

PIANO TECHNICIANS

JANUARY 1981

JOURNAL



WHO SAYS THE GOOD DIE YOUNG?



The Baldwin Hamilton is built to last. Not just for a semester or two. But for generations. And because it has the Baldwin name on it, it has the Baldwin sound in it.

That's why it's the studio piano selected by more piano teachers and music schools than any other.

The Baldwin Hamilton. Chances are, it'll still be working six days a week long after you've retired. **Baldwin.**

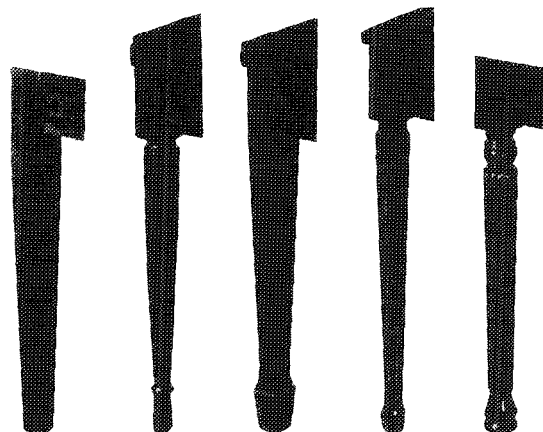
BALDWIN SPECIAL SERVICE—You may order Baldwin replacement parts at any time our office is closed—nights, weekends, and holidays—by dialing direct (513) 852-7913. Your verbal order will be recorded on our automatic answering service and processed the next working day.

PERIOD MATCHED BENCHES



Our 7000 series piano benches are constructed of selected hardwoods with a wood grained top, brass plated hinges and lid supports. The benches measure 14" x 30" with a height of approximately 19". All have music compartments and are shipped K.D., one to a box. Specify leg type and finish.

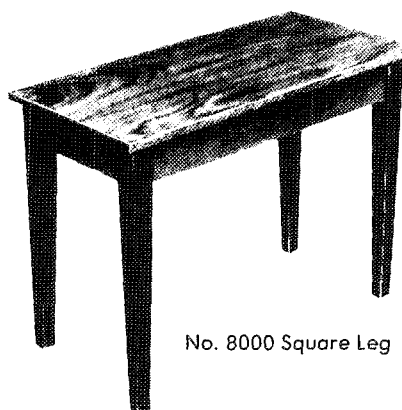
Finished Bench (Wlnr., Mahogany or Ebony)
List Price Each \$74.00
Unfinished Bench
List Price Each \$72.00
6 or More Benches Less 5%



7085 Square 7051 Round 7086 Spade 7050 Round Flute 7275 Georgian

All five leg styles are available in Walnut, Mahogany and Ebony finish or unfinished. Order by using the leg number followed by the designation "W-M-E or U" for type of finish. Example: "7085W for square leg, walnut finish.

ECONOMY BENCHES

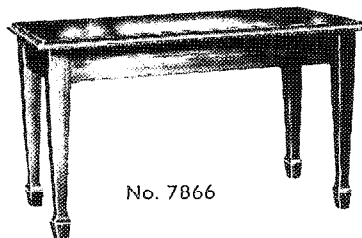


No. 8000 Square Leg

The legs and base of our 8000 series benches are made from selected hardwoods with the top being hardwood veneer laminations. All benches have music compartments and measure 14" x 30" with 20" height. No. 8000 Bench is square leg whereas No. 8001 is a round leg type. Both styles come in Walnut, Mahogany or Ebony finish or unfinished. Specify the letter "W-M-E or U" after leg style number. Example: 8001U for round leg, unfinished. (Sold and packed two of same finish and leg style to a carton. Add \$2.00 list price for individual bench packaging.)

No. 8000 - Square Leg (Specify Finish).
List Price Each \$60.00
No. 8001 - Round Leg (Specify Finish).
List Price Each \$60.00
6 or More Benches Less 5%
(Add \$2.00 list price cost for individual bench packaging)

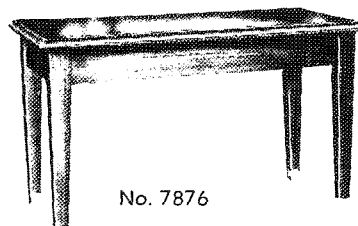
DUET SIZE PIANO BENCHES



No. 7866

Primarily designed to use with grand pianos, these high quality benches have veneered tops with a hand rubbed finish of either Walnut, Mahogany or Ebony color. Also available unfinished. All music compartments are finished. Bench height is 19" top size 14 1/2" x 35" available in spade foot or brass ferrule legs and shipped K.D.

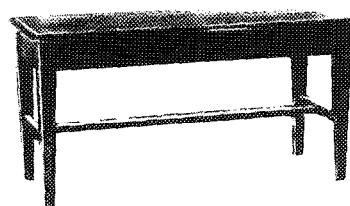
No. 7866
Spade Foot Leg, Specify Finish (W-M or E).
List Price Each \$102.00
Spade Foot Leg, Unfinished.
List Price Each \$100.00
6 or More Benches Less 5%



No. 7876

No. 7876
Brass Ferrule Leg, Specify Finish (W-M or E).
List Price Each \$104.00
Brass Ferrule Leg, Unfinished.
List Price Each \$102.00
6 or More Benches Less 5%

SCHOOL BENCHES

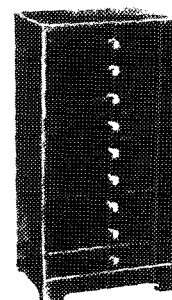


Similar specifications as the Duet Piano Bench but to further strengthen the legs for school use, a strong stretcher base is added. Comes with music compartment, 14 1/2" x 35" top size, 19" high and three finishes. Walnut, Mahogany and Ebony as well as unfinished. Shipped set up.

No. 7022
Finished Bench, Specify Finish (W-M or E).
List Price Each \$130.00
Unfinished Bench.
List Price Each \$128.00
6 or More Benches Less 5%

SHEET MUSIC CADDY

This economy sheet music cabinet is made with plenty of storage space. Cabinet stands 32 1/2" high, 16" wide x 14 1/2" deep and has nine drawers with contrasting brass drawer pulls. A high-protection finish of melamine, Formica brand, laminated surface comes in four simulated wood finishes of Walnut, Rosewood Mahogany, Fruitwood and Ebony. Cabinets are shipped from Ohio by U.P.S.



No. 7200 Specify Finish (W-RM-F or E).
List Price Each \$140.00

THE HOUSE DEDICATED TO SERVICE

Schaff

PIANO SUPPLY COMPANY

451 OAKWOOD ROAD, LAKE ZURICH, IL 60047

Prices Subject To Usual Discount

(312) 438-4556

Piano Technicians Journal

CONTENTS

EDITORIAL/Don L. Santy	4
PRESIDENT'S MESSAGE/Bob Russell	8
THE TECHNICAL FORUM/Jack Krefting	10
REGULATING SQUARE GRANDS/Roland Loest	17
CALCULATING TECHNICIAN/Dave Roberts	20
VON DER WERKSTATT/Priscilla and Joel Rappaport	22
IN THE FIELD/Ben McKlveen	26
AFTER TOUCH/David W. Pitsch	28
THE FINE ART OF TUNING/James W. Coleman, Sr.	30
SAN FRANCISCO, CONVENTION CITY/James G. Bryant	31
SAN FRANCISCO, HERE WE COME/George Defebaugh	33
CROSS OVER THE BRIDGE	34
COMING EVENTS	35
NEW MEMBERS	35
NEW CHAPTER ELECTS OFFICERS/Dick Bittinger	36
THE AUXILIARY EXCHANGE/Luellyn Preuitt	37
CLASSIFIED ADVERTISING	40

COVER... With the new year, the **Piano Technicians Journal** features a new design and a new theme on the cover — great composers of works for the piano. Pictured this month is Frederic Chopin, unique among the world's great composers because he is the only one who devoted himself almost exclusively to the piano. Of his more than 170 compositions, 169 are for solo piano.

THE PIANO TECHNICIANS GUILD, INC.

113 Dexter Avenue North
Seattle, Washington 98109

Telephone: (206) 283-7440
682-9700

Office Hours: (Pacific Time)
8 am-5 pm
Monday-Thursday

8 am-Noon
Friday

Messages may be left after office hours by calling (206) 682-9700. Your call will be answered by a tape recording machine.

PIANO TECHNICIANS JOURNAL, the official publication of the Piano Technicians Guild, is published monthly and issued to members. Annual subscription price: \$60 per year; \$108 for two years; \$5.50 per single copy. *Editorial Offices:* 113 Dexter Avenue North, Seattle, WA 98109. Telephone (206) 283-7440 or 682-9700. **Closing date for copy and advertising is six weeks prior to date of publication.** Advertising rates are furnished on request.

Reprints of most articles are available from the Guild home office, 113 Dexter Avenue North, Seattle, WA 98109. Price per page (plus postage): \$1.25 for the first page of each *Journal* article re-searched and \$.50 for additional pages of the same article.

Second Class postage paid at Seattle. US ISSN 0031 9562 Foreign and Domestic.

1980/81 Executive Board

Officers

BOB RUSSELL, *President*
1414 Lander Road
Mayfield Hts., Ohio 44124
(216) 449-5212

SID STONE, *Vice President*
1075 Palisade Street
Hayward, California 94542
(415) 538-7760

CHARLES HUETHER, *Secretary/Treasurer*
34 Jacklin Court
Clifton, New Jersey 07012
(201) 473-1341

Regional Vice Presidents

DICK BITTINGER, *Northeast*
107 W. Main, Box 51
Brownstown, Pennsylvania 17508
(717) 859-3111

WALTER KERBER, *Southeast*
2226 Siesta Dr.
Sarasota, Florida 33579

TOM R. BLANTON, *South Central*
1516 Shields Drive
Sherman, Texas 75090
(214) 892-3176

GEORGE PETERS, *Central East*
846 Westchester Road
Saginaw, Michigan 48603
(517) 799-6133

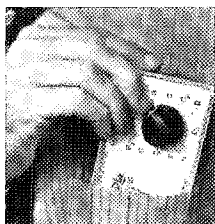
ERNEST S. PREUITT, *Central West*
4022 S. Fuller
Independence, Missouri 64052
(816) 252-2885

DANIEL A. EVANS, *Western*
4100 Beck Avenue
Studio City, California 91604
(213) 762-7544

Journal Staff

DON L. SANTY, Executive Editor
JIM GRATTON, Managing Editor
CATHY LAURO, Graphics
JACK KREFTING, Technical Editor
GEORGE DEFEBAUGH, Recorded
Journal Reader

ANNOUNCING THE HALE ELECTRO FORK



**Unmatched for accuracy and stability.
Small enough to fit your pocket . . .
and easy on your pocketbook.**

The Hale Electro Fork is the most accurate, stable and compact pitch standard ever made. It's the perfect alternative to pitch pipes and other outdated pitch determining instruments because it becomes your third hand.

It offers remarkable accuracy never achieved before. This pinpoint accuracy is guaranteed because the Hale Electro Fork uses a high frequency crystal. The unit is checked for accuracy after 100 hours of "burn in" time, then its exact frequency is measured and printed out on a certificate which is enclosed with each Hale Electro Fork.

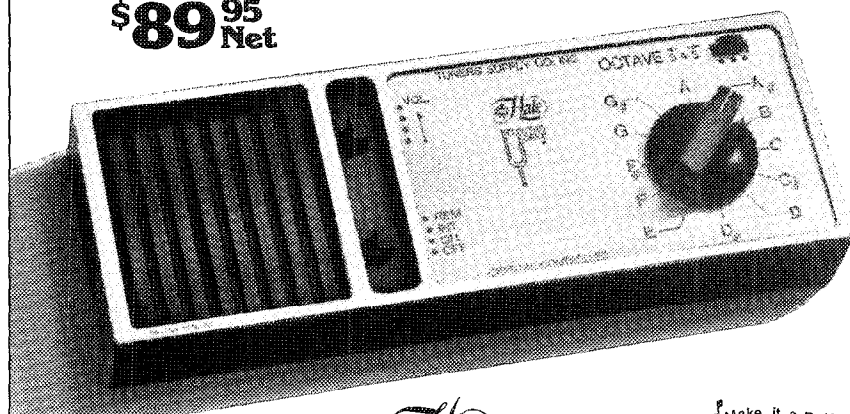
The Hale Electro Fork also insures maximum stability under a wide range of operating conditions such as temperature, component aging and battery voltage.

Its pocket size allows you to take it anywhere. And it's designed to fit your pocket in more ways than one. And it represents a significant savings of \$100 or more over many conventional pitch standards on the market today.

This easy-to-use unit is equipped with an on/off button, a three (3-4-5) octave range setting from C to B, continuous/intermittent sound and a volume control.

Now that you've read our pitch . . . get the pitch right with the Hale Electro Fork.

**\$89⁹⁵
Net**



Patent Pending

Piano Tools **Hale** and Supplies

Make it a Rule —
Use a Hale Tool

TUNERS SUPPLY COMPANY

Serving the Music Industry Since 1884

EASTERN BRANCH: 94 Wheatland Street, Somerville, MA 02145 (617) 666-4550

WESTERN BRANCH: 190 South Murphy Avenue, Sunnyvale, CA 94086 (408) 736-2355

SOMETHING BETTER for FREE?

YES!

**MMR MAGAZINE HAS TWICE
THE CIRCULATION OF ANY
OTHER INDUSTRY TRADE
MAGAZINE.**

MMR PUBLISHES THE ONLY MUSIC INDUSTRY DIRECTORY BROKEN DOWN INTO 8 CATEGORIES FROM "MASTER RESOURCE" SECTION TO "BRAND NAMES". (It even tells which suppliers give catalogs.) It's included with your free subscription!

**MORE PIANO TECHNICIANS
READ MMR THAN ANY
OTHER DEALER TRADE
MAGAZINE**

BEST OF ALL IT'S FREE

**SHOULDN'T YOU BE GETTING
IT?**

CIRCULATION OVER 10,000

Name

Company

Address

City & State

Zip

Musical Merchandise Review
370 Lexington Ave.
New York, N.Y. 10017

Men Who Have Made
PIANO HISTORY
by Alfred Dolge

\$15 + \$1.50 shipping

The Vestal Press, Box 97
Vestal 62A, NY 13850
(N.Y. Res. add 7% Sales Tax)



BUYING ALL PIANOS

WE'LL BUY OUT LOTS OR SINGLE PIANOS
WILL MOVE NOW AND PAY CASH!

HOME PIANO CENTER

CALL COLLECT **1-216-291-3838**
OR SEND LIST

EDITORIAL

Don L. Santy,
Executive Editor

It's a new year and time to begin getting used to new trends, new leadership, new technologies and a new economy. We are going to experience them all in the months ahead.

I heard a psychologist recently explain why some people can handle stress better than others. She reduced the reasons to four basics that she called "the four C's." They are *commitment*, *control*, *challenge*, and *change*. People who can *commit* themselves to something (a goal, for example), people who can *control* their environment or destiny to a reasonable degree, people who are *challenged* with new ideas and great expectations and who are flexible enough to accept *change* are the most likely to overcome high levels of stress.

The Guild contains all of these ingredients to some degree. The only fuzzy element is "control." We are more or less buffeted by the winds of the economy.

This came out during our recent convention-planning meeting in San Francisco. The suspicions we have been harboring during the past few months have been confirmed. Costs are going up — and alarmingly so.

The hospitality industry is in the same boat as we are. Workers at San Francisco hotels went on strike last year, asking for a 50 per cent increase in pay and benefits.

Is it possible to absorb a 50 per cent increase in labor costs and still charge the same prices to your customers? We all know it is not. Fortunately, the workers settled for less, but not much. So, we are going to feel it nonetheless.

The airlines are forced into the same game as the rest of the industries that serve visitors to the Golden Gate City.

It's all relative, though. One of the Guild's regional vice presi-

dents, Ernie Preuitt, recently sent an article into the home office that illustrates this point. It's from a "consumer-complaint" column.

Q. I am writing about a rip-off. The General Electric factory service company in Kansas City charged me \$70.35 for a 15-minute repair job. According to the bill, I was charged \$22.95 for labor, \$19.95 for the service call, \$26.40 for a defrost-time part and \$1.06 tax. I called in to complain, but the company said the charges were correct. How can this be?

R.A., Independence

A. We, too asked for a review. T. A. Hendrix, GE specialist in customer relations, told us the charges were correct. Hendrix said the technician was at your home a little more than 15 minutes but did complete the repairs quickly. GE uses a flat rate for repair jobs, and Hendrix said the rates used are competitive in the Kansas City area. The rates provide for only a reasonable profit, he added.

Conventions, like seminars, chapter meetings and our fine institute are all vehicles which enable the ambitious, progressive, professional technician to get ahead in his/her field. It is considered an absolutely vital process to those who really know what it's all about. That's why the most successful people can be found in attendance.

The grave danger which we all face as an educational arm of our industry is that some members may be priced out of the market. These meetings cost money.

True, they are a legitimate business expense. True, the government allows us to extract a certain amount of tax benefit for our participation. It is also true that there are other limiting factors which we must face such as business

volume, surplus of income over expenses and personal needs and restrictions.

That's why it's so important that we plan ahead for these important events.

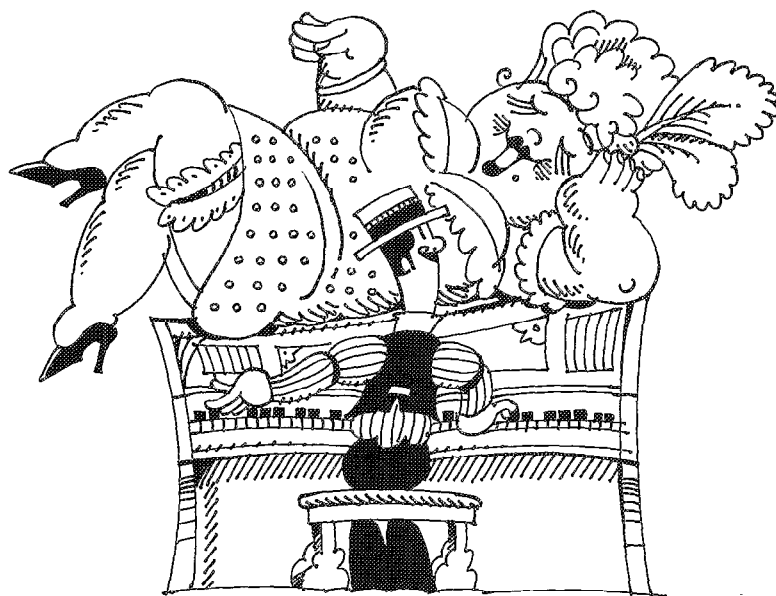
We do our utmost to keep the costs of our national convention and institute *down to the absolute minimum* in cost. We negotiate years ahead. We use every conceivable method we can with the hotels to squeeze them down to the point where we are taking chances on the levels of service. Remember, they just have so much to give for so much in return — just like us.

We also try to leave some room for those who simply can't afford it to take an alternate route. That's why we make arrangements for less expensive rooms, college dorms nearby and some functions "by choice." Serious considerations are being made to book college campuses in the future, but the right formula must be hit upon to satisfy *all* membership, including those who do not choose to live in a dormitory.

