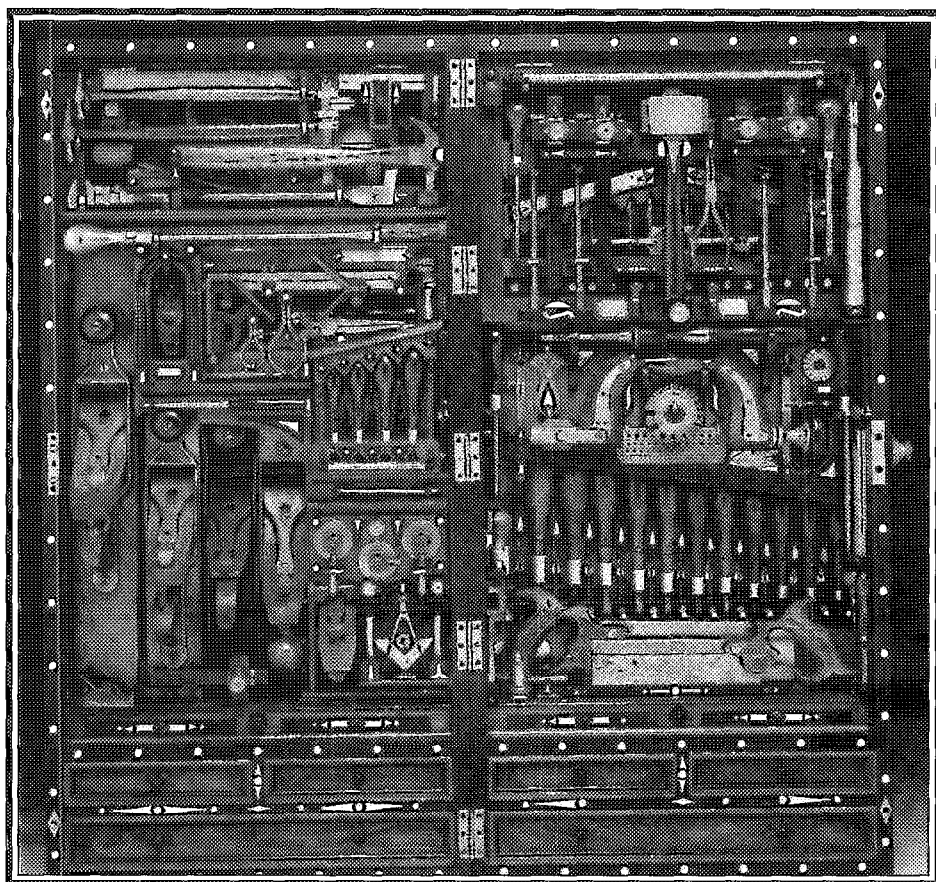
While the Smithsonian's policy proscribes them from declaring a value on anything they exhibit, research suggests the Studley chest's historic value goes well beyond the thousands of dollars its tools might fetch at an auction. There are also plans to do fully dimensioned drawings of the tool chest at some future date. □

William Sampson is a former executive editor of Fine Woodworking.


Chest holds hundreds of tools

The H.O. Studley chest contains nearly 300 tools, many of them specialty tools and tools Studley apparently made himself. Here is a partial list compiled from an appraisal inventory, beginning in the top left corner:

1. Small machinist's vise
2. Flat-nose pliers.
3. Small rosewood-handled chisel.
4. Small flat-nose pliers.
5. L.S. Starrett #20 machinist's square, 2 in.
6. L.S. Starrett ruled square, 2 in.
7. Rosewood and steel try square, 4 1/4 in.
8. Rosewood and steel try square, 7 in.
9. Rosewood and steel try square, 10 in.
10. L.S. Starrett #4 steel square.
11. L.S. Starrett inside/outside calipers, 3 in.
12. L.S. Starrett #490 protractor with rule, 9 in.
13. Small clockmaker's hammer.
14. Large clockmaker's hammer.
15. D. Maydole claw hammer, 4 oz.
16. Coes adjustable wrench, 4 3/4 in.
17. Wm. A. Clark adjustable auger bit.
18. Horn-handled screw driver.
19. Spokeshave.
20. Set of 10 center bits.
21. Inside calipers.
22. Gunsmith's screwdriver.
23. Stanley #1 bench plane.
24. L.S. Starrett #14 adjustable square, 2 1/2 in.
25. Adjustable wrench, 3 in.
26. L.S. Starrett #300 steel rule, 3 in.
27. L.S. Starrett combination square.
28. Stubs outside wing calipers, 2 1/2 in.
29. Stubs outside wing calipers, 4 in.
30. Waltham jeweler's screwdriver.
31. Stanley #30 bench plane.
32. Stanley #27 bench plane.
33. Stanley #6 bench plane.
34. Stanley #9 cabinetmaker's block plane.
35. Rosewood-handled burnisher.
36. Rosewood and brass adjustable marking gauge.
37. Birmingham Plane Co. thumb plane.
38. L.S. Starrett #203 micrometer.
39. Set of 4 nail awls with rosewood handles.
40. Stanley #4 bench plane.
41. Stanley #9 1/4 block plane.
42. Whetstone in ebony box.
43. Set of 3 machinist-made center punches.
44. Tap and die set.
45. Set of 5 quill bits.
46. Four assorted bits.
47. Set of 4 piano wire tensioning tools.
48. Embossing tool with ebony handle.



Some 300 ingeniously packaged tools fill the Studley tool chest, yet most can be removed without removing any other tools.

49. Set of 4 rosewood-handled piano action tools (in drawer).
50. Chisel with rosewood handle, 7/16 in.
51. Two tools similar to center punches.
52. Four Forstner bits.
53. Ebony and brass slitting gauge.
54. Set of 4 ebony and brass marking gauges.
55. Adjustable mortise gauge of ebony and ivory.
56. Pair of rosewood-handled stub screwdrivers, 1 1/2 in.
57. Needle-nose pliers.
58. Wood-stuffed, brass-bound mallet.
59. Set of 11 Russell Jennings bits (2 missing).
60. Set of 10 push drill bits (2 missing).
61. Brass-bound rosewood bevel, 10 in.
62. Brass-bound rosewood bevel, 6 in.
63. Pair of nail nippers.
64. Set of bow-drill bits (inside drill stock handle).
65. Ebony and brass bow drill (bow missing).
66. Plated ebony and rosewood brace.
67. Inside/outside graduated calipers, 2 in.
68. Screwdriver with rosewood handle, 8 in.
69. J. Stevens locking dividers, 4 in.
70. J. Stevens locking dividers, 6 in.
71. Standard music wire gauge.
72. English standard wire gauge.
73. Twist drill and steel wire gauge.
74. L.S. Starrett #425 graduated calipers, 3 in.
75. Wide jaw pliers.
76. L.S. Starrett #287 depth gauge.
77. Rosewood-handled screwdriver.
78. Four-fold ivory rule, 2 ft.
79. Ebony and steel archimedian push screwdriver.
80. Set of 12 Buck Brothers cabinet skew chisels.
81. Set of 11 sleeved bow-drill bits.
82. Cabinet screwdriver with horn handle, 5 in.
83. Adapter for fitting bow-drill bits to standard bit brace.
84. Brass and steel thumb scriber.
85. Small graver with rosewood handle.
86. Small screwdriver with turned horn handle.
87. Back saw with rosewood handle, 8 in.
88. Back saw with rosewood handle, 10 in.
89. Brass frame back saw with ebony handle.
90. L.S. Starrett #300 steel rule, 6 in.
91. Assorted bits and bit holders (in drawers).
92. Seven assorted center bits (in drawer).
93. Stratton Brothers brass-bound, rosewood 12-in. spirit level.
94. Rosewood-handled screwdriver.
95. Rosewood-handled wire-lifting tool.
96. Pair of rosewood-handled felt knives. 

Behold The Upright

The Finish Line

By Don Valley, RPT, MM
Western Carolinas Chapter

This last article in the "Behold The Upright" series deals with the process of preparing the piano for finishing and applying the finish itself. Like the previous articles in the series, this one will not attempt to lay out all the possible variations and methods, but will present a method which works well for me on the typical upright.