This year, we have an opportunity, for those who can afford it, to go to Hawaii for a post-convention trip. It will last seven days, take in three islands and contain all of the ingredients of an extended convention with classes and social events. We went through several pricing processes with different tour groups and wound up with one that had the most to offer for the least money. This will be a *once-in-a-lifetime experience* if you can possibly afford it.

One should look at convention costs in relative terms. If an average tuning costs around \$45, then just one tuning will cover the main banquet and the closing luncheon. A couple of tunings will cover

Everlasting Everett.



The weight of time wears well on Everett pianos. That's probably why piano technicians keep finding old Everetts people want to keep tuned. And we think the pianos we build today will last even longer.

Standard features like solid Sitka spruce soundboards, Pratt-Read keys and direct-blow Pratt-Read actions, 15-ply hard rock maple pinblocks, one-piece leg construction, poplar laminated keybed, and Denro nickel-plated tuning pins have been added.

We also proudly boast of a new management team dedicated to our growth. But with all that's new, we still have the same uncompromising dedication to craftsmanship.

So next time a customer asks you to recommend a piano, remember Everett.



Noteworthy pianos since 1883.

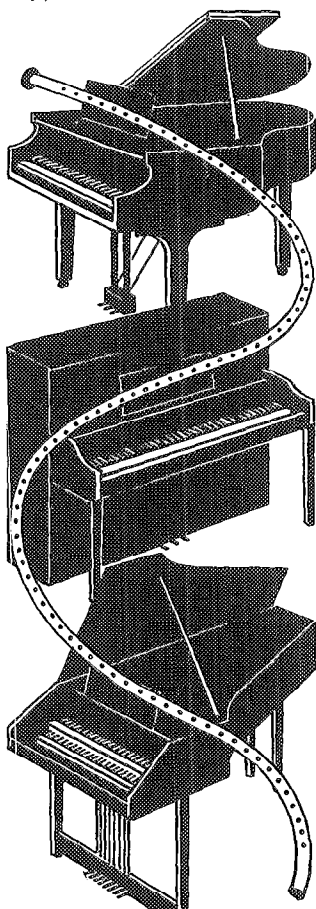
Everett Piano Company, South Haven, Michigan. A division of Yamaha International Corporation.

registration. A few more will cover your room, and a couple of days work could pay for your transportation.

Is it worth even a week's labor to experience what a convention and institute can give you in terms of advance technological information and fine fellowship with fellow craftsmen and women?

Now, if you think it's not possible to extract enough of a fee for your service to be able to afford improving your skill and knowledge, upgrading your industry and securing your future, please keep in mind the following:

A man took his car to a local repair shop after trying to fix it himself. The mechanic fixed it with amazing ease by just taking a broom stick and hitting a part vigorously a couple of times. Shortly thereafter, the guy got a bill for \$100. Enraged he returned with a demand for an itemized bill. The bill came back with a note that said, "For tapping with a broom stick, \$1. For knowing where to tap, \$99."



dampit[®]

Patent No. 3,407,700

*The Sensational New Humidifier
for Grand • Upright • Spinet Pianos
Harpsichord • Harp*

ORMAN D. PRATT,
distinguished piano technician, writes:

"This is to highly recommend your product, the DAMPIT for keyboard instruments.... I have used and studied the DAMPIT over a period of a few years. Keyboard instruments that formerly evidenced excessive seasonal pitch-drift due to the dryness of winter furnace heat, have become remarkably stabilized...."

dampit is scientifically designed, flexible, safe.

dampit is economical and easy to use.

FREE ROOM HUMIDITY INDICATOR WITH EACH DAMPIT
sugg. retail price \$22.50

Write for illustrated circular and terms.

dampits, inc.

Box 493 Radio City Station, New York, N. Y. 10101

In world-wide use for string, fretted and wood-wind instruments

One final thought (and note of caution) from the newsletter editor of the Phoenix chapter, **Jim Coleman, Jr.:**

THE COST OF TUNING A PIANO

What does it cost to tune a piano? And what do you, the technician tell the customer when he asks? The customer should know what to expect to pay for services rendered, but he is usually ignorant of the value of such services.

Your job at this point is to convince him that *you* are the *one* and that *your* price is right! When a customer asks, "How much does it cost to tune a piano?," how do you respond? Do you tell him — and then he hangs up? Or, do you ask him questions pertaining to his piano? Questions such as, "When was your piano last serviced?," or "Are there any mechanical problems such as sticking keys, etc.?" are relevant.

Normally, if this is a "new" customer, a "yes" answer to the above question will require an additional charge. The safe thing to say is

that you really cannot tell what the cost will be without seeing the piano, but you can make a "ball-park" estimate based on the information received. Also, you should make it clear that if no work is done, there will be a service charge (if that is your policy) for the trip. I have seen service charges ranging from 50 per cent to 100 per cent of the "regular" tuning fee.

Naturally, you can charge whatever you wish for your services — but, be sure that your *customer* thinks you are worth it!

*When you
service an
Aeolian piano*



*You get
service
from Aeolian*

... because we manufacture everything that goes into our pianos ... so there's never an inventory problem.

Send for your free Aeolian service manual.

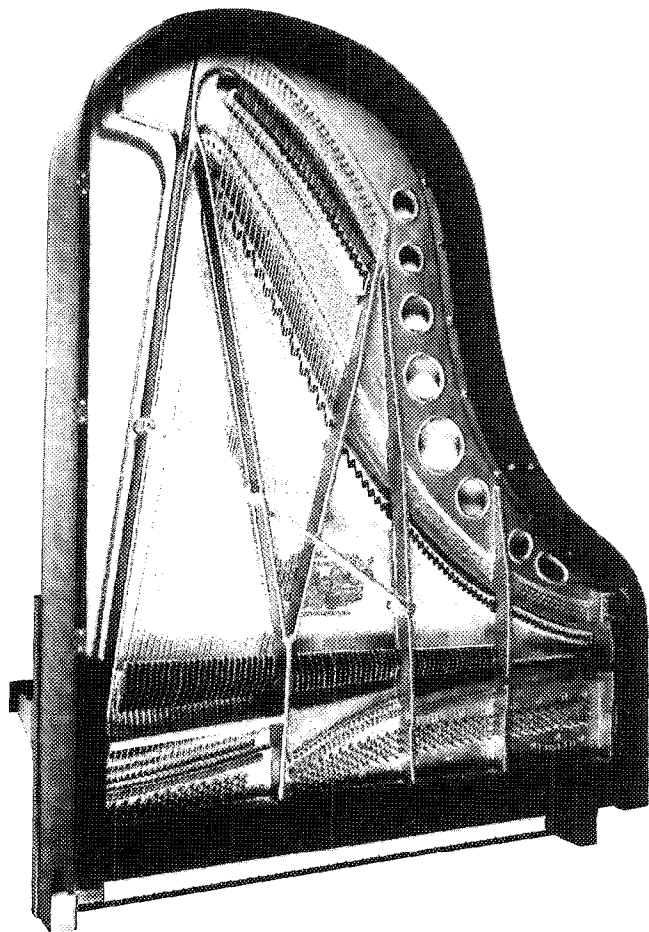
Mason & Hamlin • Knabe • Chickering
• Cable • Duo/Art • Ivers & Pond
• Melodigrand • Henry F. Miller •
Musette • Pianola • Vose • Winter
• Mason & Risch • The Sting II •
Cabaret.

AEOLIAN Corporation

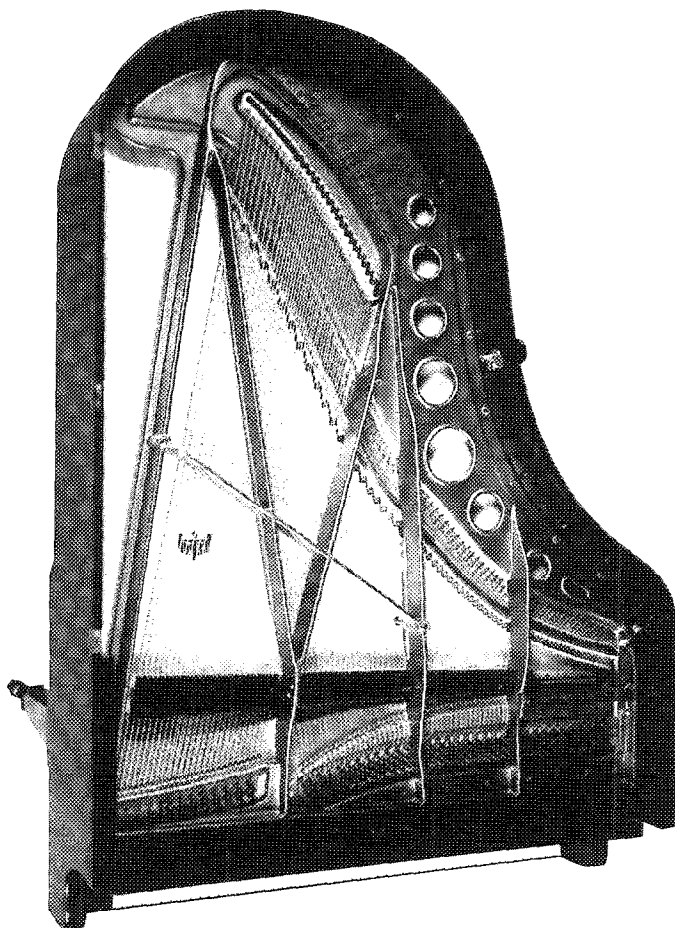
2718 Pershing Ave., Memphis, TN 38112
(901) 324-7351

The Resemblance Is Obvious!

The Kimball 6'7" Grand



The Bösendorfer 6'7" Grand



Look into a Kimball Grand Piano and you'll see a striking resemblance to the world renowned Bösendorfer. That's no accident.

The same touches of greatness previously found only in the Bösendorfer can now be found in the Kimball. Like the same distinctive plate pattern. Or the same gleaming polyester finish, the only finish of its

kind on an American made piano. Plus, every Kimball Professional Grand also features the famous European Schwander Action, and a totally new scale design. All the things which make a piano a joy to play, and a joy to work on.

Kimball Grand Pianos. Take a look and you'll see our quality is obvious.



kimball®

A beautiful way to express yourself

Kimball Piano & Organ Co.
1549 Royal Street, Jasper, Indiana 47546
A Division of Kimball International, Inc.

PRESIDENT'S MESSAGE

Bob Russell, President



A new year and an exciting year is upon us. We don't know what's around the next bend in the road, but we can be sure we will be ready for whatever happens, because life is good if we prepare ourselves.

We are constantly being reminded that "you get out of life what you put into it," or "life is like a piano ... what you get out of it depends on how you play it" or other, but similar, philosophies.

Sometimes I feel that I see and hear these thoughts so many times I begin to take them for granted, yet there is so much truth in them.

I spend about two months traveling for the Guild each year — teaching, board meetings, conventions, banquets, etc. — and I never attend an event where I don't meet someone who is inter-

esting and who adds some meaning to my life.

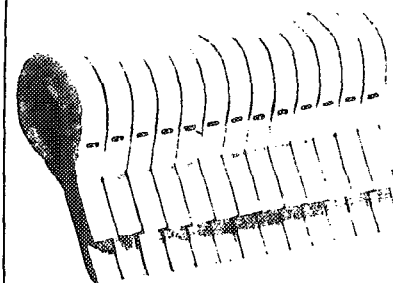
No, I don't receive a salary from the Guild, but usually I receive some help with my expenses from chapters, seminars, or the Guild, but I still do not recover all my actual costs or loss of personal business.

Why do I do it? Because it adds meaning, strength, knowledge, and excitement to my life. You must put a part of yourself into the mainstream of life if you expect to reap the benefits. Once you get into the habit of giving yourself to others it gets easier and the benefits become even greater. I am constantly and pleasantly surprised by the kindness shown to me by others as I go through life, yet when I expressed this thought to a friend he wasn't surprised at all. It seems the habit of giving has become so much of a habit that I am unaware of it.

I am expressing these feelings to you so that all of you will begin the NEW YEAR giving of yourself to others. The end result makes you feel good in your efforts and you will reap a great joy that is beyond words.

Read all the phrases; appreciate their meanings; let them tune you onto a wonderful experience.

Because of the great support we had last year, once again we will have a flea market at the San Francisco convention. Begin right now to get your "goodies" together and gain financial rewards for your chapter. This year our flea market will have an Hawaiian motif and will provide us with the atmosphere for the Guild's great Hawaiian, post-convention trip of a lifetime! □



IMADEGAWA

HAMMERHEADS FROM JAPAN

		Unbored	Bored
Grand	15 lb	U.S. \$77.50	\$82.75
Upright	14 lb	\$59.50	\$63.75

Unbored:—Pls. state number of bass

Stock Sets:—Pls. state number of bass hammers, plus measurement from strike point to center of hole.

Custom Bore:—Number samples. Mark stated value under \$2.00 to avoid hold-ups.

Please add \$3.00 per set to cover postage. We ship within 24 hours by registered mail.

Bank draft, money order, or VISA # must accompany your order.

Write or phone 1-(416)-483-9622

Piano Technicians Supply Co.
72 Old Orchard Grove
Toronto, Ontario, Canada M5M 2C9

VISA

NOW!

A Map to the Treasures In Your Old Journals

Author and Title		
Epoxies		
— J. Arnold	Epoxies - V	
— James I.	Epoxies and T	
— ch, Delwin	Epoxy Gluing of	
— Don	Quick 4-6 Minute E	
— John	Epoxy Bridge Repair	
— Harry W.	Epoxy Glue	
— Robert W.	Epoxy Cement on Loose P	
— John E.	Epoxy Soundboard Repairs	
Spreaders		
— James	Electric Glue Gun	
— raid S.	Heat Gun Source	
— an	Gluing with the Grease Gun	
— John	Buzzes in Soundboard	
— John	Glue Spreader	
— John	Electric Glue Gun	
500 Waters & Ivoryine Cement		
— Hoskins, Leslie	Mussel Glue	PTJ
— Ramsay, John	Ivory Glue Formula	TPT 05
370 Tapes		
380 Softening Glues		
— Krefling, Jack	Replacing Upright Shanks	PTJ 11/7
— Johnson, James L.	Separating Glue Joints	PTJ 06/7
— Overdorff, Anson	Glues and Solvents	PTJ 01/72
— Scheer, John	Softening Glue	PTJ 12/70
— Kegley, Paul	Disappearing Acetone	PTJ 05/66
— Koford, H. O.	Soft Glue in Heated Sand	PTJ 08/59 33
	Loosening Soundboard Glue	PTJ 03/58 9
390 Glue Removal		
— Scheer, Larry	Removing Glue from Uneven Surfaces	PTJ 09/77
— Scheer, Larry	Squeeze Out	PTJ 09/7
— Scheer, John	Remove Glue Uneven Surface	PTJ 03/7
— Overdorff, Anson	Softening Glue	PTJ 02/7
— John	White Glue	PTJ 11/7
— John	Glue Removal	PTJ 09/7
— Joe	Gluing Ivory Replacements	PTJ 08/59
— Charles	Remove Old Key-Top Glue	PTJ 03/58
— James L.	Lubricant WD40 Tested	PTJ 09/77
— John	Lubricants	PTJ 09/7
— Bernard	Emralon in Piano Actions	PTJ 03/58

\$25

Send check or money order to:

**Piano Technicians Guild
113 Dexter Avenue North
Seattle, Washington 98109**

Now, you can find the information you need — quickly and easily. It's all here in the "Classified Index to Published Piano Technology." This 293-page index can guide you to any one of the thousands of articles that have appeared over the years in the **Piano Technicians Journal** and four other publications related to piano technology.

All you have to do is look in the index under the subject heading you need. There you'll find listed all of

the articles published on that subject.

You'll find out who wrote a particular article, the title of it, the issue in which it appeared, and the page number. Then, you just grab the issue you need, and the information is yours. Quick and easy.

And, the home office of the Guild can send you a reprint of any article listed in the index that you don't have. So, how can you afford to be without it? Order your index today.

THE TECHNICAL FORUM

Jack Krefting, Technical Editor

To start the new year off right, we are introducing a new series of technical articles on the fine art of tuning, authored by none other than **James Coleman, Sr.**

If you will pardon a bit of reminiscence, I want to mention that I first met Jim at the Piano Technicians Guild's Portland convention in 1972, where he was teaching a class on tuning. His demonstration piano was not a concert grand or even a studio upright, but rather a 36-inch spinet which had been tuned within an inch of its very life. He admitted to having "gone over it a couple of times," which is like saying that Bach was a fairly decent composer or that Attila the Hun wasn't always the perfect gentleman. In short, the tuning was absolutely beautiful, better than anything I had ever heard and at least as good as any tuning I have heard since. I am especially pleased, therefore, to announce this series of articles.

Willard Jost of Franklin Lakes, New Jersey, has written us to say that he thinks a bit of humor now and then would not be misplaced in the *Journal*. He has contributed two ads clipped from his local newspaper as a sample:

For Sale

PIANO — 1901 Schaeffer Upright Grand, beautiful, new felts, burn on top, cracked bridge, dried sounding board, \$50.

For Sale — Webster Pure Mahogany Piano from the 1930's, good condition, needs to be tuned, must sell, moving, best offer, call 000-0000.

Regarding this second ad, Jost wondered aloud just who would

want an "impure" mahogany piano? Or, speculated Jost, possibly it's all mahogany and nothing else.

This month we will open a discussion of some aspects of key dip, which we hope will be further explored by our readers.

KEY DIP

Since key travel is one of the few specifications to which manufacturers seem insistent upon adhering, even experienced technicians sometimes fall into a trap that is precisely $\frac{3}{8}$ " deep. Supply-house touchblocks are customarily made with a maximum thickness of $\frac{3}{8}$ ", and this seems to square with the usual statement that touch depth should be of that dimension.

Frequently, however, we find the manufacturer is specifying the apparent dip rather than the actual amount of downward movement of the front of the natural key. A dip of $\frac{3}{8}$ " at the front would equal 0.375", yet one maker specifies a dip of 0.390" and another tells us to set the dip at $\frac{3}{8}$ ", while still another says that $\frac{3}{8}$ " travel should be measured at a point $\frac{1}{4}$ " back from the front of the key, which is where the pianist usually applies the force. This can become confusing even if we don't mention after touch, applied force, or key-dip angle.

A fourth factor is introduced when we consider that piano makers might have two touch blocks for a given model, one for factory use and a thinner one for field use. The reason for this is that

balance rail punchings compress much faster and to a far greater degree than do front rail punchings, partly because of their smaller area and partly because they bear the weight of the action parts and keys all the time, whether being played or not. The factory block, then, would be slightly thicker to compensate for anticipated compression.

If after touch is defined as the amount of key travel after escapement (a subject which has been somewhat controversial of late), then the amount of dip directly affects the amount of after touch. I am not suggesting the after touch be regulated by altering the dip. I prefer instead to adjust the hammerline, but it certainly could be done that way if evenness of touch depth were not considered of primary importance.

The applied force used when checking the dip is of vital importance, as a greater weight will compress the front-rail punching more than will a lesser weight. A reasonable standard to use would be a force of one pound of downpressure on each key tested, and of course that force must be applied at the same distance from the end of each key. Moving toward the balance rail would lessen the comprehensive effect of the same force, just as the application of that force at the very end of the key would increase it. A reasonable spot for the measurement of the downpressure might be right over the front-rail pin.

One of the most interesting aspects of key travel involves the angle, which is directly affected

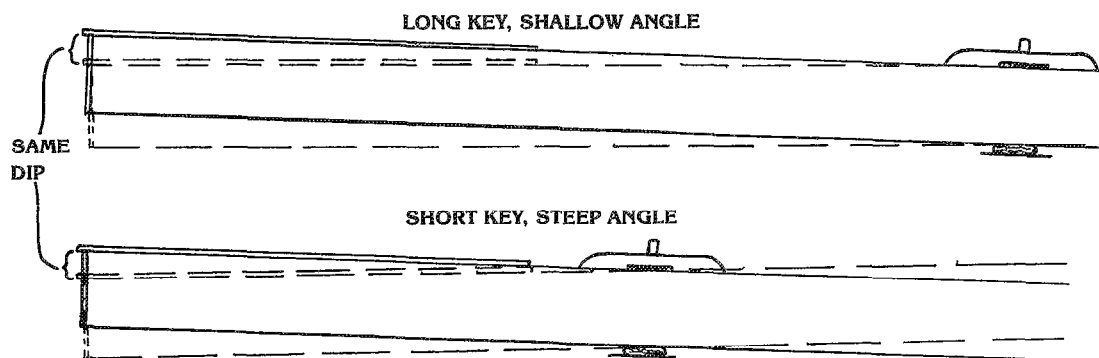


FIGURE 1

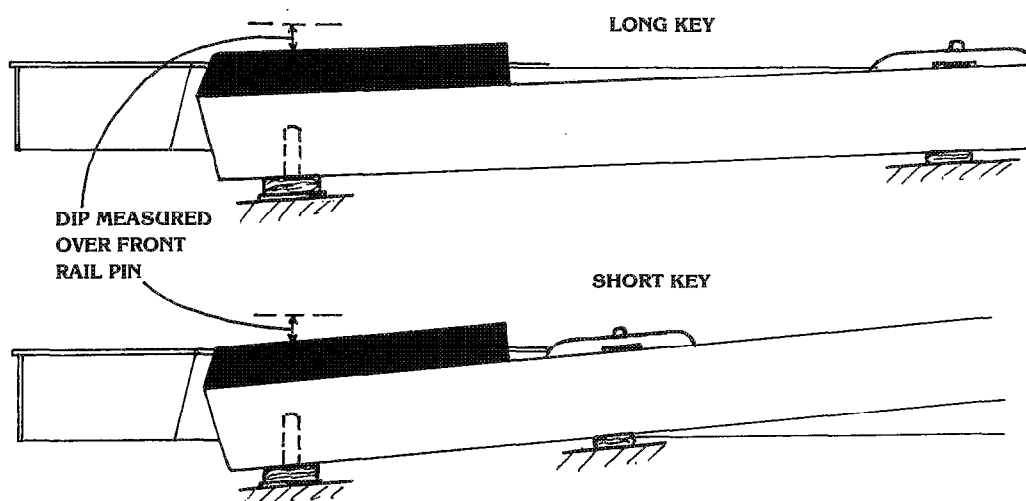


FIGURE 2

by the length of the key. **Figure 1** illustrates that the longer the key, the steeper the angle at any point in its travel, assuming the same amount of lift at the capstan and the same amount of total dip at the front.

This may or may not be of importance to the pianist, depending upon how much of the key is used during playing. The longer the key, the less would be the difference in the force required to depress it over the length of the keytop; if the pianist "gets into the keyboard" well between the sharps and close to the fallboard, less force will be required if the keys are long than if they are short.

This might well be important to the pianist, but it is of at least equal import to the technician when laying the touch. We will return to that in a moment, after considering the implications of

the length of the sharp keys on touch depth measurement and adjustment.

Figure 2 shows two sharp keys at full dip. The angle is important here, too, because if the touch depth is measured over the front-rail pin, the short key will tend to "bury" more into the adjacent naturals, at least at its very front edge.

Some technicians set touch on sharps by comparing the height of the front edge of the sharp with the thickness of a coin lying on the natural keys. This procedure guarantees uniformity of dip in the sharps, but cannot necessarily guarantee the correct amount. In this respect, measurement of dip at the back of the keystick (near the capstan) would be more accurate, at least in terms of the amount of lift at the capstan in relation to that of the natural keys.

Laying the touch on sharps is a controversial topic, having produced far more comment in past issues of the *Journal* than natural key dip.

Bill Pealer stressed the importance of the capstan lift on page 10 of the June 1975 issue, for example, and recommended the sharps be dipped so that the wood of the keystick just forward of the capstans be compared with the height of adjacent natural keysticks in the same spot.

Paul Sobus has suggested that sharps on vertical pianos be dipped so that the hammers will check evenly (*Journal*, December 1973, page 8), which is a common procedure in the manufacture of new verticals.

Anton Kuerti mentioned the thickness of a penny above adjacent naturals as being about right (*Journal*, March 1975, page 16),

although he also cautioned his readers about the importance of after touch and whippen lift. One of my most distinguished predecessors, Don Galt, recommended that the dip on grand piano sharps be set according to feel, so the aftertouch would be even and comparable to that of the natural keys (*Journal*, July 1969, page 11).

Still another method has been described by Chris Robinson on page 10 of the March 1975 issue, which involves the setting of three test keys and the use of a straight-edge to set the remaining sharps.

Which of the above is the best method of laying the touch on sharps? The answer, I think, might be more hedging than our readers might like. If the piano is a vertical and all parts are new and uniform in dimension, the method suggested by Paul Sobus has real validity in my opinion. With worn parts, or parts which are not uniform, I would prefer Bill Pealer's method because it insures performance at the back end of the key.

At some point, on one piano or another, the technician must exercise judgment and assign priorities. Is the actual amount of dip at the front of the key more or less important than evenness of aftertouch? Is the evenness of whippen rise more important than the degree of "burying" of the sharps between adjacent naturals?

Clearly, especially in cases where parts are not uniform, some compromises will become necessary. There must be some after touch, for example, but the precise amount may be less important to the pianist than evenness of key travel. Some pianists seem to be more highly attuned to one or the other, which tends to color our judgment in a particular instance.

Figure 3 illustrates three types of dip blocks for natural keys which are commonly seen in use. The first is a plain block of wood or other material, tapered for a particular scale. The second block, labeled "B," has a channel cut out of the bottom to eliminate any rocking that could result from a convex surface and a plastic overhang which simulates that of a piano key. The third block is like the first but has a protruding brass

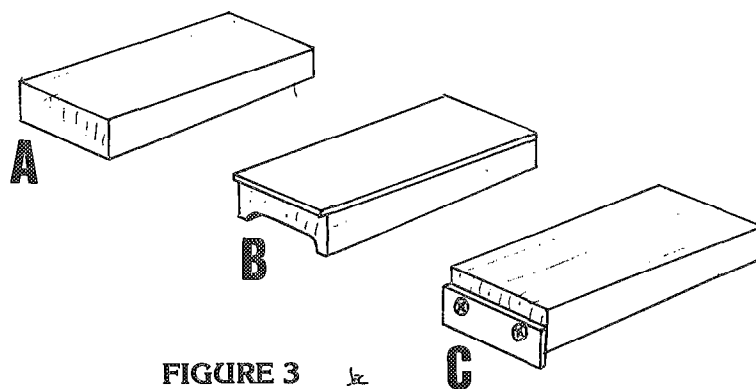


FIGURE 3 *lx*

lip which makes it easier for the technician to place the block in exactly the same position on each key.

One point that I would like to stress is that no single touch block will be suitable for all pianos without a certain amount of modification or allowance for the differences in key length, angle and travel specification. Having said that, I realize the working technician does not carry factory touch blocks made for every make and model encountered in the field; so we must find a way to make do with the two or three blocks we have on hand.

A thin block can be temporarily thickened by the addition of layers of tape, just as a thick one can be sanded down if necessary. The important thing to remember is that if both sides of the block are to be used, both must be identical.

Figure 4 illustrates, in greatly exaggerated form, how a block designed for a short key can be used on a piano with longer keys, or vice versa. The angle is wrong, but so long as there is some point on the length of the block which can be made to coincide with the specification, the block may be used. Simply, a test key at the proper dip and, with the touch block in position, mark the spot where the block is level with the adjacent keys. Use only that particular spot when dipping other keys.

One factory system which I would recommend is that of dipping only the C and F keys with the touch block. The remaining naturals may be very accurately set by the process of "drumming off" or comparing the dipped height of each key with that of the test keys.

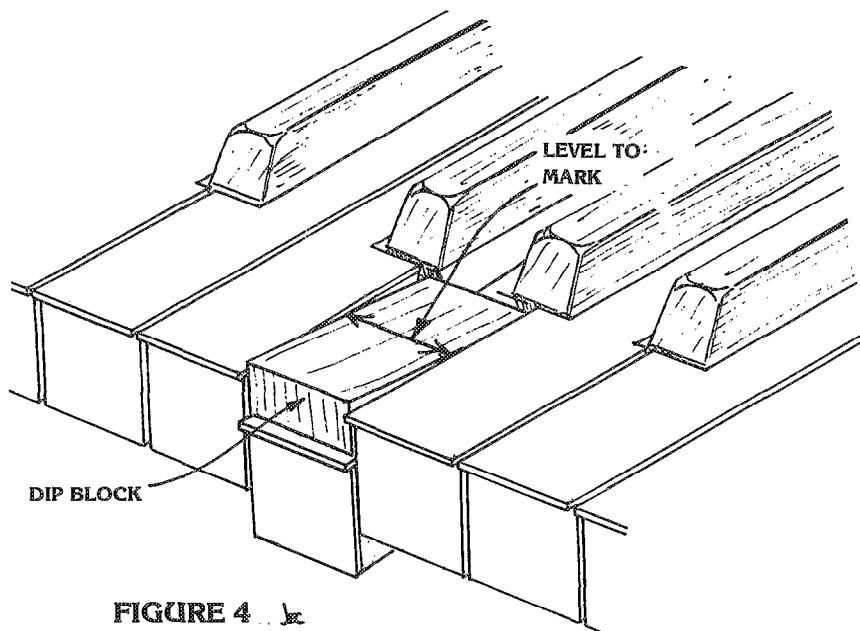


FIGURE 4 *lx*

A skilled technician can feel the difference even if it is less than a thousandth of an inch, so this system is just as accurate as that of using the touch block on each key, and it is much quicker.

Ed Schneider, superintendent of the grand piano factory at Baldwin before Cliff Geers held that post, would insist that any technician who could not feel a difference of a thousandth of an inch simply had too much skin on his fingertips. The technician was handed a piece of sandpaper and instructed to sand the excess dead skin from his fingertips so he could be sensitive enough to regulate a piano. It really works, although many people nowadays don't believe it. That was before the days of OSHA, which will likely make a government regulation prohibiting the sanding of fingertips if the word were to get out.

LOOSE TUNING PINS

QUESTION: "A fact not unusual here is for a pin block to be found with say 2/0 pins, and in good condition, but with say nine pins completely loose, beyond even a 6/0 pin. I have been using the procedure of shimming the holes with not very good results. Would the insertion of a cylinder of pin block material of about 9 to 10mm diameter into the hole with some

glue solve the problem, with previous reaming of the hole? What should be the interference, fit between the two? Any better suggestions?" — **Carlos Eugenio Borges Cortes, Rio de Janeiro, Brazil.**

ANSWER: The procedure used to correct the condition might well vary according to the circumstances and specific symptoms. In this instance, with approximately 220 pins of 2/0 size holding well and nine pins of 6/0 size still too loose, something is drastically wrong.

I would be very surprised if these loose pins were scattered throughout the scale in random fashion, because that symptom usually points to a pinblock that has delaminated, cracked or been contaminated.

If a technician notes that the loose pins are all lined up in a row, it would not be illogical to assume that at least one lamination is cracked; driving oversize pins into such a block will simply make the crack longer and wider than before. Shimming the hole with sandpaper, a repair which is often successful in the case of an isolated loose pin, would not be likely to work here either, for the same reason.

Before doing anything, the technician should try to determine the cause of the condition. If the loose

pins are all located near plate screws or pressure bar screws, it is just possible that a screwdriving lubricant has contaminated the areas of the block around the screws. Oversize pins would not be a good choice here, either, because whatever lubricant is making the original pins loose will also affect the oversize pins.

Instead of being just loose, they may be loose and jumpy, which isn't exactly a tremendous improvement, especially when you consider that oversize pins are touchy to tune anyway because of the amount of wire they pull for a given arc of hammer movement. Not only have we failed to solve the problem, but we also now have enlarged holes to deal with.

The best remedy for any pinblock problem is to install a new pinblock of the finest quality obtainable. Having said that, however, I must add that this is often not feasible for economic or other reasons, and very often it becomes necessary to find an alternate solution. The table accompanying this article lists some of the typical symptoms and probable causes of loose tuning pins, as well as some suggested remedial procedures.

TROUBLESHOOTING LOOSE TUNING PINS

SYMPTOM	PROBABLE CAUSE	BEST REMEDY	ACCEPTABLE ALTERNATE SOLUTION
1. All pins uniformly loose in relatively new piano. Pinblock not delaminating.	1. Improper drilling of holes at factory, poor quality material, lack of proper wood conditioning before drilling, or excessive dryness in environment.	1. New pinblock.	1. Repin with new pins 0.010" larger in diameter. Measure each old pin to be sure it is 0.281" in diameter.
2. All pins uniformly loose in old piano. Block not delaminating.	2. Wear, dry environment, general deterioration.	2. New pinblock while repinning.	2. If piano is of good quality, especially a good grand, repin as above. Check torque
3. Several pins very loose in a straight line.	3. Cracked lamination.	3. New pinblock.	3. Drill offending holes out to ½", plug with pinblock material and redrill for 2/0 pin.
4. Several pins very loose near plate screws or pressure bar screws.	4. Lubricant on screws may have contaminated the block.	4. New pinblock.	4. Plug as described above; or coat the inside of the hole with resin or epoxy. Reinsert pin and turn it before epoxy cures fully.
5. Most or all pins loose in a doped block.	5. Deterioration of wood.	5. New pinblock.	5. Bore one or two holes to ½" diameter and inspect. If wood is sound and not contaminated by dope (no black visible), plugging might work.
6. Many pins loose on junk upright.	6. Age, wear, deterioration.	6. New piano.	6. Apply pin dope, but don't guarantee results.
7. Many pins loose, block shows signs of delamination.	7. Dry environment, poor glue joints, moisture.	7. New pinblock or new piano.	7. None.
8. Random loose pin.	8. Wood defect, drilling error, deterioration.	8. Oversize pin, up to 4/0 size.	8. Sandpaper shim, installed with grit side toward block and paper side to pin.

NEWSLETTER TECH REPRINTS

The following article appeared in the November 1979 issue of the newsletter of the Cincinnati chapter of the Piano Technicians Guild. The author is Ben McKlveen.

Ned Dodson of Colesville, MD, introduced an upright action regulating jig at the Guild's national convention in Minneapolis. It is a clever and useful piece of equipment which has a variety of uses.

For example, it could be used to bench regulate an upright action, hang hammers, regulate spoons, replace or regulate damper felts or any combination of these things and do them all away from the piano.

The jig consists of two plexiglass plates, one for the treble section and a smaller piece for the bass section. These two pieces bolt together in such a way that when they are properly mounted on threaded rod, and secured with a combination of hex nuts and wing nuts, the plexiglass plates can be made to hang at exactly string distance from the hammers.

The jig is made in two pieces so the bass plate can be bolted to the treble plate with a pair of 1" machine screws. By using spacer washers, the lower section may be positioned to match the overstrung bass strings. The plates are bored with $\frac{1}{4} \times 3$ " slots so that almost any action with four brackets can be accommodated (see Figures 5, 6 and 7).

For hammer hanging, the mounting can be set at exactly string distance from the hammers. In addition, the plexiglass can be marked with a magic marker to simulate string position and direction so that correction of side-to-side alignment of hammers, dampers or action parts can be made before new hammers are installed.

Since the plexiglass is transparent, it allows complete visibility from the back side of the action while providing a simulated string — a boon to damper spoon regulation.

Parts needed for construction are:

- 1 piece plexiglass — approx. 40" x 6" x $\frac{1}{4}$ "
- 1 piece plexiglass — approx. 20" x 6" x $\frac{1}{4}$ "
- 4 pieces — 4" x $\frac{1}{4}$ " threaded rod

- 2 — 1" machine screws
- 10 — $\frac{1}{4}$ " wing nuts
- 8 — $\frac{1}{4}$ " hex nuts
- 10 — 15 — $\frac{1}{4}$ " washers

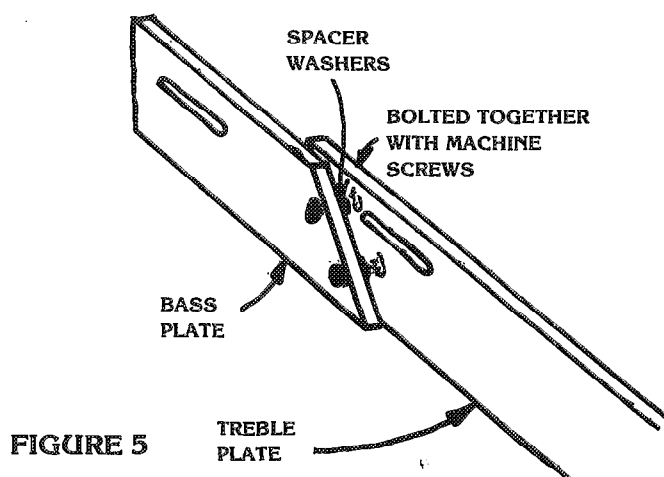
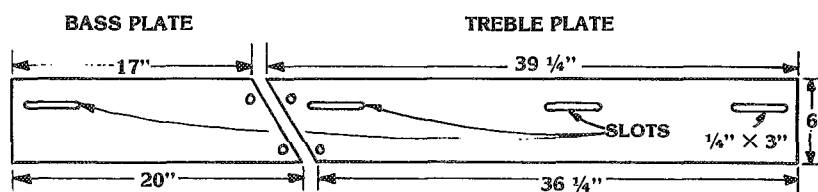


FIGURE 5



PLEXIGLAS PLATES FOR REGULATING JIG

FIGURE 6

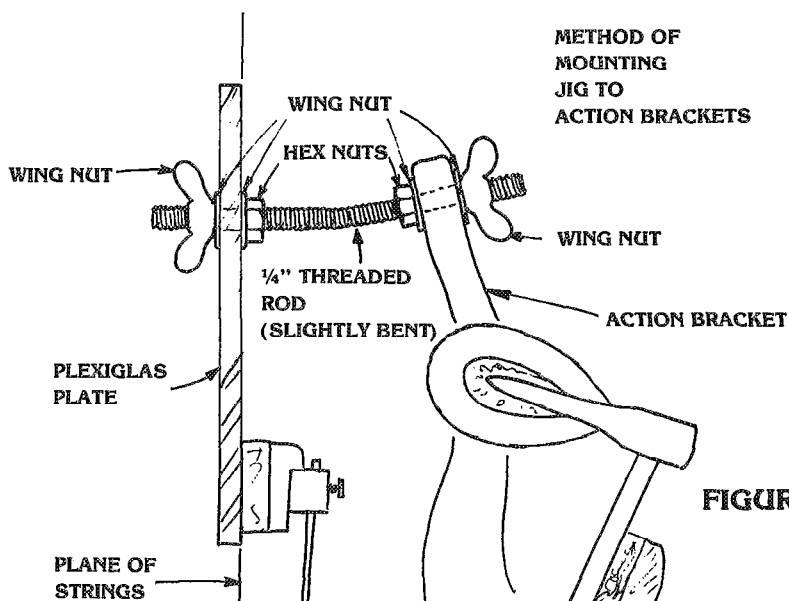


FIGURE 7

GRAND REGULATING CONTROVERSY

David Pitsch's article in the June 1980 issue sparked a rebuttal from Dave Merrill, which appeared in October. Now Jeff Denning has joined the fray, feeling that some of Merrill's points were well taken but others were not, and generally disagreeing with the tone of Merrill's rebuttal. Pitsch, incidentally, will take up the gauntlet in his own defense next month; meanwhile, here is part of what Denning has to say:

"... Question one in Pitsch's June article — (Does regulating the jack height to the balancier affect the strength of the spring?) was **yes**. Merrill said **no**.