In this discourse on refinishing the upright piano, the end result is for that finish to be restored to the same quality as the original finish. In the years since most of these pianos were built, many types of finishes have been explored—the more common being the open-grain lacquer and the oil-rubbed finish. Such crazes as vibrant colors, graining and pickling, and antiquing have come and gone too. And, presently, the high-gloss, mirror-like finish has come into vogue. Because of the character of the upright, the finishing process explained here will present basic, time-tested processes that will achieve a finish duplicating the appearance of the original.

Yesterday's Finishes

Virtually all pianos for more than one hundred fifty years have been veneered. Solid plank construction was proven to be less stable than the edge-glued close-grained core woods sawn and alternated in their direction prior to gluing. This, properly seasoned, provides a base that is solid and stable. Warping is very unusual with this type of construction. Then, with the application of veneer, the appearance approximates solid pieces. Yes, the uprights we are dealing with are "solid wood" as opposed to a composition board; however, they are not solid surface wood. There may be a couple of pieces, such as the key slip, of solid surface wood, but these will be small and are pieces not easily veneered or pieces less costly to provide in solid wood than by the veneering process. When you get a phone call and the caller says, "I have a wonderful antique upright piano made sometime in the 20s and it is solid cherry," this is not the time to create an argument and lose a job. Wait until the proper time — such as after the piano is finished and you have been paid — to educate the owner on this matter.

Originally, oil-based varnish was used to finish this veneer. It was built up in several coats with sanding in between. The final coat was not only fine-sanded, but it was also hand-rubbed to a beautiful patina. Today we refer to this finish as a satin-rubbed finish. The present-day condition of this varnish is usually a very dark, almost black, "alligatored" look. It is very ugly and in no way indicates anything about the results after refinishing. The passage of time has caused the oils from the varnish to be drawn into the wood, leaving the solid resin. As the oils have left, the solids have separated, causing the "crackled" appearance. Much of the darkening has been caused by environmental conditions such as smoke from wood-burning furnaces, stoves, and the like. Let us not forget the cigarette, cigar, and pipe smoke as well as later years when heating moved to oil stoves. Some of the worst I have found have been from city areas where coal burning was prevalent, not only in the cooking stove and the coal heater, but the locomotives and factories. As I mentioned in one of the early articles in discussing cleaning, this "stuff" will run down the vertical surfaces like thin molasses. So much for understanding what it is. Now let's proceed to remove it and replace it with a new finish. We will strip the finish off using a chemical process.

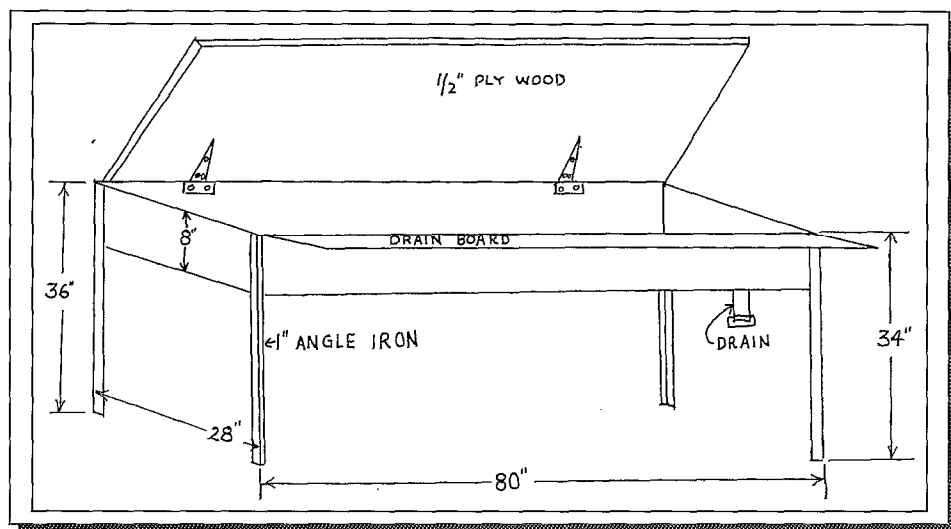
Items Needed:

- heavy-bodied stripper.
- water-thin stripper.
- lacquer thinner.
- chemical resistant gloves.
- 3" and 1" scraper blades.
- paint brushes: 3", 2".
- old toothbrushes.
- 4/0 steel wool.
- old newspapers.
- cans: 3# and 1# coffee cans are great.
- eye protection.
- grain filler.
- lacquer-compatible stains: cherry, mahogany, walnut.
- lacquer sanding sealer.
- clear lacquer: water-white or satin. (I prefer water-white.)
- spray system.
- masking tape.
- apron.
- mask designed for protection from organic vapors.

Warning! The strippers burn the skin. Also, they are highly explosive. Some people may also be sensitive to the other chemicals. Work in adequate ventilation. Use chemical-resistant gloves and apron. Protect your lungs by always wearing the proper mask. This will keep you ready to do piano #101 after #100 is finished! Do not take chances — you are not immortal.

Procedure for Stripping

First, the piano should be taken apart as completely as possible. The keys and action should be out. All hardware, buttons, felt strips and the like must be removed. The bottom board is off and, thus, the pedals too. I prefer to lay the piano on a tilter. This way I can remove the pedal strut. I can also remove the leg braces. The object here is to strip as much of the piano as possible in a stripping tank. A simple tank can be made for you by a sheet metal company and it will not cost you a great deal but, oh, what a convenience! (See illustration) This tank was made according to my specifications and will easily accommodate any piano part for any upright or grand except for the large grand lid. The only part of the piano you must strip by hand is the case. Make yourself familiar with precautions on all of the chemicals.



Sheet-metal stripping tank.

Stripping the Case

Step 1: With newspaper and masking tape, mask off any part of the piano you do not want the chemical to drip on.

Step 2: Lay plenty of old newspaper on the floor around the perimeter of the piano to catch run-off.

Step 3: With your apron, gloves, and eye protection on, put about a quart of heavy-bodied stripper in one of your cans. With your 3" brush, spread it or "daub" it on the old finish.

Important Note!: When you "spread" the stripper on, move the brush in one direction only! **Do not** brush back over it. The reason for this is that the chemical has a wax element that instantly forms a

covering on top to prevent evaporation. By brushing back over this you remove this protective coating and defeat your purpose. Because, you see, once the liquid is in place, you must allow it to set and **do its work!** Be generous with your liquid or you will have to do the job two or three times! Apply the stripper to the entire case. The reason for the heavy-bodied is that it clings well to vertical surfaces. You will see some tendency for runs. Let it happen. I like to catch the base of the runs with my brush and daub it back up higher.

Step 4: Once you have covered the entire piano, go back to where you started and check with your 3" blade. Scrape a little off. If you see or feel some of the finish still adhering, reapply to that spot and wait a few minutes. Check to see if you have left some areas too thin. Apply more stripper to those areas. Once I have checked in another few minutes and find the finish needs more

remaining debris. The toothbrush will get into creases, corners, and ornate carvings, etc. Now you can see how beautiful it is under all that old finish.

Step 6: Into a third can, pour some lacquer thinner. Take another cloth and wash all the surface you have stripped. The reason for this last wash is to neutralize what you have been working with. Another factor is to be certain you rid the surface of any wax residue from the stripping agent. You are now finished with stripping the case. If you do not have a dipping tank, you will duplicate these steps with each piece until all is stripped.

Using the Tank — The Water-thin Stripper

The tank will hold 20 gallons. I usually work with ten. This is quite different from the typical tank used in large refinishing shops that takes four hundred gallons. Having yourself protected with the same items, place a large piece, or several smaller pieces in the tank. See that it is well covered with liquid. With your hard brush (scrub brush), and/or maybe a paint brush, flow the finish over the surface. It will begin to loosen very quickly. Brush it gently until the finish is off — usually about five minutes. Hardly any work. Pull it out and rest it on the drain board. With a cloth, remove the excess liquid. Have some lacquer thinner in a can. With another cloth, wash this stripped piece with the thinner and dry it off. It is all right to allow the thinner to drain into the tank. Set the piece aside to dry. Perform this detail for each piece until all are done.