"The jack height in the balancier is controlled by an adjustment button on the end of the balancier near the whippen center pin. When the hammer is at rest, the adjustment button contacts the felt. The jack height is adjusted with hammer at rest. The spring rests on the underside of the balancier, and when the balancier is moved, the amount of compression on that spring is increased. By adjusting the jack to the balancier, compression is increased or decreased, depending upon which way the balancier is moved.

"Merrill concurred in this regard, but said the answer was definitely **no**. I don't understand this. Merrill's proof was the fact that the strength of the spring is measured once the hammer is released from the back check, and, at this point, the adjustment button is suspended in mid-air and could be altered without affecting spring strength.

"This is true, but the proof has nothing to do with the question. Pitsch is correct in his response if the hammer is at rest. Merrill is correct if the hammer is not at rest.

"... Pitsch said adding a punching would increase aftertouch. Merrill points out that aftertouch would be affected, but not directly by the additional balance rail punchings. He indicates that doing so also causes the capstan to rise about half the distance of the balance rail which causes a subsequent increase in hammer height.

"But, as Merrill continues, the capstan also moves closer to the whippen center pin, thus changing the leverage, which actually causes the change in aftertouch.

"Using an example to depict this situation: place a .010 punching at balance rail. The height of key increases approximately .020 and the capstan increases about .005 inch. The hammer will rise a certain amount. So will the whippen. So will the jack tender be closer to the let-off button. This means the key does not have to travel as far to accomplish escapement.

"Meanwhile, we haven't added punchings to the front rail to limit the additional .020 inch travel that is no longer needed. To be sure, let-off occurs sooner, but we have more aftertouch as well. This is, in the purest sense, the result of **both** adding the punching and, to a far lesser degree, changing the leverages. The capstan indeed moves closer to the whippen center pin; the change in leverage is infinitesimal and the effect on aftertouch is negligible.

"... If the jack regulating button is altered to bring the jack forward (toward keys), the jack tender moves **down** and **further** away from the let-off button. Since the key must be depressed **further** to accomplish escapement, aftertouch will be affected just as Pitsch indicated. . .

"... Pitsch said the amount of drop is proportional to the amount of aftertouch. To be sure, Merrill's argument is more plausible. Drop can be altered any time and **not** have a proportional change in aftertouch. Nonetheless, Merrill said the drop does not really affect escapement or let-off at all. Using Merrill's terminology, this is incorrect.

"Merrill points out the drop adjustment actually determines the height to which the repetition lever will raise the hammer from the check position upon release of the key pressure. However, without the drop screw there would be nothing to stop the balancier from pushing the hammer up to the point where escapement should begin. Escapement can't begin and expect to perform what it is

supposed to do without a drop screw. . . " — **Jeff Denning, Phoenix, Arizona.**

TECH TIPS

Joel Rappaport recently related an interesting story about a tuning experience which we thought worth sharing. While tuning a grand piano of high quality, he was troubled by the presence of false beats throughout the middle and treble sections.

After struggling through the job, he felt obliged to let his client know there was something wrong with her piano. She was surprised to hear there was a problem, saying that the piano always sounded good except when the ceiling fan was on.

"The ceiling fan?" asked Joel incredulously.

"Yes, I've noticed that the piano always sounds funny when the fan is on," stated the client.

Sure enough, when the fan was turned off the sound was gone and the unisons were clear. Apparently there was enough disturbance of the air when the fan was operating to cause the tone to waver, simulating false beats.

Reid Welch of Hialeah, Florida, reports excellent results from a glue called "Hot Stuff" for emergency repairs. When an action part breaks, both parts are dipped in baking soda to neutralize the acid in the wood and are then placed in position together. The glue is applied along the break line, and is drawn into the joint by capillary action.

Within a few seconds, says Welch, the parts are welded together and can be used, even in high-stress circumstances.

This material is also effective for stripped screws, according to Welch. Place the baking soda in the stripped hole, insert the screw, and apply the glue to the screw shank.

Walt Kolbuss of Indianapolis has devised a modification of the standard upright hammer extractor which makes it easier to use. A spare action bracket nut is used as shown in **Figure 8** to allow quick and easy adjustment of the extractor to any shank length

without the usual laborious turning of the key.

GADGET OF THE MONTH

Paul Bruno has written an interesting article in "Butts & Flanges," the newsletter of the Guild's Cleveland chapter. The article was primarily concerned with the advantages of a flashlight which mounts on the forehead by means of a head strap, in the style of a miner's worklight.

Paul was discussing this with Bob Russell, who pointed out another very useful tool in the same catalog.

This tool is called a "soft-jawed plier" (see **Figure 9**) with curved, specially padded jaws designed to grip cylindrical objects $\frac{1}{2}$ " to $2\frac{1}{2}$ " in diameter. The tool is 9" long and, according to Russell, is ideal for removing and replacing nosebolt nuts.

Both tools are available from the Brookstone Co., 127 Vose Farm Road, Peterborough, NH 03458. Our thanks to Paul and Bob, as well as Editor Al Metz, for this information.

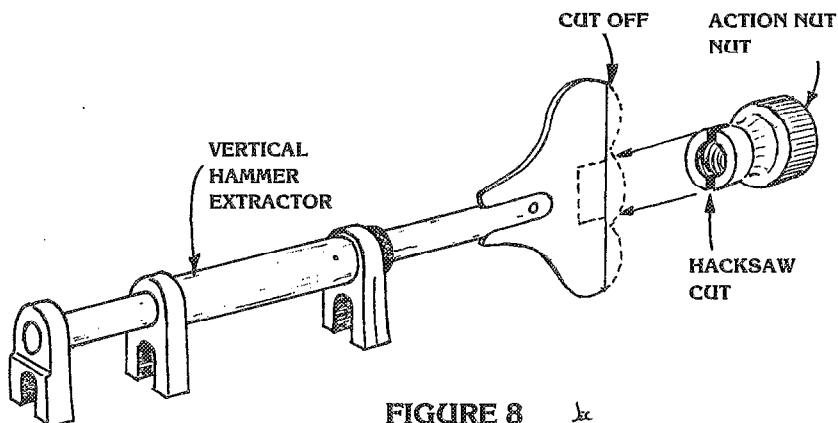


FIGURE 8

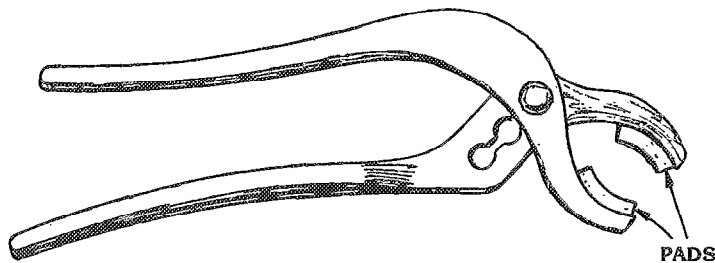


FIGURE 9

COMMENTS FROM READERS

"I would like to read Loest's article on square regulating, although I agree with what you have said regarding (the) questionable design of these pianos..." — **Paul E. Bergan, Port Bolivar, Texas**

"I wanted to express my appreciation and enjoyment of the *Journal* in general, and specifically the quality of the series by Dave Roberts. I think there should always be at least one article that goes in depth to this degree in the *Journal*. I've learned a lot from this series. Please pass on my appreciation." — **Allen Wright, Orlando, Florida**

"I would be very interested in reading Roland Loest's article on regulating square pianos. Any information on pre-20th century instruments is hard to find, and yet the instruments are quite common — especially on the East coast." — **Margaret Ikeda, Darien, Connecticut**

"As one of the avid readers of your columns in the *Journal*, I

would like to cast my vote for the article on square-grand regulation by Roland Loest to be in a forthcoming issue. Those few of us who service square grands would appreciate it, and perhaps others would not be so reluctant if they had the know-how.

I believe the *Journal* should cover such subjects as vertical pinblock installation, plate casting, Dave Roberts' formulas, antique pianos and other subjects which please 'minority groups', as well as problems the tuner-technician encounters in the normal line of duty." — **Sid Stone, Hayward, California**

CONCLUSION

I must admit I didn't realize how much interest there would be in this topic when I offered to publish the Loest article if interest seemed to warrant it. Obviously it does, so that article will appear in this issue. As always, we welcome comments, criticism, technical tips and articles for publication. Our thanks to all of this month's contributors. — ...
JK

Please address all technical correspondence to Jack Krefting, c/o Baldwin Technical Service, 1801 Gilbert Avenue, Cincinnati, OH 45202. □

Regulating Square Grands

by Roland Loest

REGULATING A STANDARD "FRENCH" SINGLE-ESCAPEMENT ACTION

About the author: Roland Loest is the principal piano technician for a New York firm which specializes in the restoration of square grands and other 19th century pianos. The author is also a concert pianist and consultant to the Metropolitan Museum of Art on historic keyboard instruments.



The single-escapement, "French" action evolved out of the German and English grand piano actions of the early 19th century and garnered the monicker "French" around 1850 when it began to be the norm in American square grands. It was still present, predominantly in square grands, until the turn of the century. Even today many restored or well maintained instruments are found with one form or another of single-escapement action.

Its principal value is its extreme simplicity and directness. However, this simplicity can be deceptive when analyzing regulating requirements. Much depends on absolute precision in regulating key dip, flange tension screws, etc., some of which elements have either a different value or are nonexistent in modern double-escapement actions.

Typically, the single-escapement action consists of a rocker (a French invention, thus the name "French"), attached to the end of the key by two screws, and a jack pinned directly to the rocker and returned to position by a spring contained either underneath the rocker or mounted on its end.

The two screws alter ("rock") the position of the rocker whereby the jack is raised or lowered relative to the hammer butt. The ham-

mers are mounted on a flange rail and their shanks rest on a hammer rail whose edge also serves as a regulating rail for the escapement buttons.

Key dip is generally shorter and hammer blow somewhat longer than on a modern grand. Escapement, especially in square grands, is typically graduated from mid-keyboard to the top note between 1/8" and 1/16".

PREPARATORY WORK Removing the French action

As in modern pianos, makers anchored the actions in square grands in a variety of ways, but in

grands in a variety of ways. But in all cases, the action is simply pulled out like a drawer, usually with a wire handle in the front of the key frame.

The keyslip is almost always attached by slipping over screw heads in the front of the action frame on to conical slots inside the keyslip. Sometimes the keyslip is glued to the keyframe, in which case handles of some kind should be found on the keyblocks for pulling the action out.

In the former case, this can be simply lifted out of place by hand. If this does not expose several screws going through the front edge of the action frame into the keybed, then feel underneath the keybed for three or four holes recessed along the front edge of the action cavity. These generally contain heavy screws that are operated with a tuning hammer or T-hammer fitted for oval pins.

Sometimes ordinary slotted screws will be found here. If there are no screws in this area, check directly underneath the keyblocks where the nameboard is fastened. Sometimes screws are used that extend through the keybed, keyblocks, and into the nameboard, holding the entire structure to-

gether and also fastening it to the keybed.

The nameboard will sometimes be a large flat piece that slides straight up out of the piano and is mounted in slots at each side, particularly in very old pianos. Most often, however, it is a much smaller piece screwed directly to the keyblocks at each end and slides out with the action. These are sometimes slotted screws, but more often are operated with a tuning hammer or T-hammer as described above.

Keys

The keys are laid in the keyframe precisely the same as in any keyboard action. Unless more specific guidelines are set forth, generally the best procedure is to use a key height which leaves approximately 1/8" of upward keyplay between the back of the ivory and the underside of the nameboard. Black keys should be set so that they are flush with the whites behind the ivory. Keys should be squared and spaced accurately.

The keyframe is bedded to the keybed in the same manner as any keyboard instrument. In the back of many instruments' action cavity is a screw that butts against the member of the action frame forming the right side of the frame. Unless the position of the hammers suggests otherwise, this screw should be adjusted so that the front of the keyslip is flush at its treble end with the side of the piano case immediately to the right. The keyslip must, of course, be tight against the keyblock.

Hammer Rail Cloth

If the hammer rail cloth is to be replaced, a cloth that establishes 2" or 2 1/8" hammer blow (allowing for wear on the hammer surfaces if new hammers are not being used) is generally about right.

If the hammer rail cloth is not

being replaced and hammers are excessively far from the strings, the hammer rail can be raised by bushing underneath the points where the rail rests on the action brackets.

A guide to use here is how far forward the rockers can be moved to compensate for added height where the jack contacts the butt leather. Key level must first be established for this test.

REGULATING

Hammer - string - jack adjustment

The first step is regulating the position of each hammer to its string. After this, the position of each jack should be adjusted so that it meets the butt squarely centered. This can be done by inserting strips of travel paper under whichever side of the rocker needs to be raised in order to move the jack in the desired direction.

Rocker - jack relationship

The position of each rocker should be adjusted so there is no lost motion in moving the key to connect the jack with the butt leather, but the jack should not be so close that it rubs the butt when returning to position. No more than 1/64" of play in the key should be allowed to insure the jack freedom of movement in returning to position.

Some difficulty may be encountered where the jack has worn an indentation at its point of connection with the butt leather. This will cause the jack to rub the under-surface of the butt when it passes outside the indentation, both in letoff and in returning to position. This causes a jerky touch, with uncertain repetition unless undue lost motion is allowed.

Rocker adjustment

If there is no lost motion, first tighten the screw nearest the jack pin. Access to this screw can be had by raising the hammer until the jack falls out of position. The key can then be lifted off the center rail pin and drawn forward until the screw in question is accessible by inserting the blade of a screwdriver among the shanks between the hammer rail and regulating rail.

Do not try to remove the key unless there is clearly enough space between the regulating button and the tip of the backcheck. Sometimes the keyframe construction allows some keys to be removed with the action rails intact by dipping the backcheck end of the key through the spaces left by the members of the keyframe while holding the action off the surface of the regulating table.

If adjusting the screw nearer the jack pin introduces lost motion, then tighten the screw nearer the back of the key in order to compensate. Access to this screw can be had with the key in position by inserting the blade of the screwdriver among the shanks of the far side of the hammer rail. Back-and-forth adjustment of these screws should be drawn snugly, but not tightened unduly to avoid cracking the rocker or drawing it into the surface of the key.

If there is lost motion, the screw nearer the back of the action should first be adjusted. If this brings the jack into too firm contact with the butt, it should be lowered by tightening the screw at the near end of the rocker. Again, back-and-forth adjustment of the rocker screws should be employed to get the jack in the desired position.

This operation is most easily pursued by turning the action so that the backchecks are nearest the front of the regulating table.

Escapement

The next step in regulating is the escapement. Most French actions have a regulating screw located along the edge of the hammer flange rail toward the back of the action. It is adjusted with a regulating screw adjuster commonly used on upright actions.

The bass hammers should be set to let off 1/8" from the string. The treble hammers should be regulated so that the bottom treble hammer lets off 1/8" from the string; regulating is graduated so that the top treble hammer lets off 1/16" from the string. This is done to compensate for the lower volume capacity of the higher strings in square grands and for the slightly shorter key dip required by the

progressively longer keys of a square grand action.

For this step to be accomplished with precision, a rail representing the strings will have to be extended over the action at precisely the proper angle to achieve the desired 1/16" graduation. This can be done by building an extension on to a conventional grand let-off regulating device.

Key dip - backcheck regulation

For this regulating step, a decision must be made whether to allow the key dip or the after touch to vary slightly from the bass to the treble of the action.

Because of the great difference of key length from treble to bass, a somewhat longer key dip is required to achieve letoff in the extreme bass than in the extreme treble, even with a 1/16" graduation in escapement. The key dip should be allowed to vary rather than the after touch, since excessive after touch diminishes control by the player in executing fast, delicate passages.

If this method of regulating is chosen, the extreme one or two octaves of the bass will have about 1/32" added key dip over the treble, making a majority of the treble slightly less than 3/8" and the extreme bass exactly 3/8" or slightly more.

The degree of after touch allowed by the key dip can be most precisely set by measuring the distance the key dip removes the jack from the edge of the hammer butt after letoff is complete. Any more than enough motion to allow the butt complete clearance is excessive. If the jack is between 1/16" and 1/32" from the butt when the key is all the way down, that will be sufficient.

If the butt leather is in consistently good shape from note to note and the jacks are perfectly regulated, then this method will result in precisely even after touch throughout the keyboard.

As the key dip is adjusted on each note, the backcheck distance should also be adjusted. The backchecks should be set to catch the hammer as high as possible without causing the backcheck to interfere with the hammer tail as it rises from the hammer rail. If new

hammers are used, the tails must be shaped as precisely as possible for this dimension to be set with accuracy. One distance should be found with a test key and observed throughout the action.

Flange tension-regulating screw

If a flange tension regulating screw is present in the hammer flanges, it should be tightened so that each hammer bounces exactly twice against the hammer rail when dropped from striking position.

DAMPER ACTION

With the action installed in the piano, the damper action should now be regulated.

Preparatory work

To remove the Pleyel damper action, found in almost all square grands (and many European-built, 19th century grands), first unscrew the knob in the bass-end bracket. Then, with the damper-limiting rail removed, lift the bass end of the damper frame straight up a few inches.

Next, swing the frame so that all the damper levers are raised above the screws that hold the limiting rail and slide the entire frame to the left until the pin at the treble-end slides free of the hole in which it operates.

When storing the damper frame for any length of time, lay it on a table with the tops of the levers down and the felt up, lest the surface of the felt become misshapen and not come into proper contact with the strings when replaced.

To replace the damper frame, first insert the pin at the treble end of the frame into the bushed hole of the plate. Make sure the damper levers are above the limiting rail screws. When lowering the bass-end into position, carefully line up the #1 damper with its string. In this way, all the dampers will be lowered directly into position and, if the damper action was properly positioned in the first place, the frame will be properly lined up with the bracket at the bass end.

The damper action frame should be in such a position at rest that

there is some lost motion between the beginning of its lift of the damper levers. This lost motion can be perceived between the underside of the levers and the felt-covered edge of the damper frame that raises them when the pedal is depressed.

If there is no lost motion when the damper frame is at rest, then the end bracket (usually screwed into the frame of the piano and supporting the bass end of the damper frame) is too high and should be screwed farther into the piano.

Before employing a measure such as this, however, first check all other points at which the damper frame contacts the piano: the bushed hole at the treble end of the damper frame, to insure there is free operation; the rod that connects the frame with the pedal, in case there is slight lost motion; and the surface of the damper frame that usually contacts the plate at the frame's bass end, to see whether the damper frame comes to rest properly or if some excess padding or felt prevents this.

Such conditions occur when the dampers have been worn or eaten by moths when new dampers of a different shape or thickness have been installed, or when the bracket at the bass end has been removed (such as for polishing) and replaced at a different height.

Damper lifter buttons

The lower button on the lifter wires should be adjusted so it allows 1/16" play in the key between the key's position of rest and contact with the lifter wire. This is most easily accomplished with the damper action removed from the piano.

At the same time this is done, any damper lifter wires that do not fall through their holes of their own accord should be freed.

With the damper action replaced in the piano, the upper buttons on the lifter wires should be adjusted so there is 1/16" play between the top of the button and the undersurface of the damper lever. These two steps will insure the damper comes into play when the key is depressed 1/8".

Damper lever flange

Following adjustment of the damper-lifter buttons, each damper-lever flange should be adjusted so the damper falls squarely against its string. Dampers with extensions on them should be adjusted so the main damper and its extension both rest squarely against the string and come into contact with it at the same time.

The extension is usually adjusted by screwing it in or out on the wire that connects it with the main damper block. This wire is screwed into the block at an angle so screwing it in or out raises or lowers the extension relative to the main damper.

The extension wire must also be adjusted so the plane of the underside of its felt is the same as the plane of the underside of the felt on the main damper block. The plane of the underside of the damper felt can be adjusted relative to the plane of the unison wires by placing travel paper under the lever flanges.

"After-ring" in square grands

Even with these procedures followed scrupulously, the finest square grands will be found to have some after-ring in at least the single bass unisons. This can be traced to the impracticality of spreading the sections of damper-extension assemblies to cover the greater dimension of partials along the wire's length because of the restrictions of the damper frame.

Some grands with crank dampers or Southwell dampers will have somewhat better damping efficiency in the bass, but the slightly better damping capacity is more than mitigated by the extreme difficulty of doing precise work on such damper actions. □

How to Buy a Good Used Piano

Problem Areas Illustrated
30-Page Book- \$3.00

Willard Leverett
8206 Yarrow Court
Arvada, Colorado 80005

Calculating Technician

Part XVII Dave Roberts

I hope everyone had an enjoyable holiday season. I'm wondering how many of you potential calculating technicians talked Santa into bringing you one of the three programmable calculators discussed last month.

Remember, the value of these \$220 - \$300 calculators is that they automatically calculate in seconds all the formulas we've been discussing, and you don't even have to know any math or what the symbols on the keyboard buttons mean, as long as someone gives you the program you need.

Last month, I gave you a piano scale evaluation/modification program for the Hewlett-Packard model HP-67 and indicated that I would do the same this month for the HP-41C and the Texas Instruments model TI-59. Well, I'm not quite in a position to do this yet, so let's defer these program listings until next month.

Instead, let's use this month's column to do an example scale evaluation, so you can see just what can be expected when you encounter a good scale. There is no way I can choose a piano scale which all of you will agree is a reference standard for the industry, but I probably won't get too many arguments if I choose a Steinway concert grand, in this case a 1923 model D which has both iron and copper wound strings in the bass.

In the table on the right, I have tabulated calculation results for notes 1 - 8. Please refer to my November 1980 *Journal* article if you have trouble remembering the meaning of the symbols or their units. Obviously, this listing of information is not as complete as the example worksheet given in the November 1980 article, but it will suffice to illustrate the points which I wish to make.

As I indicated last month, this entire table takes less than one hour to calculate and write down if you use one of the three programmable calculators which have been discussed.

Furthermore, recall that one would not ordinarily take the time to calculate and fill in the entire table because most scaling problems are localized and can be spotted visually, as described in previous articles.

For instance, you will find that there are usually no (rectifiable) problems in most of the treble scale if your visual inspection reveals that it conforms reasonably closely to Braid White's rule for treble scaling (April 1980 *Journal*). Hence, your attention will most often be drawn to the bass/treble break or the plain/wound break and sometimes the bass scale.

Take a few minutes to examine the table to see just how inharmonicity I_4 , loudness Z , hammer/string contact-time factor NT/H , string tension T and speaking length elongation E_L actually change in a good scale.

Also check the ratio T/T_B , the string tension as a fraction of its breaking strength, to confirm that it always remains below 0.60 (i.e., 60 per cent of breaking tension). Indeed, the strings in this particular scale are conservatively designed at no more than 50 per cent of breaking, although recall from the October 1980 article that the various bent portions of the strings (at the hitch and tuning pins, agraffes, capo bar and string rests) are stressed more severely than this. This is one reason why these strings were designed so conservatively in the first place.

To confirm our previously stated rules for good scale design, you should particularly note the following features of the Steinway scale given here:

- I_4 changes from unison to unison in an almost computer perfect fashion from **A1** - **C88**, a tribute to the (computerless) men who designed and developed this instrument and evidence for the usefulness of our inharmonicity formula for both plain and wound strings. In particular, note that I_4 decreases at the rate of about 3.0

times per octave, starting at **C88**, leveling out at around 1.0¢ at the bass/treble break (**E20/F21**) and then rising again slightly toward the deep bass.

- Z also changes remarkably smoothly from **A1** - **C88**, decreasing from around 3300 in the bass to about 650 in the high treble. The smoothness in Z at the bass/treble break (**E20/F21**) and the copper monochord/iron bichord break (**E8/F9**) attests to the usefulness of our loudness formula Z for both plain and wound strings.

- NT/H changes smoothly as you progress down the scale, even across the bass-treble break where there are large changes in T and H individually (see NOTES at the top of the table). But then there are apparently rough transitions at the two remaining breaks in the bass. Actually, one can't really do much better than this unless the speaking lengths were also to change significantly at these breaks, as they do at the bass-treble break. As mentioned in previous articles, the smoothness in NT/H has 3rd priority behind smoothness in I_4 and Z . This scale bears out this order in priorities.

- T changes in a semi-smooth fashion only within each section of unison types. For instance, in the plain trichord section, string tension decreases in a slightly jagged fashion from around 200 pounds at the low end to about 140 pounds at the treble end. At the bass-treble and monochord-bichord breaks, however, the change in tension is anything but smooth. This illustrates that it is generally incorrect to enforce preconceived notions of "equal tension" on a piano scale. Approaching scale evaluation strictly from such a viewpoint is too simplistic to have any general validity.

- E_L also changes remarkably smoothly throughout the entire scale, which greatly aids in good (relative) tuning stability.

These observations of a good scale will give you a practical guideline in evaluating other scales. We'll have more to say about this in a future article, so stay tuned to this column. . . □

P	make	Steinway	NOTES												
I	model	'D' (concert)													
A	type	8'113/4" grand													
N	serial	219648													
O	mfg date	1923	H (20) = 6.75"; L/H = 8.0 H (21) = 9.0"; L/H = 8.0												
m	d	D	N	I ₄	Z	$\frac{T}{T_B}$	$\frac{NT}{H}$	T	E _L	m	d,D	I ₄	Z	$\frac{T}{T_B}$	T
A1	67	187	1C	3.0	3318	.34	35	348	.27	F45	39	6.4	879	.41	169
A#	67	181	1C	2.8	3285	.35	37	364	.28	F#	39	7.2	880	.41	170
B3	63	178	1C	2.1	3348	.42	40	391	.33	G47	39	8.0	882	.41	171
C4	59	158	1C	1.8	2785	.41	35	343	.33	G#	39	9.0	882	.41	171
C#	59	152	1C	1.7	2721	.43	36	353	.34	A49	39	9.7	890	.42	174
D6	55	140	1C	1.4	2428	.45	34	332	.37	A#	39	10.9	890	.42	174
D#	55	134	1C	1.3	2336	.45	35	335	.37	B51	39	11.8	899	.43	177
E8	55	127	1C	1.3	2202	.45	35	330	.36	C52	38	12.5	854	.42	169
F9	51	109	2I	1.3	2199	.37	52	243	.30	C#	38	13.3	865	.43	173
F#	51	107		1.2	2207	.39	55	254	.31	D54	38	14.8	867	.43	174
G11	48	102		1.0	2082	.42	55	249	.33	D#	38	16.1	874	.44	176
G#	46	96		0.9	1919	.43	54	238	.34	E56	38	17.7	879	.45	178
A13	44	87	2I	0.9	1641	.41	49	211	.32	F57	38	19.7	881	.45	179
A#	40	81	3I	0.7	1789	.44	69	193	.35	F#	37	21.1	834	.44	169
B15	40	76		0.8	1635	.42	67	182	.32	G59	37	23.1	839	.45	171
C16	39	73		0.8	1549	.42	67	177	.31	G#	37	25.6	842	.45	172
C#	39	71		0.8	1510	.42	70	177	.30	A61	37	28.8	841	.45	172
D18	38	66		0.9	1342	.40	66	160	.28	A#	37	32.8	838	.45	171
D#	38	63		1.0	1254	.38	65	153	.26	B63	37	37.9	832	.44	169
E20	37	62	3I	1.0	1228	.40	67	151	.26	C64	36	40.0	789	.44	160
F21	47	47	3P	0.9	1155	.35	67	201	.28	C#	36	42.4	801	.45	165
F#	47	47		0.9	1171	.36	72	201	.27	D66	36	45.4	810	.46	169
G23	47	47		1.0	1175	.37	77	208	.26	D#	36	49.0	818	.47	172
G#	47	47		1.1	1188	.37	82	213	.26	E68	36	53.4	824	.48	175
A25	45	45		1.1	1104	.38	81	201	.25	F69	36	58.9	828	.48	176
A#	45	45		1.2	1113	.38	86	204	.25	F#	36	63.2	837	.49	180
B27	45	45		1.3	1121	.39	92	207	.24	G71	36	68.4	845	.50	184
C28	45	45		1.4	1121	.39	98	207	.22	G#	35	70.7	804	.50	176
C#	45	45		1.6	1122	.39		207	.21	A73	35	81.8	798	.50	173
D30	45	45		1.8	1125	.39		208	.20	A#	35	91.8	798	.50	173
D#	43	43		1.8	1031	.39		192	.19	B75	35	105	795	.49	172
E32	43	43		2.0	1029	.39		191	.18	C76	35	115	799	.50	174
F33	43	43		2.3	1028	.39		191	.17	C#	34	135	735	.47	156
F#	43	43		2.5	1032	.39		192	.16	D78	34	143	745	.48	160
G35	43	43		2.9	1028	.39		190	.15	D#	34	164	742	.48	159
G#	43	43		3.2	1031	.39		192	.14	E80	34	178	748	.49	161
A37	43	43		3.6	1028	.39		191	.14	F81	33	213	683	.45	143
A#	41	41		3.6	938	.39		175	.13	F#	33	258	670	.44	137
B39	41	41		3.9	949	.39		179	.13	G83	33	294	667	.43	136
C40	41	41		4.4	951	.40		179	.12	G#	33	312	677	.44	140
C#	41	41		4.8	951	.40		182	.11	A85	32	314	644	.45	135
D42	41	41		5.3	961	.40		183	.11	A#	32	338	651	.46	138
D#	41	41		5.8	965	.41		185	.11	B87	32	368	656	.47	140
E44	39	39	3P	5.8	875	.40	168	168	.10	C88	32	364	677	.50	149

VON DER WERKSTATT

Priscilla and Joel Rappaport

A PRELIMINARY DECISION

Without fail, every fall we receive many requests for estimates on fixing up the old family upright. Perhaps people are taking a fresh look at that old klunker sitting in the corner all these years. The piano is usually in terrible condition, having been neglected inside and out. It simply must be fixed up if anybody is going to play it again or take lessons.

Although many instruments have been semi-refinished, their actions are usually shot. Felt and leather in the action are generally in poor condition. Leather gets hard with age and wears with playing. Felt also gets hard and usually shows signs of having been attacked by moths or mice over the years.

In essence, for you, as the technician making an evaluation of this situation, there is nothing much to work with. How can one file hammers when the treble hammers are worn down to the wood? How can dampers be regulated when moth larvae have tunneled their way in and out of the felt? How can one finely regulate an upright action when the leather on the catchers and the butts has been worn excessively?

Action parts on a piano that has been played hard for 50 years will exhibit more wear in the middle than in the extreme treble or bass. Because of this, it is impossible to get the action to feel even and consistent throughout, no matter how exacting you are with your regulation procedure.

Regulating a worn-out upright action involves compromise upon compromise just to get things to work.

So you end up with an action that just "plays" with some sort of "clunk" from a hammer filed for the 15th time, letting off at $\frac{1}{2}$ " from the string. The key depresses $\frac{5}{8}$ " while a wobbly hammer bobbles around uncaught, waiting for you to let go of the key so the unaligned jack can have a chance at working its way back under the butt.

And so the process is repeated.

Many of these old uprights have had their actions "rebuilt" and have been outfitted with a new stock-bored set of hammers stuck on the ends of the old brittle, cedar shanks. The only difference between the action that has old hammers and the one with new hammers just stuck onto the old shanks, is that from the action with new hammers, you get a little nicer clunk.

Does this standard of how the old upright plays, then represent the potential of the instrument and what the manufacturer originally intended?

The answer is, of course, no.

Is it then justified to restore an old upright action to like-new condition considering the costs and the market value? The answer varies.

Many fine old uprights are of excellent construction and design and are worth the costs. Others, are not.

The upright hammer butt is the

center of most functions of upright regulation and plays a major role in "let-off." Its design allows for jack contact, clearance and jack return as the key is depressed and released.

Repetition is strongly affected by the placement of the butt forward and backward in the basic action design. The distance from the strings to the butt axis is about a shank's diameter less than the distance from the center of the hammer bore point to the strings at the time the hammer strikes the string. Therefore, the hammer shank is never vertical at the time the hammer strikes the string, but somewhat slanted.

This principle, plus the mass of the hammer being thrown back to the rest rail after striking the string, helps ensure repetition.

The position of the butt on the action rail, right and left, affects alignment and the travel of the hammers. The butts are spaced and traveled so that the hammers align correctly to the strings and move parallel with one another. Problems with the butt flange such as poor bushings, pins too loose or too tight, can cause the hammer to act wobbly, or sluggish. Likewise, if the bushing in the flange is poor, the pin could be slanted causing severe traveling problems.

Choosing and using good quality materials play an important part in the end product. If the buckskin or leather on the rounded surface of a butt is rough, the jack will exhibit more friction during let-off, and have a difficult time returning to its rest position.

The nap of the buckskin in this area should be in the same direction that the jack travels in returning to position. The jack slides back under the butt. The nap for the catchers is also important. The leather on the catchers should facilitate the butt being caught by the felt covered backcheck, yet aid in its release as the key is let up. Therefore, the nap would be from top to bottom to achieve this function.

In restoring old upright actions to good or like-new condition, you have the following options:

1. Use the old butts as they are.
2. Use the old butts but replace all felt and leather.

3. Use new butts that match the original style.

If you choose to go with the first option and use the old butts as they are, be sure you have carefully evaluated their condition and the extent of wear before you begin work. Make sure that the moths haven't eaten out the felt between the leather and the wood of the butt body. If the felt is missing, the intended curve is no longer present.

The second option presents a lot of time-consuming work. However, this route may be desirable especially if the action in question has good wood action parts and/or an unusual design of butt that is no longer available.

The third option is commonly used. Frequently, you can find yourself in trouble if you don't carefully check the materials before you begin work. The dimensions of the new parts should match that of the original. It is often necessary to work over the new butts so that your regulation work later will be at a minimum.

New parts look nice. The advantage is also that everything is even. The leather on the catchers should be the same thickness. The holes for the shanks should also be consistent. The curve on the butt body should be round and give a good solid start to your subsequent work.

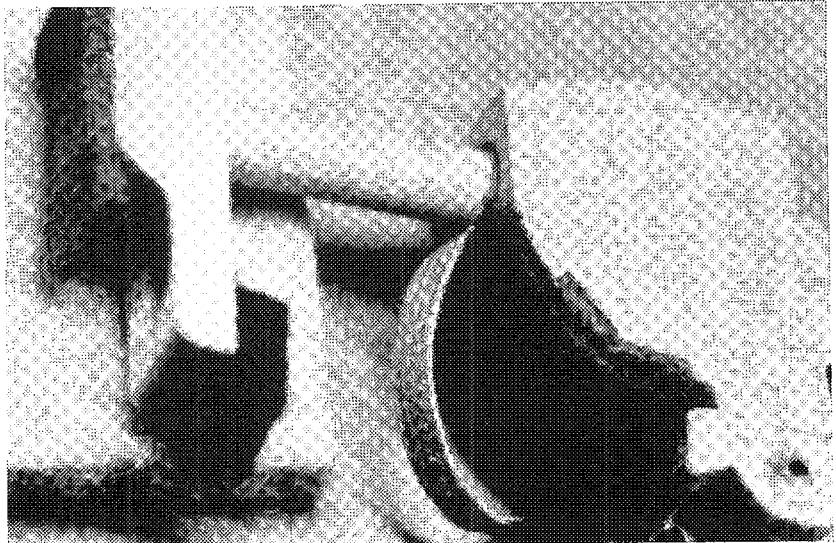
Whether you re-do old butts, or use new ones, these basic prerequisites should be met.

Recently, we placed an order to a supply house for two sets of brass rail butts. New butts were to be used for two old uprights because the old ones were partly missing or completely worn out. Starting over with new parts would certainly save time and energy, plus give us a good even regulation, so we thought. The pictures accompanying this article illustrate these parts, and, as you can see, there were problems.

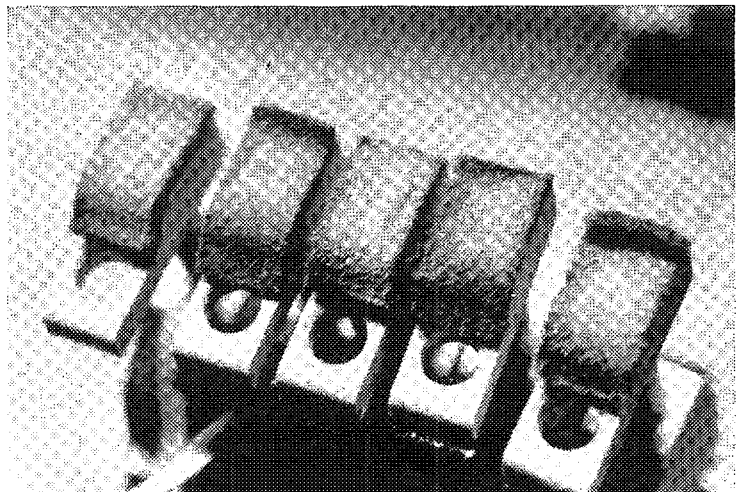
We wrote a letter to this supply house to make the following points:

1. There were no extra butts in each set. Each set had exactly 88 butts, allowing no extras, should something be wrong with the manufacture of a butt.