Preparing for the Finish

Step 1: Sand lightly with 220 or finer grit abrasive paper. A "palm sander" is all right for the large flat surfaces. Do not use a belt sander or disc sander because of the deep cutting and grooving you will get.

Step 2: Fill the "grain valleys" with filler. This is not generally available in your local supply companies. It can be gotten through Star, Mohawk, and Webb Phillips. The purpose is to achieve a smooth surface, filling the "valleys" level with the "hills." Make certain it is mixed to a creamy consistency. Apply it with a brush or cloth. Work with one piece or a section at a time. When the filler loses its sheen, you must rub out the excess. Use burlap or other coarse-weave material. Wad it up into a ball in your fist.

Work in a circular motion until the excess is worked up into the material and the surface of the wood is smooth. Excess — even a little — will appear as dry mud under your finish coat. Allow it to dry several hours.

Step 3: You will notice, no doubt, some small pieces, such as leg braces, molded edges, etc., to be different in color than the rest. It is usually because these are different wood than the veneered surfaces of the piano. If you finish these like this, your product will appear very amateurish. This is one of the main areas where your stain comes in. If your veneers have a “reddish” tone, use the cherry or mahogany stains. It is better to dilute them 1:1 at first and apply several coats than to use full strength and bite too deep. If your veneers are “brown,” use the walnut stain. Experiment with color. Mix and combine to come up with a satisfactory color. Baby-food jars are excellent for this. It is better to have an edge a little darker than the surface than lighter. Light reflection will draw the eye to the lighter strips, pieces, or lines and make it seem not dark enough.

Note: Always be sure your solutions are well mixed before each use. The solids tend to settle to the bottom quickly.

Applying and Rubbing the Finish

Step 1: Spray a coat of sanding sealer over the body and each piece. It should be diluted with lacquer thinner 3:1. An ounce of fish-eye killer in each quart will help to prevent this frustrating phenomenon. This dries quickly. You can start light sanding on the first piece as soon as you have coated them all. If you have filled properly, this application of sealer and the fine sanding will produce a nice glass-smooth finish on which to lay your final coats. Be careful as you sand, not to much pressure at the corners or you will come up with “white corners.” If this happens, use stain pens — like magic markers — to stain in those “white” edges prior to more finish coats.

Step 2: Having diluted your lacquer with thinner 2:1 and adding a little fish-eye killer, spray all pieces for your first finish coat. Allow this to dry before fine sanding with 220 or finer grit. This is to remove any unevenness prior to your final finish coat. Two finish coats is sufficient, providing your foundation was prepared properly. If your filling process did not produce a smooth foundation, you may need to apply more finish coats and sanding to make up for rough preparation. This is a lot more work.

Step 3: After applying your final finish coat and allowing it to dry, use your 4/0 steel wool and rub it vigorously, always in the direction of the grain. This will remove the glare and bring out the richness of the grain. I like to follow this up with a rub of steel-wool wax, using 4/0 steel wool here, too. Make sure to buff it well following this step. Steel-wool wax is available from your large piano supply houses. A quart lasts a long time because a little goes a long way.

I trust this series on upright piano rebuilding has been practical for you and that you will not be intimidated by these pianos and procedures. I have enjoyed the comments from many readers up to now and wish you added pleasure as you increase your business by accepting work now that you may have been turning away before. Go For It!

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Tales of William Braid White

By David Ireland

I have been a piano technician in Mansfield, Ohio for 25 years, and I recently joined PTG as a member of the Cleveland Chapter. My dad was a technician and he raised me in the business. Dad learned his craft from William Braid White in Chicago in the 1940s. Recently, I introduced myself to the "pianotech" e-mail list and included the above information. Someone requested that I pass along any stories dad may have told me about Dr. White. Below is my response as posted to the list. Someone suggested that it may be of interest to you. You know how stories go — they take on the emphasis of the teller. Nevertheless, I believe them to be essentially accurate.

I do have a few tales of William Braid White. My dad described him as a very proper Victorian gentleman. He used the English language with precision and expected others to do the same — he detested slang. Apparently he spoke in the same stilted style with which he wrote. Dr. White attended some function where a student had brought a date. The young lady described the student as her "guy." Dr. White cringed and explained that a "guy" was a cable which gave support to a telephone pole.

Although Dr. White was not mean or nasty, he was severe — exacting and demanding. When my dad was in his 70s, he told me that in difficult tuning situations, he could always feel the presence of Dr. White looking over his shoulder to see if he was taking some expedient or shortcut. To this day, I have my dad and Dr. White looking over mine!

Students at Dr. White's school

"Although Dr. White was not mean or nasty, he was severe — exacting and demanding."

"...not only did he stop the appropriate wheel dead every time, but he often did it with a single flip of the wrist."

The Tuner's Life

learned to tune unisons first. There were a number of upright backs — no keyboards or actions — at the back of the room. Students learned to tune unisons by picking the strings. This is actually a pretty good method. The beats are clearer and you get some appreciation of the fact that plucking the string at different places produces different sounds.

Before students could tune octaves, they had to learn all of the acoustical theory about simultaneous propagation of waves and interference patterns. Dr. White knew the field of acoustics as it existed then. He taught from Helmholtz's *Sensations of Tone*. I still have Dad's copy.

At this point they could use instruments with keyboards and actions. Dr. White gave classroom demonstrations. He had a Conn Chromatic Stroboscope with the 13 (as I recall) spinning disks. When he taught temperament, which he called "laying the bearings," he would set up the strobe where the class could see it. He would then turn his back on it and set a temperament. Dad said that not only did he stop the appropriate wheel dead every time, but he often did it with a single flip of the wrist. Dad said he could drop-in unisons like a machine. This was disquieting to students who would saw away on the strings for

an hour to tune an octave's worth of unisons, but it gave them hope that the seemingly impossible task was do-able with enough practice.

This school used what we would today call the mastery approach. Students did not have to be fast, not at first, but they needed to be accurate. No one was permitted to sit while tuning an upright piano — "lazy and sloppy." Dr. White recommended standing while tuning grands, though he didn't insist on it. I have found that when I am having difficulty hearing something while tuning a grand, standing helps. It also helps me with the low bass.

My dad was an accomplished musician and Dr. White knew it. Dad told me about playing chamber music at Dr. White's home. Musicians from the University of Chicago would join him. He didn't play with these groups other than control his reproducing piano. The instrument was of his own design. It had mechanisms all of the way down to the floor. There were musical selections where it would be impossible to find a pianist who could join them. Dad said that some of the music had torturous piano parts (my dad was a fine pianist and able to judge this, but he played violin in these groups. He was Concertmaster of the Mansfield Symphony for decades). Dr. White's piano allowed the string

Continued on Next Page

"Dad described some kind of a board with a grid on it that Dr. White used to punch his piano rolls, one hole at a time, from the musical score."

BRM a Must Read

By Bob Russell, RPT
Marketing Committee

I consider the Business Resource Manual a "must read" book for the professional piano technician. The manual is loaded with information to help you improve the quality and quantity of your business. The manual is available from the Home Office for \$20. Here is a sampling of the valuable information contained in the manual.

Success Stories from PTG Members

Charles Gibson of Caledonia, Mich., has drummed up new business by speaking about piano maintenance to teacher groups and to parents/students at teacher forums and recitals. At these events he has set up a display of PTG literature near the door, with a "Please Take One" sign. Charles also buys inexpensive pens that are imprinted with his name and phone number to give to clients when they sign the invoice. He realizes that pens end up disappearing into drawers and purses, but they also reappear some day and serve as reminders of his friendly service.

Charles never misses an opportunity to establish a good rapport with his clients. He sends them thank-you cards that genuinely convey that he appreciates their business. This has been terrific for generating word-of-mouth referrals.

The local **Madison, Wisconsin PTG Chapter** has been reaching out to children through a local museum. Technicians have given the kids guided tours through the piano, disassembling it and exploring the many curious features. These PTG members know that studies show that if a child has not developed interest in music and the arts before the sixth

grade, it is unlikely that he or she will ever nurture a love for the fine arts.

From the very first day **Tom Sterner** of Wilmington, Del., purchased an assortment of PTG brochures, TBs and book-marks, they paid for themselves. He was tuning a three-year-old Steinway M. The customer was a good player and very interested in keeping the piano in good condition. He asked Tom if it needed voicing or regulation, and just what's involved. Equipped with his TBs and brochures, Tom gave the client plenty of information to read while he completed the tuning. The client was very impressed with the brochures and detailed explanations. A few minutes later, the customer said, "I have to have it done, and how soon can you do it." That same day, Tom was tuning a regular customer's high-quality grand, and the client said that he thought the piano might need voicing. Once again, Tom was equipped with the easy-to-read materials, which convinced the customer to proceed with the work.

Ruth Brown of Hatboro, Penn., always sends information to new clients prior to the appointment. She likes sending the NPF "The Piano and Its Proper Care" brochures and a Damp-Chaser flier. Not only does she start the education process ahead of time, customers know right away that they are dealing with a professional who is serious about proper piano care.

Excerpts from 88 "Keys" to Improving Your Business

1. Smile! That's probably the easiest thing that you can do to increase your business. You'll put people at ease, meet

Continued on Next Page

Tales of William Braid White

Continued from Previous Page

players to play music that they otherwise would not have had the opportunity to play for lack of a pianist. It allowed Dr. White to test his mechanisms under playing conditions. Dad described some kind of a board with a grid on it that Dr. White used to punch his piano rolls, one hole at a time, from the musical score.

Dr. White had a method of tuning two pianos for a concert.
Step 1 — Tune one piano correctly.
Step 2 — Match Middle C on the second piano to the first piano.
Step 3 — Tune the second piano correctly.
Step 4 — Identify and resolve any

obvious problems.

Oddly enough, this method has always worked well for me. My dad had a variation on it. There was an annual recital held at a local school auditorium. The school had a quite decent Baldwin grand and so did the teacher. Dad would tune the teacher's piano in her home. Then he would tune the school piano. After the piano was moved from the home to the school, he would do Step 4 — identify and resolve any obvious problems. It rarely took more than 20 minutes.

I owe Dr. White a tremendous debt. He was a powerful influence on my father, who was a powerful influence on me. Once every few years I re-read *Piano Tuning and Allied Arts*. I just re-read it this year. Although I enjoy

the very fine books that have been published in recent years, I keep returning to that book. When we technicians disagree about something or take opposite approaches, the acid test I use to guide me is, "Which opinion is consistent with my experience?" and, "What did Dr. White say about it?" My other hero is Dr. W. Edwards Deming, who said that many of our problems stem not from what we don't know, but from what we know that is not so! From time to time a consensus forms about some problem, based on something we know that is not so. Dr. White's work can take us back to a time before we knew some of the things that are not so.

Business Tips

BRM a Must Read

Continued from Previous Page

new people and make current clients want to refer you to their friends.

2. Think about what differentiates your business from all competitors. Are you an RPT? Do you have special training? Do you specialize in restoring older pianos? Let your customer know why you are different and why you are better than your competitors.
3. Provide quality work. High quality work leads to repeat and referral sales. Remember that marketing will bring in a customer once, but quality of service will bring them back again.
4. Incorporate the PTG logo in all of your business paperwork. Visually stimulated with a logo, people are more apt to remember you as well as respond to your marketing.
5. Come up with a theme for your business. This is a set of words that summarizes your identity, benefits, or uniqueness. Yours could read: "Joe Smith, Expert Craftsman." Once you have a theme, use it on business cards, flyers, letters and invoices.
6. Make it easy for customers to reach you. Put a pleasant message on your answering machine and return calls promptly.
7. Compile a list of all the piano dealers in the area. Provide them with an assortment of PTG brochures and your business cards.
8. Constantly add to and update your mailing list. To help increase the list consider having a contest with a local piano store giving away a year's worth of free piano tunings. To enter the contest, people must write their names and addresses in order to enter. Add all the names to your master mailing list.
9. Don't forget to send out reminder notices to your current clients. Perhaps include brochures or a newsletter.
10. In order to be a successful marketer, you must remember that marketing is not an event. It is an on-going process.
11. Offer current customers a discount on future tunings for every referral they give you.
12. Send birthday cards, holiday cards, or anniversary cards to your clients. If you don't know their birthday send a "Happy Beethoven's Birthday" card on December 16.
13. Do you have a business plan with specific goals for yourself and for your business? If you don't know where you are going, you'll never know if you get there! Planing the direction of your business is essential to success.
14. Do the local piano moving companies know who you are? This is another excellent source for referrals. Include them in your mailings and make personal contact.
15. Keep your price competitive, while still allowing yourself a fair profit. When setting a price for your services, consider the time you will spend, the competition's price and who your customers are.
16. Join clubs. Many people secure all the business they need simply by joining social clubs, country clubs, service clubs, professional clubs, health clubs or trade associations.
17. When in a dilemma about how to dress, be formal rather than informal. A well groomed, clean appearance inspires confidence and makes your customers want to refer you to their friends.
18. Update your business cards to include the appropriate member version of the PTG logo. Business cards are not merely reminders, but powerful selling tools and marketing vehicles that set you apart from your competition.
19. Quality stationery is essential. Update your stationery to include your member version of the PTG logo and top-rate stock to convey a message that says you stand for higher quality and have higher standards than most service providers.
20. On your invoices, include a big and bold PTG logo, to implant the consummated sale in the mind of the customer. Include a bookmark or anything that makes your relationship more personal.
21. Offer gift certificates to your customers for the holidays. They can buy a friend a piano tuning. This is a unique and thoughtful gift for people who have everything — including a piano!

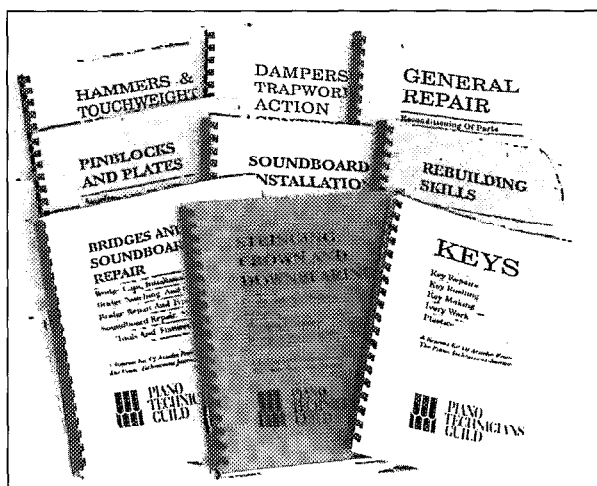
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A Look Back at Dearborn

Opening Ceremony



PTG Secretary-Treasurer Jim Coleman, above, calls the roll of the states at Opening Assembly, and Bill Bremmer, right, responds for the state of Wisconsin.



PTG Pres. Leon Spier, below left, meets with Kawai Executive Vice President Jun Ando, following the Opening Ceremony.



PTGF Pres. Roger Weissensteiner, above, and SPELLS Coordinator Jim Gass, right, deliver addresses at the Opening Assembly.



RPTs Mike Carraher, above from left, Bob Russell, Journal Editor Steve Brady and Keith Bowman are 1996 Member of Note winners.



Norman Neblett, above, presents PTG Pres. Marshall Hawkins with the Hall of Fame award. Danny Boone was entered into the Hall of Fame posthumously.



RPT & CTE Tari Meredyth, above left, and RPT & CTE Mike Carraher, flank Mitch Kell, center, after being presented with Examiner of the Year awards.



RPT Paul Woodard, above left, receives the Passport to Excellence from PTG Pres. Leon Spier.



Accepting Newsletter awards, above from left, Bruce Dornfeld for the Waukegan Partial Post, PNW RVP Ward Guthrie for Vancouver Beat, and Ken Burton for Calgary's In Tune.