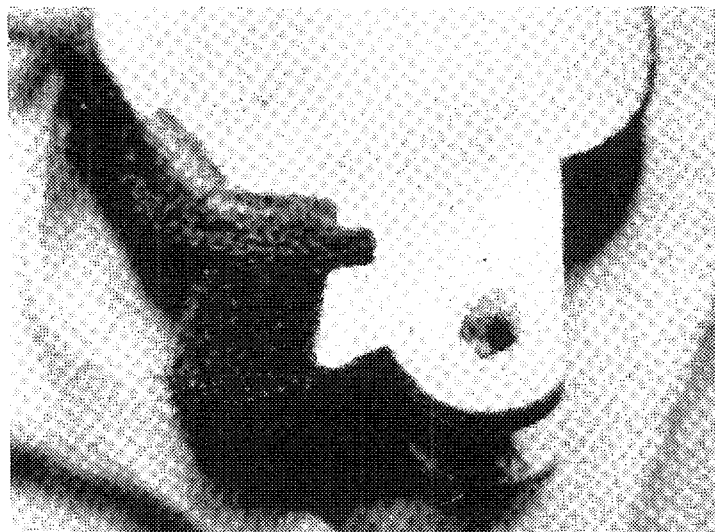
2. The cowhide leather on the



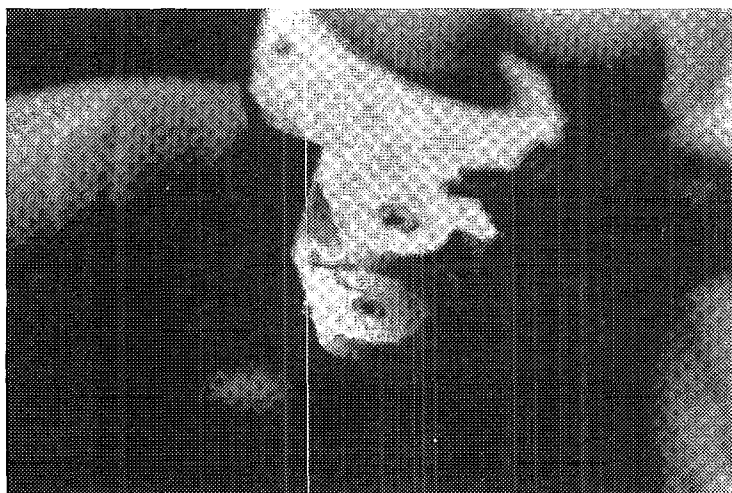
Cowhide leather poorly glued to the catcher. Leather surface here should be flat so that it is properly caught.



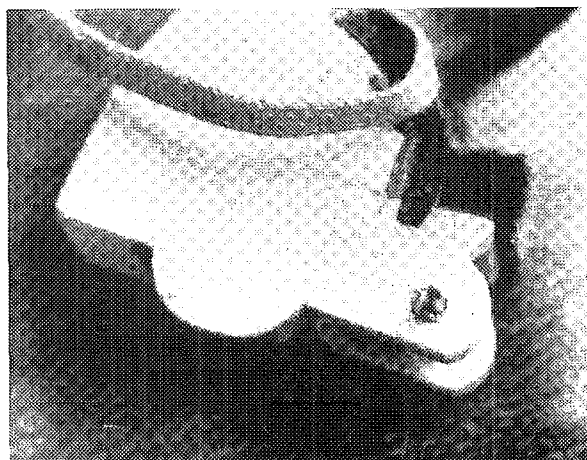
Unevenness of the leather surface on catchers. There is no way that the regulation of this upright will have consistent back-checking.



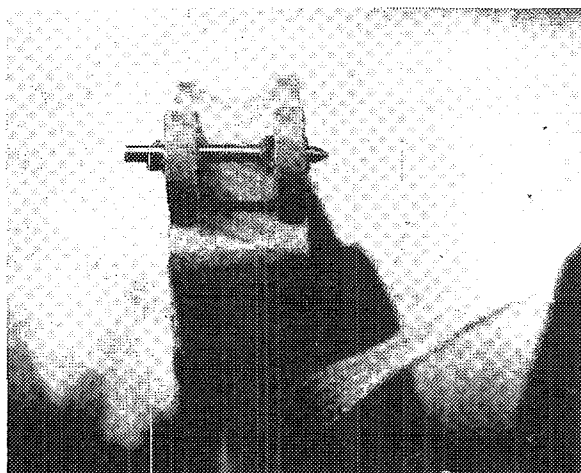
Center pin forced into bushing so that pin is lodged between the cloth bushing and wood, instead of pin being in the middle of the bushing hole where it should be.



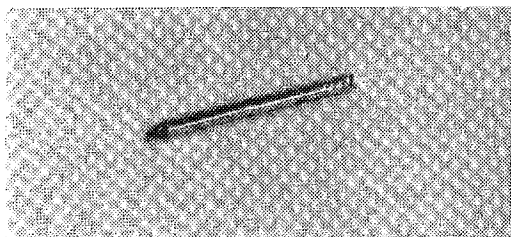
This butt shows the bushing cloth not encompassing the entire hole. The pin wiggled against the wood. Also notice the crack in the wood on the underside of the other bushing.



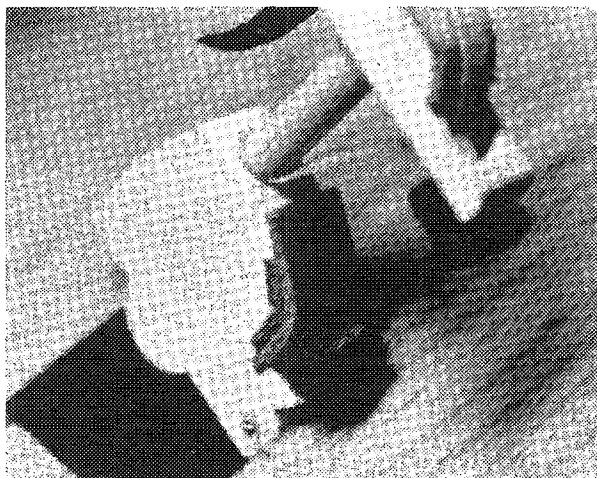
Pin in bushing as many of these butts come from the manufacturer. This one obviously missed the center of the bushing cloth hole.



A side view of the center pin. This sort of alignment will drastically affect the travel of the butts later in the regulation.



One of many burred pins found in the butts as supplied by the manufacturer. This one was pulled out by fingers. In this photo, the pin looks like it was gripped by pliers.



Hard glue smeared on the jack rest felt. This will cause unwanted noise.

catcher part of the butt was very uneven, particularly on the top edge. Some butts had the leather poorly glued, and some even had glue all over the leather and the small green butt felt against which the jack rests.

3. The pinning and the bushing work were poor. In some cases the pin was pushed through so that it lodged between the bushing and the wood of the bushing hole. Many pins had burrs on them.

"To remedy this situation, I had to releather all the catchers and repin the butts that I used. It was also necessary to dig into the second set to find enough butts that were half-way straight as far as the bushing pins were concerned. This cost me considerable extra time. I would like to see better quality in this product. . ."

The following memo was written in response to my letter:

"We are most sorry that you have experienced difficulty with the brass rail butts which you just purchased. Any defective item certainly may be returned for replacement. We do not manufacture this item and therefore we will forward your defective pieces to the manufacturer for their inspection.

"This item as well as many others which are sold in sets only contain 88 pieces. Extra parts are not supplied."

This memo points out two things. First, our supply houses are trying very hard to be of service to us by making what we need available to us in reasonable quality and, second, they cannot manufacture every item and the situation is

complicated by a variety of manufacturers which supply the supply houses.

This memo clearly shows that quality control is a manufacturer's problem. Or is it?

Many times — as in this illustration — we technicians do not even know who the manufacturer is; as far as we are concerned, we are dealing only with the supply house. Surely the supply house's reputation is worth an effort at quality control even if they act only as distributors. This supply house should either exercise their own quality control and deliver 88 usable butts or send several extra pieces along with each set for the contingencies shown in the pictures.

We called a major manufacturer of action parts. The spokesman indicated that his company realizes that not every piece is perfect and includes 90 items in each set. His company does carry out daily quality control checks and, like the supply house, is more than willing to replace defective parts. Furthermore, the manufacturer is definitely interested in keeping the quality up and is always open to constructive criticism. This latter point we will return to later.

The supply house's suggestion that we simply return defective items is not satisfactory. It is an irritating outlay of time and money to do so and holding up a job to do this irritates the customer as well. Someone will undoubtedly suggest that more than one set of a part be ordered so that delays are eliminated. The job can continue

and defective parts can be sent back for replacement while the pressure is off.

This may be fine if all we are talking about is a set of butts. Multiply this solution by the number of parts we use, shanks, damper felts, flanges, capstans, back-checks, etc., and a very active repair or rebuilding shop would need to hire someone full time to research from where each part came and be continually sending parts back and receiving replacements. And how many of us want to lay out the funds for several sets of grand whippens just to have 88 usable ones when each set could cost several hundred dollars?

The theme that recurs is that manufacturers and supply houses are really interested in hearing when their products do not come up to expectations. How do they know we are not satisfied unless we tell them?

Our suggestion then is to return defective items along with a letter explaining why the part is not usable *and that it is an imposition to have to do this*. Urge better quality control *before* the consumer receives the goods. If we all do this and the extent of the problem is felt, perhaps changes will be forthcoming. □

In the Field

BEN McKLVEEN

This month I bring you a potpourri of thoughts and ideas that accumulated in my notebooks last year. They are too brief to be the subject of an entire article, but certainly worthy of mention. So I have strung them together like beads. If you find something you like, pick it out and use it.

Did you ever notice how repair opportunities seem to occur in bunches? My work will go along quite regularly and then suddenly I will find myself with a rash of broken strings or broken hammer shanks or unglued jack flanges to repair.

During the past few months I have had to repair several loose sustaining pedals on Steinway grands. The problem is stripped threads. The machine screw that holds the pedal, bushing, and backing plate in place will not tighten. Extended use of the pedal plus service neglect causes a lot of wear and eventually the threads break down. The repair is simple enough but it involves the use of some tools not normally associated with piano technology.

The materials needed to make this repair are: a tap wrench, a $\frac{1}{4}$ -20 tap, (the $\frac{1}{4}$ is the diameter in inches, the figure 20 refers to the number of threads per inch), a #7 drill bit (.201"), a $\frac{1}{4}$ " drill bit, and a $\frac{3}{4}$ " x $\frac{1}{4}$ -20 round head machine screw.

You can buy all of this stuff at your local hardware store for less than \$10 and this includes a bag of machine screws. So you can repeat this repair a dozen times with no additional expense. See **Figure 1**.

Clean out the threaded hole in the pedal with the #7 drill. Tap new larger threads in this hole with the tap and tap wrench. Enlarge the plate hole with the $\frac{1}{4}$ " drill so that the new screw will pass through it freely. Reassemble the pedal using a new piece of

bushing cloth, lubricated with tallow or V.J. lube.

The classes we attend at conventions and seminars take us through various procedures, such as action regulating, in great detail from beginning to end. Unfortunately, we are not always called upon to perform these procedures in exactly the way we learned them. More often we find ourselves facing one or two keys that don't play well.

While experience is a great help in diagnosing and correcting these problems, of equal importance is a skill I call "an eye for irregularity." This is the ability to recognize quickly that piece or part that doesn't look like all the others.

For example, jack tenders that are mortised or dowelled into the jack will fail to function because the glue joint breaks down. When this happens, the tender will droop. Then the hammer blocks. An inattentive technician will attempt to turn down the regulating button to re-establish escapement, but this strains the joint further and eventually it separates.

Regulating must be done with care. It is essential that the tender is realigned with the other jacks so that it is not too high or too low. (See **Figure 2**) I had to clean up a regulating mess on a piano whose player knew what the problem

was but did the repairs so carelessly that the piano became impossible to play.

This is but one of many areas in the piano where misalignment signals trouble. Key spacing, hammer, damper, whippen, back check and bridle wire alignment—all of these things—should catch your attention the minute you open a piano. Irregularities can often speak volumes about the quality and condition of the instrument.

During the forum held at the Piano Technicians Guild's Ohio state seminar, someone asked about the availability of special factory tools. The questioner was under the impression that there are a vast number of gadgets being used to build pianos that field technicians don't have. The truth of the matter is that more than ninety per cent of the hand tools used in piano production are the same tools we use.

Some of these tools are adapted in special ways to speed up production or to facilitate use in a repetitive operation. However, a few items do show up which might be useful to a field technician. Some examples:

1. A double-ended tool for fine regulating; one end with a short, pointed capstan regulator to adjust escapement, the other end holds a grand drop screw regulator (See **Figure 3**).

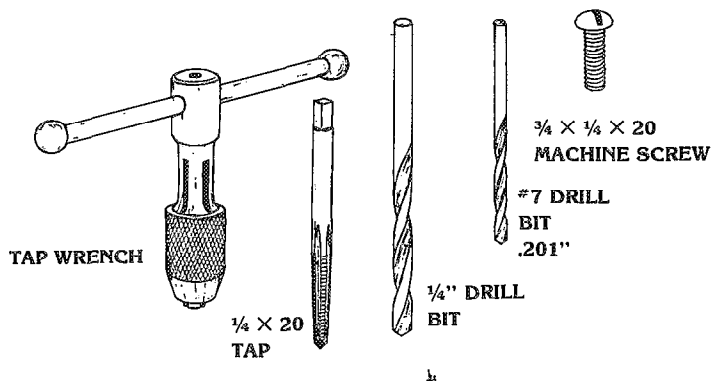


FIGURE 1

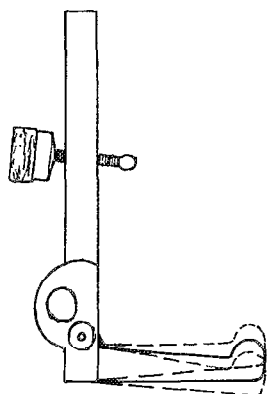


FIGURE 2

This is used in a grand fine-regulating department. It permits fine adjustments to let off and drop without having to change tools.

The factory tool is held together with epoxy and tape. A useful field tool would have to be flexible enough to include a grand jack screw regulator head and a small screw-driver blade. This would permit the use of the tool in any kind of grand piano. Drop screws come in male and female versions and jack-regulating buttons can be capstans or equipped with wire-regulating screws. The essential ingredients are illustrated in **Figure 3**. Is there someone out there who can make it all fit together and work?

2. A stringing device (See **Figure 4**). This is a small aluminum doughnut with a slot to hold the tuning pin and a small pin mounted in the side to help bend the wire as it is wound on the pin. The advantage is that it can be worn over a glove and takes some of the pressure off the fingers when you start the bend in the wire. Jim Campbell has added his variation to **Figure 4** which works well, too.

There are some changes in piano construction coming out of the factories. I will try to keep you informed about these as they come to my attention.

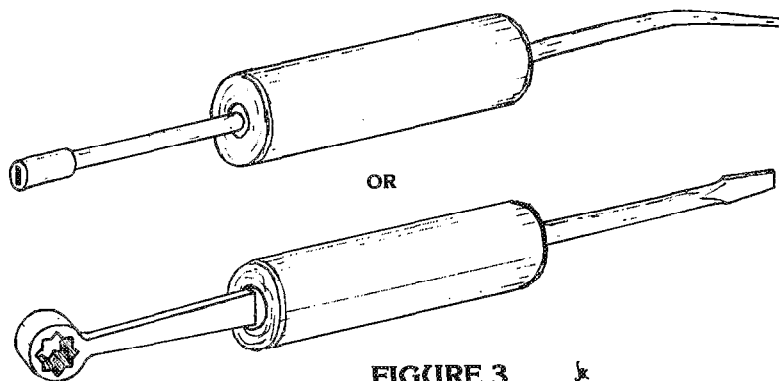


FIGURE 3

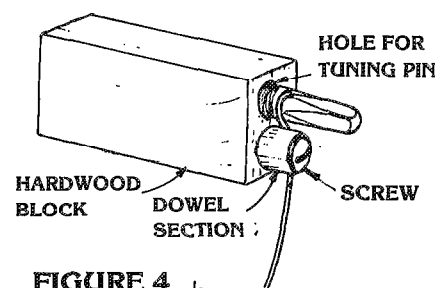
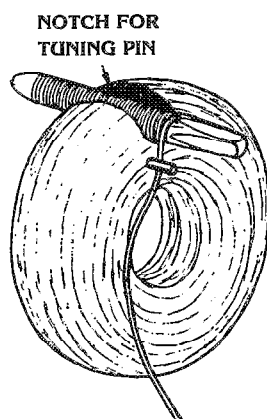


FIGURE 4

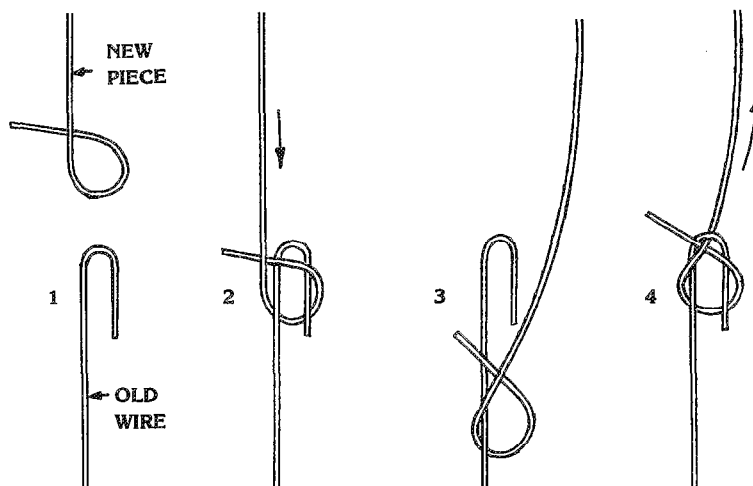


FIGURE 5

I would like to encourage you to try splicing broken wires. The knot pictured in **Figure 5** is not new. It was illustrated in the *Journal* back in 1971. It is easy to tie and is great in tight spots and especially if there is only a small amount of wire left with which to work.

The following is a sign I saw in a school shop last summer.

RULES OF THE SHOP

If you borrow it, return it.
If you unlock it, lock it.
If you turn it on, turn it off.
If you use it, don't abuse it.
If you break it, repair it.
If you make a mess, clean it up.
If you can't operate it, leave it alone.

After Touch

David W. Pitsch

50-POINT GUIDE TO GRAND REGULATION PART VI

Section III. ALIGNMENTS

29) Align jack to knuckle core

In order for the power to be transmitted from the whippen to the hammer shank efficiently, the jack must be properly aligned under the knuckle.

Looking at the action sideways, the rear of the jack (the surface towards the hammer) should line up perfectly with the rear of the knuckle core. Normally, this alignment is easy to see. The knuckle should be glued on perpendicular to the shank, and if the hammer is new and was bored correctly, the shank should be perpendicular to the jack. Sighting along the rear of the jack, it should be easy to tell when the jack is in line with the knuckle core.

However, if the shank is not perpendicular to the jack, this alignment is hard to see. Two things can cause this:

A. The hammer has worn resulting in the capstan being turned up to keep the blow distance close enough. The shank then becomes more than 90 degrees from the rear of the jack. In such cases, imagine a line drawn from the rear of the knuckle core down to the point on the knuckle leather where the jack would touch it. Then line up the rear of the jack to this point.