Accepting Chapter Service Awards, above from left, Mike Carraher for South Central Pennsylvania, SE RVP David Duncan for Research Triangle, and Twin Cities Chapter President Melinda Powell.



PTG Vice President Gina Carter, above from left, Secretary-Treasurer Jim Coleman, NE RVP Chuck Erbemehl, SE RVP David Duncan, SC RVP Jack Wyatt, CE RVP Laura Kinsky, CW RVP David Durben, W RVP Paul Monroe, and PNW RVP Ward Guthrie, received Presidential Citations from President Leon Spier.

A Look Back at Dearborn

Golden Hammer Banquet



RPT James Coleman, Sr., left, makes his way to the podium, above, where he receives the Golden Hammer Award.



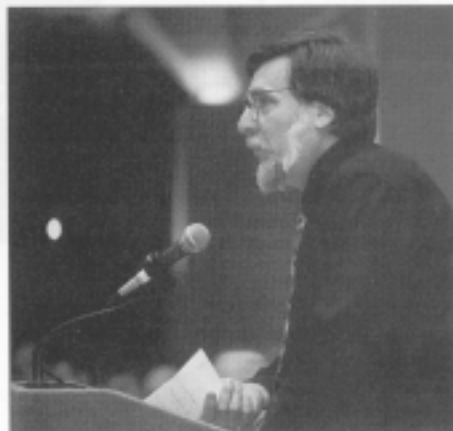
Incoming PTG President Marshall Hawkins, left, receives the gavel from outgoing President Leon Speir.



1997 Institute Director Wally Brooks outlines plans for the Institute at Orlando.



Henry Steinway is introduced during the banquet.



Florida State Pres. Robert Carr addresses plans for the 1997 PTG Convention in Orlando.

Out and About



Larry Crabb, at left, leads the Barbershop Chorus outside of the Stanley Steamer Ballroom in the Dearborn Hyatt. Lower left, Larry Fine and Doug Wood reflect on the convention. Below, Richard Bittner, president of host chapter, Detroit-Windsor, is interviewed by reporter Dana Cameron of WWJ-AM radio. At right, A Steinway D that was two inches too big for the Hyatt's elevators is taken down the steps to the Hyatt's first floor.



At Council



President-elect Marshall Hawkins, left at left, and Vice President-elect David Durben during a Council session. Below, Past-President Ernie Preuitt, listens to a Council debate. At right, President Leon Speir addresses Council.



At left, Lewis Spivey, left, and Don Wigent reflect on a Council item. Below at left, Vice President Gina Carter and parliamentarian Gracie Banks listen as President Leon Speir addresses the Council.



Below left, Assistant to the Executive Director, Jerri Dowdy, and Fred Tremper check in Council delegates.



Above from right, Keith McGavern, Jack Stebbins, Richard Bitner and Clarence Zeche tally Council votes.



Members of the Members Rights Committee, above, stand before the Council after their election, and at right, candidates for the Nominating Committee line up before a Council vote.



The 1996-97 Regional Vice Presidents, above from left, NE RVP Jim Birch, SE RVP Michael Travis, SC RVP Jack Wyatt, CE RVP Laura Kinsky, CW RVP Kent Swafford, W RVP Paul Monroe and PMW RVP Ward Guthrie.

A Look Back at Dearborn

1996-97 Board of Directors



The 1996-97 PTG Executive Board of Directors, seated from left, W RVP Paul Monroe, Secretary-Treasurer Jim Coleman, President Marshall Hawkins, Vice President David Durbin and CE RVP Laura Kinsky, and second row from left, SE RVP Michael Travis, NE RVP Jim Birch, Immediate Past-President Leon Speir, SC RVP Jack Wyatt, CW RVP Kent Swafford, and PNW RVP Ward Guthrie.

Movers & Shakers



Up to their necks, from left, Erin, Jonathan, Kim and Paul Niehaus, David, Susie and Jim Geiger and Tim Rainwater.



Above from left, the 1996 Technical Institute Committee, Evelyn Smith, Wally Brooks, Director Paul Olsen, and Fred Fornwalt. At Left, Paul Olsen delivers an address at the Opening Ceremony.

A Touch of Class



Above, Virgil Smith instructs a packed classroom on Aural Tuning Techniques. At Left, Richard Bittner discusses friction in *Dealing with Friction*. Below at left, Bill Spurlock works with Julie Kase in the Applied Skills Hands-on workshop.



Above left, LaRoy Edwards uses a punching to make a point in *Aftertouch: The Secret of Ultimate Performance*.

In the Exhibition Hall



Left from left, Ed Schadler Sr. and Ed Schadler Jr. of American Piano Supply Co.; center from left, Kent Webb and Jamie Marks of Baldwin Piano; right, Philip Bema of Bema Innovations.



Left, Gary Conte of Boston Piano; center, Beverly Brooks of Brooks, Ltd.; right, Larry Fine of Brookside Press.



Left from left, Gerry Cousins of Best Piano Services and Kevin Cory of Cory Instrument Products; center, Karen Rives, Roger Wheelock, Gayle Mair and Bob Mair of Damp-Chaser Electronics; right, Dr. Piano Ken Burton.



Left from left, Barbara Fandrich and Ed Richards of Fandrich Piano Co.; center left from left Vince Grantano and Alan Vincent of Geneva International; center right, Anne Fleming-Brown of George Brown College; right, Glen Hart of Hart's Piano Shop.



Left, Ingbert Blüthner of German Piano Imports and Reeder Restorations; Center, Thomas Lloyd of Senda Piano to Havana; right from left, Paul Sanderson and Mary Sanderson of Inventronics, Inc.

A Look Back at Dearborn

In the Exhibition Hall



Left from left, Bill Jansen and Paul Jansen of Paul Jansen & Son; center left from left, Mark Newcomer, Ray Chandler and Don Mannino of Kawai America; center right, Peter Conroy of Kemble & Co.; right, Ruth McCall of McCall Enterprises.



Left, Carl Meyer of Meyer Enterprises; center left, Kevin McGinnis of North Bennet Street School; center right, Rob Morton of Pacific Piano Supply Co.; right from left, Webb Phillips and Ruth Brown of Webb Phillips & Associates.



Far left from left, Paul Monachino, Don Dusenbury, Kirk Burgett and Mark Burgett of PianoDisc; center from left, Mark Bisso, Jane Aisenbrey and Bob Mannell of Pianotek Supply Co.; left from left, Jim Schmitt and Randy Potter of Randy Potter School of Piano Technology.

Right from left, PTG Home Office Administrative Assistant, Midge Sheldon, and Taylor Mackinnon in the PTG booth; center from left, Lloyd, Donna and Michael Meyer of Renner USA; far right from left, Dean and Martha Reyburn of Reyburn Piano Service.



Far left, Dean Garten of Samick; left from left, Bruce Ganck, Frank Finn, Herb Johnson, Megan Spiegel and Dave Johnson of Schaff Piano Co.



Left, Chip Wise of Schimmel Piano Co.; center, Peter Duetz of Seiler; right from left, Dale Fox, Bill Spurlock and Brett Dearing of Spurlock Specialty Tools.



Left from left, Michael Anests, Gary Green, Bob Berger, Mr. and Mrs. Henry Steinway, and Mike Mohr of Steinway; center from left, Al Whelan, John Omiatek and Cindy Philippi of Story & Clark; right, Charles Walter of Walter Piano Co.



Left, Sam Sammartino of Wordenwand; center from left, Mark Wisner, Steve Pearson and Steve Darning of Yamaha; right, Phil Glenn of Young Chang.

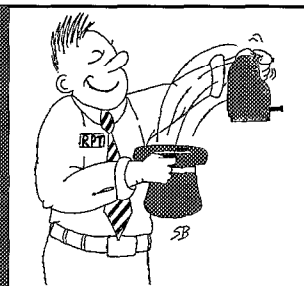
Dearborn!

**1996 PTG ANNUAL
CONVENTION & TECHNICAL INSTITUTE**

It Was A Classic

Grand Illusions ...