B. The other reason, which is fairly common, is that the hammer hole was not placed correctly in the molding. This results in the top of the hammer either being too high or too low in relation to a line drawn down the middle of the hammer shank.

Boring the hammer wrong of course results in the shank not being perpendicular to the jack, as in cause A. If this angle of the shank to the jack becomes too great, then either the hammer has worn excessively so that it should be replaced, or if the hammers are new, then the hole in the molding should be plugged and rebored.

Why was the hammer bored incorrectly? Have you ever noticed when regulating the hammer-blow distance, that when the tops of the hammers are adjusted so they all are, say, $1\frac{3}{4}$ " from the strings at rest, that the hammers in each section vary as to their heights measured from the keybed to the top of the hammers?

We should expect the bass hammers to be higher since the bass strings are higher so they can cross over the tenor strings. But notice that if the agraffes are not the same height as the capo

d'astro, the hammers will also vary in their heights between these sections.

If the original or duplicate hammers were not bored taking into account these different string heights, then the hammer shanks will not be perpendicular to the jacks with the hammers at rest.

We will discuss this problem further in a later article on hammers, but let me add here that some pianos have a different string height for each section!

An easy way to align all of the jacks is to align the end hammers in each section, and then by using a straightedge or a thread, align the jacks in the respective sections to the end samples.

Note that some manufacturers mark a line on top of the balanciers. This line serves as a guide only when the action parts are being assembled in the factory. If it is necessary to deviate from this line, don't hesitate.

To test the jack alignment, hold the hammer with one hand to keep it from coming up, and with the other hand, give the key a strong blow. If the jack is too far in or out in relation to the knuckle core, the jack will slip out from the force of the blow given to the key. This test should be given to all 88 keys.

When the knuckles are all in a straight line, and if all of the jack tops are also in a straight line, this test should prove out on every key.

But many pianos made today do not have all of the knuckles lined up perfectly, some being out of line by an $\frac{1}{8}$ "! For these pianos, the jacks must be individually aligned to their respective knuckle cores.

New England Conservatory

DEPARTMENT OF PIANO TECHNOLOGY
FRANK HANSON, Chairman

The nation's oldest independent conservatory of music offers an outstanding program in the maintenance, tuning, and reconstruction of pianos. Program graduates are qualified for independent professional practice upon completion of course.

For application and/or brochure, write:
New England Conservatory
Department of Piano Technology
Frank Hanson, chairman
290 Huntington Avenue
Boston, Massachusetts 02115
Tel. (617) 262-1120, ext. 365

Remember in replacing a whole set of shanks and flanges, the knuckles must be the same size as the original, and the distance from the center pin to the center of the knuckle core must be identical.

30) Align and square backchecks to hammer tails.

To facilitate this regulation, turn the action around so the backchecks are facing you. Individually lift the end of the key and wait for the hammer to come into check. Don't lift the key so forcibly that the hammer Shank is marred by hitting against the drop screw, or actually broken off from the impact! Look to see if the hammer tail is caught in the middle of the backcheck, and that the backcheck is square and aligned to the hammer molding.

To correct the side-to-side alignment, first bend the backcheck wire at the bottom to the right or to the left as needed, then bend it at the top to square the backcheck with the tail. This procedure is the same as when bending damper wires.

Check to see if the backcheck is turned or if the hammer tail was not filed properly on angled hammers. The two should be adjusted or filed so the stress on the key when the hammer goes into check is in line with the key itself.

Some imported pianos from Asia were made with the backchecks turned to meet the angle of the tails in the bass and tenor sections. This stressed not only the key bushings but also the hammer center.

File these tails square to the ends of the keys as they should be, and turn the backchecks so they are square to the tails. If the tails are not filed properly, the protruding corner of the tail will cut into the backcheck leather in no time.

While aligning, make certain that the tails are roughed up enough to keep the hammer securely caught by the backcheck. I use 60-grit, open-coat sandpaper glued onto a hand file for roughing up old hammers. New hammers I rough up before they are glued onto the shanks. I would caution against the use of coarse files or

moto-tool saw blades to roughen up tails, as these make the tails so rough they wear the leather out prematurely.

This ends the third section of our 50-point procedure. Back in the May 1980 *Journal*, I mentioned, when I first explained this procedure, that section IV, The Touch, was the most variable part of the regulation, and that depending upon the needs of the action, the sequence may be changed.

In the June 1980 *Journal*, we saw a chart which shows how the different regulations of The Touch affect or are affected by the others. A quick glance at this chart reveals that three steps: A. the key height, B. the key dip, and C. the blow distance affect or are affected by the others the most.

Before we begin talking about all the steps in section IV, let us discuss how to get the correct relationship of these three steps. Without doing this first, the regulator can waste many hours on section IV trying to figure out why the action does not play at its peak performance.

Way back in step #12 in section I, we adjusted the keyheight. All that remains here is to adjust the blow and the dip. I will explain two methods to regulate a grand piano. One is the blow-priority method; the other is the dip-priority.

I contend that once the keyheight is set, one only needs to set the dip or the blow, and the remainder of the action can be regulated to peak performance, straight through, with little or no doubling back to alter previously set measurements. Next month, we will continue with a discussion of these two methods. □

THREE INDISPENSABLE AIDS

HAMMER SOFTENER

A very harsh tone can be brought down to any degree in a few minutes. Softening is proportional to the temperature the liquid is brought up to, and only several drops upon the crown are necessary. This action is immediate and permanent but can be reversed by our hammer hardener.

HAMMER HARDENER

This liquid is applied directly to the crown. After drying, if needed, it can be voiced to varying degrees — impossible when using other hardeners. It comes in 4 types to minimize tone regulation. The results are permanent but can be reversed by our hammer softener.

FLANGE LUBE

Absolutely the most effective on the market. A permanent lube for all types of flanges, even plastics. For any contact between felt and metal — jacks, key fronts and centers, squeaks in damper springs, etc.

Write for complete information:

THATCHER CHEMICAL CO.

7915 Las Nueces Pl. • Carlsbad, CA 92008

ELECTRIFY PLAYER PIANOS
PUMP ORGANS

YOU CAN QUICKLY END TIRESOME FOOT-PUMPING
With a Compact Low-Cost Lee Silent Suction Unit

EASY TO INSTALL / 1000'S IN USE
FULLY GUARANTEED

write to
Lee Music Mfg. Co.
Rt. 1 Box 60D
Culver, OR 97734



CALIFORNIA STATE CONVENTION Beautiful Southern California

February 28 & March 1

Location:

The Inn at the Park Hotel
Anaheim, California

Contact:

Gene Wilkison
7871 Eldorado Plaza
Long Beach, CA 90808

THE FINE ART OF TUNING

James W. Coleman, Sr.

HOW TO BEAT THE NEW TUNING TEST

First of all, you will be scored on how well your general pitch level approaches that of the master tuning.

Since the A-440 is the standard in the world you would do better to use an "A" tuning fork. Due to the inharmonicity of the testing piano, if you tune from a "C" fork, your "A" may be off as much as .2 of a cent if everything else is right.

We have discovered a variety of ways in which tuners employ their forks. The most common error is where the $F_3 - A_4$ major-tenth beat rate is compared with the piano F_3 and the fork A_4 . Tuning forks do not produce octave harmonics so a confusion factor is encountered when one depends on the natural octave harmonic of the piano case parts on which the fork is made to vibrate. Since the second partial of the A_4 piano string may be inharmonic or sharp by as much as 2 cents on some pianos, the A_4 string fundamental may be forced as much as 2 cents flat by this test.

The correct method is to use the F_2 as the test note with the A-440 fork and A_4 string. When the beat rate of $F_2 - A_4$ (seventeenth test) is equal, whether the fork or the A_4 string is used in the interval, you will have an accurate tuning of A_4 .

Another method is to use an A-442 fork and tune so that the A_4 string is 2 beats a second on the flat side. Confusion is avoided here if you hold the fork to your ear for comparison instead of placing it on a resonator such as the keybed or bridge. If you have a watch with a second hand or an electronic watch with second blips, you can easily achieve accuracy closer than $\frac{1}{4}$ beat per second.

Next to the high treble, the temperament and mid-range portions are the most difficult for the newer tuners. Those who have not learned to use all the available aural tests have some difficulty here.

After the normal temperament procedure is completed, extreme care is needed to insure that each type interval is smoothly graduated in beat rate as one plays it chromatically up the scale. Each fourth and fifth should be checked to see that it is beating on the correct side of ZERO beat.

For fifths, the 6th - 10th test is very helpful; also the faster beating minor-third is helpful.

For fourths, the 3rd - 6th test can be used above and below the fourth.

We have discovered that a use of contiguous thirds, contiguous fourths, and contiguous fifths are good to point out slight discrepancies. An example of contiguous thirds would be C - E- G# where E - G# beats approximately $1\frac{1}{4}$ times as fast as the C - E third. A fourth would beat $\frac{1}{4}$ times as fast as its contiguous fourth below, theoretically an upper fifth will beat $1\frac{1}{2}$ times as fast as the lower adjoining fifth, but due to inharmonicity the fifths do not seem to rise much in beat rate as one progresses up the scale.

As one proceeds through the mid-range all intervals should continue to be used because the tolerance is still only 1 cent.

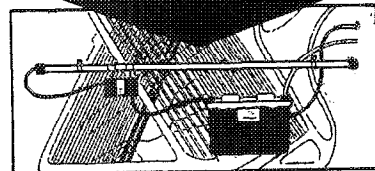
The 3rd - 10th test should be carefully used as one proceeds up through the mid-range, being certain that the tenth is not slower than the third nor faster by $\frac{1}{2}$ beat per second.

As one descends into the upper bass, the equal-beating minor 3rd - major 6th test should be used to provide a little more stretch than is provided by 3rd - 10th test.

Next month, some additional tips for the bass and then on to the treble section. □

Let us help you
EARN
\$50 TO \$70
from every piano
owner in your files

INSTALL
the complete
DAMPP-CHASER®
IN PIANO DUAL
AUTOMATIC
HUMIDITY
CONTROL SYSTEM™



Who knows better than you, the professional tuner/technician, what Dampness and Dry Heat can do to a piano. That Dampness can cause sticking keys, rusty strings and pins and sluggish action. In winter, how Dry Heat in heated areas can cause rattling keys, slipping pins and even cracked soundboards, and as you know, tuning instability is caused by **both** conditions.

Now, Dampp-Chaser's Humidity Control System comes to the rescue! It guards pianos and your good work, safely and silently against **both** Dampness and Dry Heat automatically by establishing and maintaining normal humidity within all pianos 365 days a year.

Recommending and installing the Dampp-Chaser System will create satisfied customers, plus bring you more customers. The cost to piano owners for a lifetime investment, including your installation, would be around \$125 (upright) or \$150 (grand). Proven in over ONE MILLION installations worldwide since 1947.

GET STARTED NOW

Write for information and **FREE** samples of the Dampp-Chaser Business Building Aids.

OVER 30 YEARS OF MANUFACTURING BY
DAMPP-CHASER®
ELECTRONICS, INC.

P.O. Box 1610 PTJ
HENDERSONVILLE, N.C. 28739

See us at BOOTH 1629

NAMM WINTER MARKET

Anaheim Convention Center

Feb. 6-8, 1981

978-1

San Francisco

The 1981 Convention City

by James G. Bryant
Local Host Chairman
1981 Piano Technicians Guild
Convention

Spawned in 1849 with the discovery of gold, and nurtured by the wealth of Nevada's Comstock Lode, San Francisco has matured into one of the world's truly great cities and San Francisco is a city in every sense of the word.

What makes this particular city unique is a combination of elements which far transcend the dazzling beauty of its setting. The friendliness and euphoria of its people, the uniqueness of its climate, and its exciting and turbulent history all contribute to make it incomparable. There is no place else on this earth quite like San Francisco.

It has been compared to a vain and beautiful woman. She is cultured, fun loving, untroubled by conscience, a bit narcissistic and a living symbol of verve and beauty. She is amused and flattered by your attention but totally aloof to your advances.

Great cities are rarely created, they evolve, and the history of San Francisco is as fascinating as the city itself. It has, at one time, been a city of gaiety and of turmoil, of prosperity and of poverty, of

determination and of despair — a city as changeable as its weather.

Since those days when the Big Four amassed their huge fortunes and the vigilante committees chastised wrong-doers with a hangman's rope, San Francisco has exuded excitement. From the early days on the Barbary Coast to the more recent happenings in the Haight-Ashbury, San Francisco has never been dull. As William Saroyan stated, "If you are alive, you cannot be bored in San Francisco."

Here is a city which has always seemed to be a decade or two ahead of the rest of the country. It is as if some omnipotent power decreed it a proving ground for social change. Its recent history bears this out. The beatniks of the early 1950s; the flower children of the 1960s, and the anti-war demonstrators of the 1960s and early 1970s all trace their origins to the streets of San Francisco and its environs.

If past is prologue, it bodes well for the future of this country, for the San Francisco of today is a far cry from the turbulent city of the past three decades. The beatniks are now successful writers, stock-brokers, politicians and at least one piano tuner. The flower chil-

dren have either migrated to the communes in the northern part of the state or, more often, have returned to whence they came, sadder but wiser. Most of the anti-war activists are still there, smug in the satisfaction that they were right all along, and therefore, content to work through the system.

The result is an atmosphere of love and understanding, peace and tranquility, happiness and joy. A city whose inhabitants — be they black, white, or yellow, straight or gay, rich or poor, white collar, blue collar or no collar at all — are working together to maintain their historical heritage and enhance their cultural achievements to make a great city still greater.

San Francisco is a young city and, like the young, its friendly people look forward and never back. Despite Proposition 13, they have just opened a beautiful new symphony hall and a huge convention center is under construction.

Yet they always seem to keep everything in perspective. When the citizenry realized that the Embarcadero Freeway was going to impose its ugliness on the entire vista of their beautiful waterfront, such a hue and cry went up that construction was halted immediately and what remains — and





has for over 10 years — is a huge freeway, suspended in midair and going nowhere. It still stands as a steel and concrete monument to the spirit of the people of San Francisco and a mute warning to those who would try to deface the beauty of their city under the guise of progress.

Penurious civic leaders have been trying for years to scrap the cable cars and it is here that the San Franciscan becomes the most stubborn. He knows they are silly and outmoded; that they cost many millions to maintain, and may not be as safe as other means of public transportation, but he is delighted by their absurdity. Even on damp and blustery mornings he would rather cling to a pole on the long wooden outer step of a cable car than ride in the finest limousine. This quaint anachronism clanks and rattles its way up the steel hill only to come swooping down on its roller coaster ride accompanied by the

ding-ding of the bell as each gripman clangs out his own particular concerto. As the rider leaps from his precarious perch in midblock and jogs alongside for a few steps to gain his equilibrium, his spirits are lifted.

The cable cars, the fragrant little corner-flower stands, the street musicians — these are all San Francisco traditions which the people will never let the mere lack of money abolish, and rightfully so. They are nourishment for the soul.

When you visit San Francisco, you too will feel all of these things and, when you leave, it will be like parting from an old and dear friend. I feel about San Francisco the way I feel about my wife. While she may have a fault or two, I truly love her and never tire of seeing her, secure in the knowledge that her cherished countenance will always have something fresh to give me. □

**THE NEW ENGLAND SCHOOL OF
STRINGED KEYBOARD
INSTRUMENT TECHNOLOGY**

Department of
North Bennet Street Industrial School

**PIANOFORTE
HARPSICHORD CLAVICHORD**

TWO-YEAR COURSE

Instructors: William E. Garlick
David C. Betts

FIRST YEAR — In Tuning, Regulating, Repair and Maintenance, Acoustics, History, Business Practice and Promotion.

SECOND ADVANCED ELECTIVE YEAR — Comprehensive piano rebuilding, advanced tuning, regulating and voicing. Harpsichord and Clavichord maintenance.

N.B.I.S. admits students of any race, color, religion, sex, national or ethnic origin. For further information write: William E. Garlick, Program Director, Dept. Piano Tech., 39 North Bennet Street, Boston, Mass. 02113 or telephone (617) 227-2357.

San Francisco, Here We Come (again)

by George Defebaugh
1981 Institute Director

Seems like yesterday I was attending my first Piano Technicians Convention. The hotel was the old Palace and the city was San Francisco, California, City of Enchantment, Bagdad by the Bay, "Everybody's Favorite City." The year was 1955 and the organization was The American Society of Piano Technicians (ASPT).

Why should my first convention stand out in such sharp focus in my memory? Well, if you can spare me a few minutes, I'll tell you.

Having spent nearly 20 years as a full-time musician-part-time piano technician (make that "lone-wolf type" piano tuner), I was only a year or so into "turning my careers around," "reorganizing my priorities," "taking a different tack," or whatever one calls a change of direction in life. The fact is, a very good friend, Fred Lent, had introduced me to ASPT in 1952 or '53 and when I decided to make piano tuning & repair a vocation and relegate drumming to avocation status, I naturally joined ASPT.

Now to the 1955 ASPT convention:

Being relatively new in the organization this gave me the opportunity to become better acquainted with some of the "younger" members of the chapter such as Norman Neblett, Norman Miller, Ernest Dege, LaRoy Edwards, and Fred Odenheimer, who for some reason or other don't seem so young any more. For that matter Don Morton, who was president of the Los Angeles chapter of ASPT and gave me my entrance exam, doesn't seem so young anymore, either.

Having been an ASPT member for nearly a year and rubbing elbows at chapter meetings with such greats as Vic Jackson, Les Hoskins, Willard Davis, Cecil Short, Harvey Smith, Herman Koford, Warren Forgey, etc., I was becoming somewhat accustomed to being in the presence of a storehouse of knowledge. However, seeing a group of talented people such as this all together at a four-day convention really boggled my mind.

Added to the above-mentioned names, with whom I was just beginning to feel comfortable, I now had to add Percy Gatz, Erwin Otto, Bill Hupfer, Don Galt, Bob and Jim Burton and of course no convention would have been complete

without Charlie Stein and his class in grand regulation.

Although the attendance at the 1955 ASPT convention was probably no more than 400, I WAS IMPRESSED. When President Don Morton called on us for convention reports at the next chapter meeting, I remember my statement quite clearly:

"I never knew there were so many people in this business who knew so *much* about pianos."

If I haven't lost you by this time, you are probably beginning to get my point. There is nothing like the memories of a PTG international convention to store in your memory bank. If this is your first convention, I guarantee you will never forget it. You will have 3½ days of classes with the finest instructors in our business. You will go home with so much information it will take you a year to sort it out. As a learning experience, it has no equal.

If you already have many years in the business, come and learn a new way to do an old job, or get your own opinions reinforced. Young or old, experienced or inexperienced, you can't afford to miss it. Just circle these dates on your calendar, July 7, 8, 9, 10, 1981, and set your sights on "Everybody's Favorite City," San Francisco. We plan to have "Everybody's Favorite Class" in the 1981 PTG Institute of Piano Technology. □



FALCONWOOD PINBLOCKS OF BEECHWOOD

• The Finest Quality Pinblock, bar none!

Are installed tuning pins losing their grip? Falconwood pinblocks help solve this problem. Constructed of 27 laminated plies of beechwood, they absorb less moisture, resist expansion and contraction to maintain a true round tuning pin hole.