The Page for Serious Cases



History of the Piano — Part I

By Bob Bullock

*The Piano's Contribution To Civilization:
An Irrelevant, Irreverent Perspective. Part One*

Ah! The noble, marvelous piano! How many of us earn our livelihood in the shadow of this musical giant, oblivious to its contributions to the story of homosapiness? I, for one, have felt unqualified to respond, with confidence, when asked about its origins. This situation often arises at one of Mrs. Gottrock's lawn parties, when one of the tipsy guests inquires, "So! Who *did* invent the piano?" Hoping to make myself indispensable to any gathering of these classy dressers, I decided to thoroughly educate myself about this majestic, melodious machine.

To be brutally honest, I have long been addicted to the cold shrimp they serve when these "swells" get together, and have been known to stuff my pockets with them, in anticipation of a late evening snack. My wife broke me of this habit when she tried to steam some wrinkles out of one of my sports jackets, only to find a few remaining crustaceans had matured and, were, with the steam's assistance, rapidly metamorphosing from a solid to a gaseous state. You need not have borne olfactory witness to this event to appreciate its potential for domestic violence. Betty hates seafood, anyway.

Committed to becoming an expert on the piano's past, I went to the local library and read every tome I could find on the subject. The literature is plentiful, and traces the piano to its emergence as an icon for the musically enlightened. Some school pianos are thought to be the earliest ones built. Carbon-dating of the chewing gum wads found under their keybeds easily confirms this theory. These stalwarts have survived the ravages of time and the assault of millions of grubby little fingers. The ability to build a truly indestructible school piano has apparently been lost somewhere along the way. Thankfully, many school pianos from the earliest days of the craft endure.

All evidence points to the Greek philosopher, Plato, as the inventor of the piano. After him, every other significant development refined his original effort. Originally, Plato placed a lyre across two sawhorses and struck the strings with the jawbone of a Phoenician. He soon discovered he could obtain a "cleaner" sound by using the jawbone of a *dead* Phoenician, and the Phoenician didn't mind it as much. The Phoenicians, in self-defense, persuaded Plato to install hammers and keys on his invention. This piano had 64 keys, all white. Plato thought this arrangement sufficient, but the meddlesome Pythagoras insisted Plato insert a few black notes between the white ones, for contrast. Plato argued that he had written the early hit, *Heart and Soul*, using only white keys. Pythagoras, the first music critic, threatened Plato with a bad review, and the reluctant inventor capitulated, against his better judgment. Those skinny, black keys have been the nemesis of piano students for two millennia. One can only speculate how much easier the piano would have been to master had Pythagoras kept his nose out of it.

It is generally believed that Octavius, a descendant of Plato, discovered the octave, the first universally accepted interval, but such is not the case. As it requires an octave to perform *Heart and Soul*, said octave obviously preceded the Roman. It is more likely that Octavius was named for the interval than vice versa.

Plato's cousin, Homer, giving up his music lessons, invented "Rap." He was known as "Homey" among his contemporaries. He eventually gave up music altogether and became a best-selling author. *The Oddity* and *The Sacroiliad* are two Greek classics for which Homer is remembered.

Plato remains famous, among small children, as the inventor of modeling clay, the best of which bears his name.

A peaceful people, the Greeks were known for their cooking, which was tasty, plentiful and cheap. In the year Minus

87, they were invaded by Caesar's legions, who had been dispatched to the eastern Mediterranean to gather all of the pita bread, Baclava', feta cheese and Uzo they could find. It is said the Emperor wanted to open a chain of *Pizza/Pizza* parlors, featuring imported ingredients. Sadly, he became abruptly perforated before he could see his idea come to fruition.

Marching into Athens, the centurions stumbled across a piano Homer had cast aside when he gave up on "Rap." They took it back to Rome to display it as part of the "spoils of war." Caesar told Senator "Pliny-the-Stupid" to guard the ill-gotten gain. Living up to his name, Pliny traded the piano to a Mongol named Khan for a horse. The Romans were not too keen on horses. They were proud of all the roads that led to Rome, and didn't fancy having to hose them down every time a horse trotted by. When the hapless Pliny rode the horse into the Senate one day, for a roll-call vote, they promptly dispatched him, not because the horse messed up the marble floor, but because he had not cut the other senators in on the deal! Ironically, they had "offed" the only guy who might have led them to the missing piano!

EDITOR'S NOTE: Part II of Part I to be continued next month.

PIANOMAN Adventures

by Alan Hallmark



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Ant Philosophy 101

As we approach the fall season of the year and take a look at the soon approaching winter, my thoughts reflect on the lessons from the ant.

I'm a rock turner. I love to flip over rocks and logs and see what multi-legged creatures have made a home underneath. My interest in nature, and of insects in particular, is a holdover from my youth as I spent many hours watching ants go from one place to another, always in a hurry to get the job done.

Anyway, the other day I was hiking up a hill and my entomological curiosity got the better of me, so I flipped over a large rotting log. Underneath was a seething mass of ants, and I was captivated by how quickly they interpreted my disturbance as a cause for organized alarm.

While I was watching they quickly secreted their eggs and larvae deep into underground caverns. I was reminded of Jim Rohn's talk on Ant Philosophy. Ant fact #1: Ants never give up. I poked a stick down into the tangled mass of ants, and they attacked the stick with such vigor that I knew had it been my finger, it would have been a goner. Ants don't care about the size of the threat. They just keep on fighting and biting until they die. Did you ever see an ant come up against an obstacle? Does it shrug its little shoulders and give up? No! The ant just keeps plugging away at the problem — trying to go around, over, under, or through it until it succeeds. Be like an ant and become relentless in your pursuit of your idea of success. Winston Churchill said it best; *Never, never, never give up.*

Ant fact #2: Ants plan for winter all summer. Summer is when food sources are plentiful and the sun is warm and ants are working hardest to prepare for the inevitable cold hard winter.

Here is some wisdom we can extract from this simple fact; Don't be disillusioned into thinking that your income is secure. The storms and winds can come so unexpectedly and you need to be preparing right now — while it is sum-

mer — for the hard winter of life to come.

Ant fact #3: Ants look forward to summer all winter. Do you think ants hide underground depressed because it's cold outside? No way. They are probably thinking, *"This won't last long. Pretty soon, it'll be summer and we will be outta here!"* And sure enough on the first warm day of spring, you can find them celebrating the beginning of warm weather. They can't wait to get out. That's a good philosophy to adopt. Especially if you are the one that has to drive yourself to get shuckin'. I find the best way is to always have

tomorrow's work lined up as soon as possible so that you will never be out of work, *unemployed.*

Ant fact #4: When ants gather food for the winter, they gather all they possibly can. Ants don't just gather food until they get tired. They just keep on working until the work is done. What an important lesson.

How many books should you read? How many hours should you work? How many audiocassettes should you listen to in your car as you travel from job to job?

See "Ant Philosophy" on Next Page

Saving Now Pays Off

As we approach the latter part of 1996 and the Republican and Democratic races heat up, the economy is in what "they" call "a soft landing."

This means several things. First of all, the inflation for the year will remain low, below 3 percent. Right now stocks are not taking off as predicted at the first of the year, and bonds are having a "hey-day."

What should you and I do? We should be saving at least 10 percent of our yearly earnings. This should be started as early in your career as possible. I know that it is difficult to think about savings when you just enter business and expenses are eating up most of the profits. It is also difficult to think of retirement years that seem to be so far away. Believe me, they will slip up on you before you know it and you need to be prepared. Social Security benefits (if they are still available when you retire) will definitely not be enough to let you carry on your present lifestyle.

If you have been around a while, you should have some investments already started and we will suggest several throughout the year to get your thinking cap working. Those of you who are nearing retirement (do piano tuners really retire?) already know that your income

will not be as great as you had planned on years ago, because of inflation. However there are things that you can still do to help yourself. We will deal with that a little later.

An Individual Retirement Account with a secure financial institution is just one way to begin. You can stock away \$2,000 a year, tax free. If you don't have time to manage your own stocks and bonds account, invest in a Mutual Fund Account that has a good track record. There are also some very good Mutual Funds that let you trade stocks. In other words, you can get a Mutual Fund and let them manage your investments, or you can get Mutual Funds that let you manage.

For those who have the time and want to spend the effort, the Stock Market is a way to increase your income. We do want to caution you. Every prospectus also has a disclaimer something like this, "Any performance figures are based upon historical results and do not assure future performance." So they say that you can earn from a little-to-great return, however, you can also have a little-to-great loss.

We will try to get into some business

See "Saving Now" on Next Page

Passages

Harry E. Berg August 19, 1907 - August 8, 1996

Announcing the eternal birth of Harry E. Berg: August 19, 1907-August 8, 1996.

Born in Connecticut of Swedish parents, Harry Berg earned his BA degree from Phillips University and in 1939 graduated from Phillips Theological Seminary in Enid, OK. Reverend Berg served pastorates in Medicine Lodge, KS and Garden City, KS during the 1940s and Centralia, WA 1950-52. He moved his family to California in 1952 where he was the minister of the First Christian Church in Bellflower. A Pastoral Call in 1959

lead to the founding of University Avenue Christian Church in Bakersfield, CA where he built the church facilities and served the congregation until his retirement in 1980. Pastor Berg moved to Phoenix with his wife in 1989. The couple shared 60 years of marriage until her passing in October, 1994.

In addition to his life long service to the Lord, Harry also spent many years as a piano & organ tuner. He was a member of The Piano Technicians Guild for 35 years, where he contributed in teaching, writing, training and leading other members. His professionalism brought him high respect from the LA Chapter and all others that knew him within the Guild and his satisfied clients.

Viewing and interment was at

Hillcrest Memorial Gardens in Bakersfield, CA, August 14th at 12:00. A Memorial Service was held Saturday, August 24th at Hillcrest Memorial Gardens, with a potluck which followed at University Avenue Christian Church in Bakersfield. A Memorial fund has been established at Phillips Theological Seminary. Contributions may be sent to Phillips University Foundation, Box 2335, Enid, OK 73702.

The children of Harry Berg are: David F. Berg (Louis Hill Berg-wife), and Ruth Ann Anderson. The grandchildren of Harry Berg are: Norman E. Berg of Kent, WA., Gregory E. Berg of Tempe, AZ., and Dione Anderson of Bloomington, MN.

— David F. Berg
Phoenix, Ariz.

Ant Philosophy 101

Continued from Previous Page

Trees also live by this philosophy. Does a tree grow just a few feet and decide to stop? Of course not. Trees grow as high as they can. Be like a tree, challenge yourself by reaching ... as far as you can ... as high as you can.

So the next time you see an ant cross your path, resist the temptation to squash it with your shoe. Observe it for a few minutes, and see if you can't let some of the ant's powerful life philosophies rub off on you.

Be the best that you can be, reach the highest that you can reach, learn the most that you can learn. Become the greatest Piano Technician that you can become, and the one that will be the most satisfied will be *you*.

— Gary Neie, RPT,
Economic Affairs Committee

Saving Now

Continued from Previous Page

planning, retirement options and some more investment opportunities in future columns. There are opportunities on every hand.

If you are having difficulty in earning a living you need to be present at *every* PTG chapter meeting, state convention, and international convention that you can find. You will find business classes and individual technicians who will bend over backwards to help you succeed. It's up to you to get that help.

— Gary Neie, RPT,
Economic Affairs Committee

In Memory . .

ROBERT HOFSTETTER, RPT
MONTEREY BAY, CA

VIRGIL MASSEY, RPT
SHENANDOAH, VA

LOREN PELKEY, RPT
SEATTLE, WA

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EVENTS CALENDAR

All seminars, conferences, conventions and events listed here are approved PTG activities. Chapters and regions wishing to have their function listed must complete a seminar request form. To obtain one of these forms, contact the PTG Home Office or your Regional Vice President.

Once approval is given and your request form reaches Home Office, your event will be listed through the month in which it is to take place.

Deadline to be included in the Events Calendar is at least 45 days before the publication date; however, once the request is approved, it will automatically be included in the next available issue.

October 3-6, 1996

NYSCON - ONTARIO-PROVINCE
Rochester South Holidome, Rochester, NY
Contact: Robert Edwardsen
716-586-1360 or 1-800-4-NYSCON
Rochester, NY

October 25-27, 1996

NORTH CAROLINA REGIONAL CONFERENCE
Sheraton Airport Hotel, Charlotte, NC
Conference Director:
James Baker, RPT (704)366-8466
Registration Contact:
Lewis Spivey, RPT (919)937-4777
15 Rachel Drive, Nashville, NC 27856

October 31 - November 3, 1996

TEXAS STATE ASSOCIATION CONVENTION
Inn on Lake Travis, Austin, TX
Contact: Mike Pope, (512)869-4707
3307 Rocky Hollow Trail, Georgetown, TX 78628

January 3-4, 1997

ARIZONA STATE SEMINAR
Tempe, Arizona
Contact: Rick Florence, (602)926-4328
119 W. San Angelo Ave., Gilbert, AZ 85234

February 21-23, 1997

CALIFORNIA STATE CONVENTION
Radisson Hotel, Sacramento, CA
Contact: Yvonne Ashmore, (916)273-8800
12700 La Barr Meadows Rd., Grass Valley, CA 95949
Website address: www.dcalcada.com/ptg/

March 14-16, 1997

PACIFIC NORTHWEST
West Coast Tye Hotel, Olympia, WA
Contact: Mitch Kiel (360)264-5112

April 3-6, 1997

PENNSYLVANIA STATE CONVENTION
Days Inn, State College, PA
Contact: Fred Fornwalt, (814)942-1489
1333 Logan Blvd., Altoona, PA 16602

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Louisville, Ohio

AUXILIARY

E X C H A N G E

Dedicated To Auxiliary News and Interests

It's Not too Early to Start Thinking About Orlando

Hello, on this beautiful Fall day. I was not going to talk about Orlando just yet because, at this writing, I have not even been to Orlando to the planning meeting. But since I had a few minutes this Sunday to read a *New Yorker* Magazine that was on my desk marked "FYI" (For Your Information), I decided to check it out. Maybe some of you will want to place a deposit on a newly built home in Celebration, Fla., when you are down there next summer. I refer you to the article in the July 22, 1996 issue of the *New Yorker* entitled, "Tomorrowland" by Witold Rybczynski, on page 36.

Did you know what EPCOT stands for? I didn't. It stands for Experimental Prototype Community of Tomorrow. EPCOT is situated in Walt Disney World, on the enormous tract of land — 28,000 acres — that Disney owns outside Orlando. There are two other theme parks there, the Magic Kingdom and the Disney MGM Studios, and a fourth, Disney's Animal Kingdom, is slated to open in 1998. The article talks about the city that Walt



*Phyllis Tremper
PTGA President*

wanted to build and had dreamed of for a long time before his death. Go to the library and read the article if you don't subscribe to the *New Yorker* Magazine. It's very interesting and something we should see while we are so close to the "perfect city." I'll also check it out while I'm there in September. After I return I'll tell you more about Orlando and what's in it for us to do. But I have a feeling that we need to start saving our vacation money right now because I don't think any of this trip will be inexpensive. However, this will be a once-in-a-lifetime experience for most of us, as I

can't believe the convention will ever be held in this city again. So make the most of it.

This in from the Information Highway Department: Paul says that after reading his mail upon return from convention, he came across a letter regarding the California State PTG Seminar. It will be held February 21 through February 23, 1997, in Sacramento. They have a Web Page anyone may visit for more information, located at: <http://www.dcalcada.com/ptg/>. Here is the new URL (address) for the PTG Home Page: <http://www.ptg.org>. I hope more and more of you are visiting on the Internet. It's a great invention and so much more inexpensive than the old snail mail. Please drop me a line anytime on f.trempe@morehead-st.edu.

I would love to have a note from anyone who was at convention in Dearborn, who has an interesting anecdote to tell us about your trip there or your going and/or coming. Also, please, anyone who goes to the regional seminars, please write to us about the
See "It's Not Too Early" on Next Page

Life and Times

By Phyllis Tremper
PTGA President

I was born Phyllis Krahmer in Freeport, Ill., of German ancestry. I attended public school there and started music lessons in the fourth grade on violin, after taking piano lessons for several years. At 13, I added vocal training, and after five years, I obtained a vocal scholarship from Illinois Wesleyan University. After graduating from IWU, I went to work for Columbia Records in New York City. While in NYC, I sang with the Robert Shaw Chorale and numerous other groups.

In 1958, I married my college sweetheart, Fred Tremper, and we moved to Chicago where I sang with the Rockefeller Chapel Chorus for one year and then on to the Lyric Opera Chorus of Chicago for 25 years. I had a solo position for a church in Oak Park, Ill., for 17 years and a temple position for 15 years. I also was the soloist for a group called the Chicago Baroque Ensemble made up of 17 singers. During all of this time, I did not "give up my day job!" I worked for Murphy Employment Service for 7 years, two as manager of the Oak Park office.

In the mid 1980s, Fred and I

joined with Allan and Vicki Day to operate the Muse Piano Workshop in Oak Park, Ill. Each of us had a position to fill, and mine was running the office, payroll, scheduling tuners from our school and sales of pianos in our showroom. This business, T-D Enterprises, Inc. was sold in 1988.

As Fred accepted a position at Morehead State University, we moved to Kentucky and I began my volunteering positions: I teach five adults to read, hold a national office of my music fraternity, Sigma Alpha Iota, and am treasurer of our newly formed Recycling Center, Vice-President of the Morehead

Theater Guild and a board member of the PTG Auxiliary now for six years.

Believe it or not, this leaves time for me to perform in most of the shows and musicals that the MTG produces. If not on the "boards," I am behind the scenes doing publicity or wherever needs to be done. We just produced *Fiddler on the Roof*, which was performed the weekend after the Dearborn Convention in which I had a part.

We have two grandchildren in the Chicago suburbs which makes a trip to Chicago twice a year an enjoyable event.



PTGA President Paul Cook addresses the Opening Assembly at the 1996 Convention in Dearborn.



1996 PTGA Scholarship recipient Holly Huang warms up prior to performing during the Baldwin Recital for the Auxiliary.

It's Not Too Early

Continued from Previous Page

auxiliary activities there. Please cover the story for these pages. The rest of the country wants to hear what goes on. Thanks.

From the Did-You-Know Department: The mouth of the Statue of Liberty is three feet wide.

"Put a Little Music in Your Life."

PS — The President's word to the Re-organization Committee: "Team-work: coming together is a beginning; keeping together is progress; working together is success." — Author: Henry Ford



Looking forward to Orlando. PTG Auxiliary Board members have Walt Disney mascots to guide them to the 40th Annual Convention in 1997

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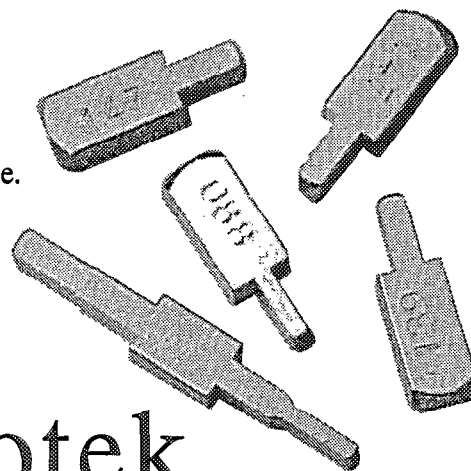
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PianoDiscTM

October 1996

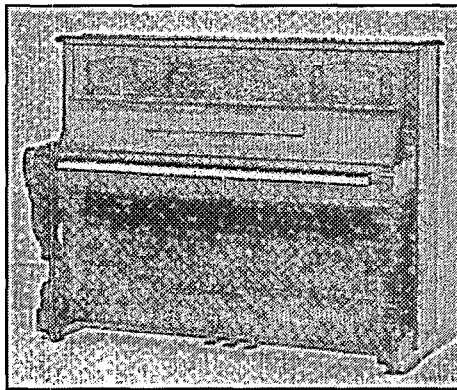
News From The World of PianoDisc

John Patton fills Mason & Hamlin plant manager spot

HAVERHILL, MA — Mason & Hamlin has announced the addition of John Patton to its management team. Patton has been named Plant Manager at Mason & Hamlin's Haverhill, Massachusetts factory.

Patton brings a wealth of experience to the post, including assignments as Manager of the Quality Assurance Department and, later, the Director of Technical Services, for the Aeolian Corporation, as well as Vice President, Manufacturing of the Falcone Piano Company. He also owned and operated Patton Pianocraft, a piano rebuilding business that specialized in soundboard installation.

Mason & Hamlin's president of operations, Kirk Burgett, commented, "We're pleased that John is with us in this very important stage of our business. His experience and expertise will make him a vital part of Mason & Hamlin's reemergence in the piano market."



The 48" Professional Upright (KN-480 NFI) is one of the new Knabe models.

Our Traditions

Knabes become new PianoDisc pianos

Over the last 30 years the Knabe line has had several changes in ownership, culminating in its purchase, in April of this year, by MSR/PianoDisc owners Kirk and Gary Burgett. Their plans for the Knabe line include its adoption as the official PianoDisc piano, replacing the PianoDisc brand pianos that the company has been selling since 1991.

In addition to its supporting role for PianoDisc, the new Knabe line will also be sold as acoustic or QuietTime pianos with the GT-360 QuietTime mute system factory installed. Pianos sold only as acoustic instruments will still come with some modifications to allow easier after-market installations of MSR products. Some of the original, traditional American case designs will be incorporated in the new pianos as well.

Enthusiasm for the reintroduction of Knabe to the marketplace is running high among PianoDisc's dealers, reports company Executive Vice President Tom Lagomarsino. "Our orders reflect its tremendous acceptance. We know that the Knabe name brings a great deal of prestige to PianoDisc and, in turn, PianoDisc will revitalize Knabe. Both are sure to prosper from the new association."

CONVENTION SCHEDULE

October 31-November 3, 1996

Texas State Association

Inn on Lake Travis, Austin, TX

• Classes:

"History of Mason & Hamlin" will be offered twice; each class is 1-1/2 hours long; instructor is Paul Monachino.

"Servicing the PianoDisc System" will be offered once on Sunday; is six hours long; instructor is Don Dusenbury.

February 21-23, 1997

California State Convention

Radisson Hotel, Sacramento, CA

• Classes:

"Servicing the PianoDisc System", "History of Mason & Hamlin", "The Art of Making Dampers From Scratch"

• Factory Tours:

PianoDisc Factory Tours will be conducted continuously, all day Friday, and on a limited basis Saturday.

• Reception: MSR/PianoDisc/Mason & Hamlin will host the Friday night reception, 8-9:30 p.m.

• Banquet: Saturday night, MSR is sponsoring the entertainment portion by PianoDisc artist Paul Smith.

TRAINING SCHEDULE

• October 21-26 • November 18-23

CONTINUING EDUCATION

• October 28-30 • December 2-4

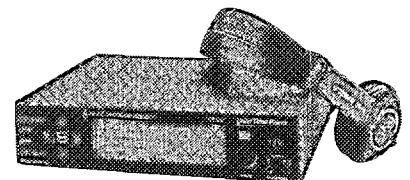
MSR/PianoDisc

4111 North Freeway Blvd.
Sacramento, CA 95834

Phone: (916) 567-9999 • Fax: (916) 567-1941

Tech Support: (619) 258-1460 or (916) 567-9999

Tuition for the installation and Continuing Education seminars is free, but a \$50.00 refundable deposit is required for confirmation. The PianoDisc Continuing Education Series seminars are restricted to PianoDisc certified technicians in good standing. For more information about attending a PianoDisc Installation Training seminar or a Continuing Education seminar, call PianoDisc during our office hours.



QuietTime Quiz

True or False:

1. QuietTime gives an acoustic piano the benefits and features of an electronic keyboard.
2. QuietTime can silence a piano 100%.
3. QuietTime makes a piano compatible with virtually every MIDI device.
4. QuietTime is the only retrofit mute system

The answer to each is "True."

Support the PTG Foundation

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