C.A. Geers can furnish a pinblock to suit your needs — Send the old pinblock and have our craftsmen match, cut and shape a new block or buy a panel ready to size, cut and fit yourself.

Ask about our complete or partial Piano Rebuilding Service.

PANEL SIZES

Single panel — 9½" x 4½" x 56" x 1½" thick
Double panel — 14" x 56" x 1½" thick
Full panel — either
36" or 48" wide
x 1½" thick

Lightly
sanded ready
to drill

★ Write or call

WEST COAST SUPPLIER	B & G INTERNATIONAL Carson, CA Phone: 213-830-0150
---------------------------	--

Area Code 513 941-7666



PIANO COMPANY, INC.

691 N. MIAMI AVE.
CLEVES (CINCINNATI) OH. 45002

NOW
AVAILABLE

STEP-BY-STEP PINBLOCK
INSTALLATION BOOKLET.
AN INVALUABLE TOOL
AT ONLY \$5.00

CROSS OVER THE BRIDGE

All New for 1980-1981

This year the booster club has a new format.

1. **POINTS** The point system for bringing in a new member has been changed to give members a simpler, fairer system. Three points will be credited for bringing in a registered technician, apprentice or allied tradesman and one point for sponsoring a member of any other classification. In this way, the point spread recognizes the fact that all who sponsor a new member are actively supporting the Guild.

Members who achieve fifteen points will be honored in the 1981 President's Club. Those who help bring a former member back into the Guild will be honored in the 1981 Restorer's Club.

2. **PRIZES** This year as a special feature every member who brings in three members will receive a flashlight pen and every member who brings in seven new members will receive a Journal binder as a gift.

To be sure all points are properly recorded, please check all new member applications carefully.

1. Please **PRINT** your name after your signature on the line "recommended by" when you wish to receive credit for bringing a new member into the Guild. Some signatures are difficult to read and we regret having to omit a name for this reason.

2. Please show your own chapter after your name. Some members sponsor a new member into a chapter other than their own.

3. If you wish credit for a **RESTORED MEMBER**, please write this fact on the application form. It is not always possible to trace a former member after a lapse of time.

4. If corrections should be needed in the records, please notify the home office promptly. The **Journal** goes to print some weeks ahead of mailing.

5. The first figure after each name represents the number of points earned. The second figure shows the number of new members brought into the Guild for the year 1980-81.

Pts Mbs

President's Club

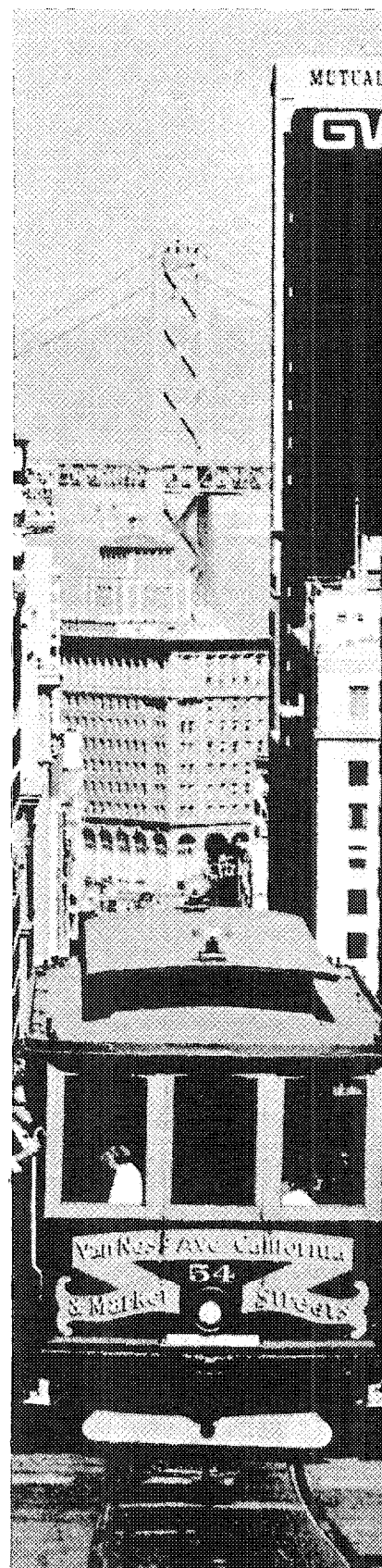
DRAINE, Robert 24 ... 8

Restorer's Club

COLEMAN, Sr., Jim
MANNA, Tony
WALKUP, Ken

Booster Club

AFFLECK, Don	1 ... 1
ALLEN, Jon	1 ... 1
ANDERSON, Albert	6 ... 2
ASHMORE, Yvonne	1 ... 1
ATHERTON, Olan	3 ... 1
BAKER, Elizabeth	3 ... 1
BITTINGER, Dick	10 ... 4
BLOCH, John	3 ... 1
BROOKSHIRE, Jerry	1 ... 1
BROWNFIELD, Gary	3 ... 1
CALLAHAN, James	1 ... 1
CAUNTER, Gerry	3 ... 1
CLEVENGER, Wayne	4 ... 2
COLEMAN, Sr., Jim	4 ... 2
COX, Merrill	4 ... 2
CUNNINGHAM, Jess	3 ... 1
DeARMOND, C. E.	6 ... 2
DeTAR, BRIAN	1 ... 1
DROST, Michael	8 ... 4
DUNCAN, David	3 ... 1
DUKES, Frank	3 ... 1
ERDMAN, James	1 ... 1
EVANS, Dan	3 ... 1
FELTON, Hilbert	4 ... 2
FINGER, Chris	12 ... 4
FLEGLE, Sr., Richard	1 ... 1
FRANZ, Earl	1 ... 1
FREEMAN, Jimmie	3 ... 1
FROST, Jack	6 ... 2
GARLICK, William	3 ... 1
GILLER, Evan	4 ... 2
HANSON, Frank	9 ... 3
HARMON, Clayton	3 ... 1
HAUCK, Jack	1 ... 1
HEDRICK, Ralph	4 ... 2
HERBERT, Curtis	2 ... 2
HESS, Marty	3 ... 1
KADWELL, Kenneth	3 ... 1
KELLEY, Allen	6 ... 2
KIMBELL, Michael	1 ... 1
KINGSBURY, Richard	3 ... 1
LILLICO, John	1 ... 1
MACCIA, Allen	3 ... 1
MANNA, Tony	3 ... 1
McGUIRE, Michael	3 ... 1
METZ, Al	2 ... 2
MULLER, George	3 ... 1
ODENHEIMER, Fred	3 ... 1
OSBORNE, James	3 ... 1
PERSON, Donald	3 ... 1
PETERSON, Gerald	3 ... 1
PREUITT, Ernest	13 ... 5
REITER, Michael	1 ... 1
REQUE, Styrke	1 ... 1
RUSSELL, Bob	5 ... 5
SAAH, Joseph	3 ... 1
SEAFORD, Jack	1 ... 1
SCHNEIDER, William	3 ... 1
SCHOPPERT, Robert	12 ... 4
SEITZ, Al	3 ... 1



SIEROTA, Walter 3 ... 1
 SKOLNIK, David 3 ... 1
 STEELE, Joe 10 ... 4
 STONE, Sidney 1 ... 1
 SVEC, John 1 ... 1
 THILE, Scott 1 ... 1
 WAGNER, Lloyd 3 ... 1
 WALKUP, Ken 3 ... 1
 WILLIAMS, Kenneth 3 ... 1
 ZEISEMER, Bruce 3 ... 1

New Members

REGISTERED TECHNICIANS

Blue Ridge, VA Chapter
 TUCKER, KIRBY E.
 178 Squire Hill Rd.
 Charlottesville, VA 22901

Denver, CO Chapter
 BONDURANT, GARY J.
 4895 Morrison Road
 Denver, CO 80219

JOHNSON, BRUCE G.
 5193 Zinnia Street
 Arvada, CO 80002

Erie, PA Chapter
 BROSCOE, JAMES R.
 622 Sharon
 New Castle Road
 Farrell, PA 16121

Hutchinson, KS Chapter
 PICKERILL, JERRY W.
 1209 Beeson
 Dodge City, KS 67801

Kansas City, MO Chapter
 ANDERSON, RICHMOND C.
 8805 Evanston
 Kansas City, MO 64138

EVERSOLE, THOMAS R.
 2629 Missouri
 Lawrence, KS 66044

Lansing, MI Chapter
 SHULZE, GARY R.
 2293 Hemlock Court
 Ann Arbor, MI 48104

Northeast Florida Chapter
 HUDNALL, ARTIS L.
 12 Mitchell Court
 Orange Park, FL 32073

Northwest Indiana Chapter
 MACCHIA, MIKE D.
 6730 East 85th Court
 Merrillville, IN 46410

St. Louis, MO Chapter
 GODDARD, PATRICK D.
 2615 Texas Ave.
 St. Louis, MO 63118

South Dakota Chapter
 PORTER, JON W.
 1110 South Newton
 Sioux City, IA 51106

Southwest Florida Chapter
 SUYKER, GLENN W.
 3192 64th St. North
 St. Pete, FL 33710

Syracuse, NY Chapter
 NOWARK, TIMOTHY C.
 127 Sheldon Ave.
 Syracuse, NY 13205

Tucson, AZ Chapter
 PRENTICE, RANDY
 2762 N. Forgeus
 Tucson, AZ 85716

Vancouver, B.C.
 BAYLEY, ROBERT E.
 20611 44th Ave.
 Langley, BC V3A 3E5

Western Massachusetts Chapter
 LOOMIS, RICHARD G.
 28 Mountain Street
 Haydenville, MA 01039

WHYNOTT, DOUGLAS V.
 45 Laurel Park
 Northampton, MA 01060

APPRENTICE

Dallas, TX Chapter
 DANIELSON, TIMOTHY J.
 49 B Neva Lane
 Route 2
 Denison, TX 75020

Denver, CO Chapter
 KARASIK, RANDAL B.
 3059 S. Grape Way
 Denver, CO 80222

MAYHERCY, KENNETH W.
 P.O. Box 1080
 Steamboat Springs, CO 80477

Kansas City, KS Chapter
 ROBBINS, PHILLIP R.
 7026 Redwood Dr.
 Kansas City, KS 66112

Portland, OR Chapter
 CORNELL, DANIEL E.
 717 SE 212th
 Gresham, OR 97030

Puget Sound, WA Chapter
 SNYDER, JAMES D.
 P.O. Box 193
 Onalaska, WA 98570

ASSOCIATE

Toronto, ON Canada Chapter
 HARRIS, LEE M.
 904 Ivanhoe Ave.
 Ottawa, ON K2B 5S5

STUDENTS

Central Washington Chapter
 HENDERSON, ANNETTE J.
 Route 2, Box 2142
 Wapato, WA 98951

Coming Events

Notices of seminars will be accepted for insertion in THE JOURNAL no sooner than six months before an event. In addition to the listing below, your seminar may be publicized through one free display ad, two columns by two inches deep. It is the responsibility of the advertiser to submit copy for the ad to the Home Office. Material must be received six weeks prior to the publication date of THE JOURNAL.

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

Jan. 16-17, 1981
 ARIZONA STATE CONVENTION
 Tucson, Arizona

Contact: Glenn J. Persons
 42 E. Wetmore Road
 Tucson, Arizona 85705
 (602) 887-8569

Feb. 28-March 1, 1981
 CALIFORNIA STATE CONVENTION
 The Inn at the Park
 Anaheim, California

Contact: Paul Monroe
 5200 Irvine Blvd., #310
 Irvine, California 92714

March 27-29, 1981
 PENNSYLVANIA STATE CONVENTION
 Brunswick Motor Inn
 Downtown Lancaster, Pennsylvania

Contact: Richard E. Bitteringer
 107 West Main Street
 P.O. Box #51
 Brownstown, Pennsylvania
 17508
 (717) 859-3111

April 13-14, 1981
 MICHIGAN STATE CONFERENCE
 Michigan State University
 East Lansing, Michigan

Contact: Thomas McNeil
 119 Allen Street
 Lansing, MI 48912
 (517) 372-7296

PIANO TECHNICIANS GUILD
24th Annual Convention
and
Technical Institute
San Francisco Hilton Hotel
July 6-10, 1981

Minnesota - North Iowa Chapter
MONTGOMERY, KAREN E.
214 S. Second St.
River Falls, WI 54022

QUALE, LOIS I.
1436 Howard Ave.
Eau Claire, WI 54701

Santa Clara, CA Chapter
MOSES, RODNEY D.
22316 Janice Ave.
Cupertino, CA 95014

Southwest Florida Chapter
COX, WADE O.
2495 Browning St.
Sarasota, FL 33577

Toronto, ON Chapter
JOHNSON, RODMAN J.
140 Ripley Court
Unit #3
Oakville, ON L6H 1H1

Utah Valley Chapter
JIMISON, ROBERT L.
665 E 700 N
Provo, UT 84601

Wichita, KS Chapter
CHEATHAM, MARK O.
604 W. Emporia
Wichita, KS 67214

RECLASSIFIED

REGISTERED TECHNICIAN

DAVIS, STEPHEN
Portland, OR Chapter

NORRINGTON, WILLIAM E.
Orange County, CA Chapter

TATE, ROBERT H., JR.
Utah Valley Chapter

TOMM, ROBERT E.
Erie, PA Chapter



Piano Keys
Recovered With

ART IVORY

Over 50 years of continuous service
to dealers and tuners

WRITE FOR COMPLETE
PRICE LIST
O. E. SHULER CO., Inc.

149 E. HARRISON ST.
PARAGON, INDIANA 46368

New Chapter Elects Officers

by Dick Bittinger
Northeast Regional
Vice President
Piano Technicians Guild

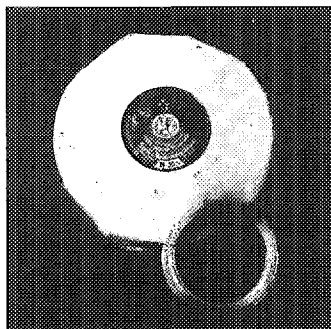
Officers and members of the Piano Technicians Guild's newest chapter were announced recently. The Maritime Provinces Chapter, covering eastern Canada, has Joe Steele of Fredericton, New Brunswick, as its new president; Arne Wickens of Moncton, N.B. as its vice president; Dennis Johnson, also of Fredericton, as its treasurer, and John Smith of St. John, N.B., as its secretary.

Membership in the chapter numbers 10 with seven craftsmen, two apprentices and one associate member. Other members of the chapter include W. T. Pearson of Charlottetown, Prince Edward Island; E. P. Wickens of St. Stephen, N.B.; John Thurber of Fredericton; Mike McDonald of Sydney, Nova Scotia; J. Bruno Theriault of Mon-

ton and Andrew McNicol of Sackville, N.B.

During the formation of the chapter in late August, the new Guild tuning test was administered by Al Sanderson, RTT of the Boston chapter. Five tests were given and two persons passed the test for tuning examiner. They were Joe Steele, the new chapter's president, and Leslie Collis, secretary of the Newfoundland chapter.

On hand to help with the written, bench and tuning tests were Allyn Winslow of the Boston chapter, James Bittinger of the Reading-Lancaster (Pennsylvania) chapter and Paul Rice of the Maine chapter. □



NOW AVAILABLE!
FINEST QUALITY "Röslau"

CAST STEEL WIRE

EXTRA QUALITY • BLUE LABEL • TINNED

Available in 1 and 5 pound Coils

SIZES 12 through 22 (Half Sizes)
12 through 20½

SMALLER SIZES

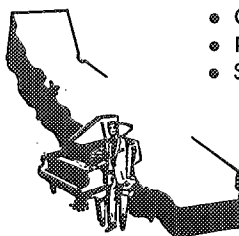
1/4 lb. COIL No. 00 through 11
(Even Sizes Only)

COMPLETE LINE OF TOOLS and SUPPLIES for PIANO REBUILDERS

SPECIAL TOOLS . . .

Designed to Meet the Technician's Requirements

- SPOON BENDERS
- KEY BUSHING TIGHTENER
- GRAM WEIGHTS
- STRING HEIGHT GAUGE
- REPINNING TOOL
- GRAND KEY LEVELING LEADS
- SHIMMING KNIVES
- STRING HOOKS (2 Types)



Write: **BOX PTJ**

PACIFIC PIANO SUPPLY CO.

P.O. Box 9412 • North Hollywood, Calif. 91609
Phones: (Area 213) 877-0674, 769-2490

THE AUXILIARY EXCHANGE

Luellyn Preuitt

1980/81 Auxiliary Board

Officers

JEWELL (Mrs. Jack) SPRINKLE,
President
6033 North 19th Road
Arlington, Virginia 22205

JULIE (Mrs. Ronald) BERRY, 1st
Vice President
6520 Parker Lane
Indianapolis, Indiana 46220

SHIRLEY (Mrs. Richard) TRUAX,
2nd Vice President
628 Florida Avenue
York, Pennsylvania 17402

BERT (Mrs. Walt) SIEROTA,
Recording Secretary
5201 Whitaker Avenue
Philadelphia, Pennsylvania 19124

AGNES (Mrs. Charles) HUETHER,
Corresponding Secretary
34 Jacklin Court
Clifton, New Jersey 07012

BELVA (Mrs. Richard) FLEGLE,
Treasurer
1920 South 1st Street #904
Minneapolis, Minnesota 55454

GINGER (Mrs. James) BRYANT,
Parliamentarian & History
1012 Dunbarton Circle
Sacramento, California 95825



Editor, Auxiliary Exchange

LUELLYN PREUITT
4022 South Fuller
Independence, Missouri 64052

"As our Good Ship Elisha sails near the Horn, we send to you greetings! And a good year 1981."

Thus begins President Jewell in her monthly message. She continues:

"The planning meeting for the 24th annual convention went very well. We were impelled to change a few things, but I believe for the better. The hotel is very large and has good facilities for class rooms and social activities. The auxiliary center will be in the California Room, which is a section on the main (second) convention floor.

"Food functions are going to be more expensive this year, so we are having to raise our registration fee by \$5. All of the hotel personnel were courteous and helpful at our meeting. I was told to advise everyone to bring warm clothing, as July is a cool, damp month there.

"Jack and I began a three-and-one-half hour tour to learn about points of interest. Unfortunately, after having viewed Chinatown, Italianatown, the Wharf area, and wharfend of the cable car system, the guide stopped the van at the top of a steep hill where we were going to descend 'the crookedest street in the world (Lombard Street).' Suddenly, there was a loud bang, and steam flew; the radiator had broken. We were told to wait for a replacement.

"After deciding it wasn't coming (some 45 minutes later), Jack and I decided to go on our own.

"We then walked back to the waterfront and took a boat tour of the harbor. You could spend all day at the waterfront; there are so many places to shop, eat and look

"We then took the cable car back to the hotel. I hope they are working when we are there in July. (Your writer's note here: once in a while I just plain boggle at Jewell's handwriting, as I'm sure she does at mine! Anyway, although I cannot quote her verbatim, I know she means that the turnstiles are always full, and that you have to be very alert to get on.)

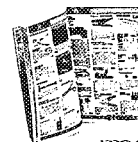
"One starting point is within easy walking distance of the hotel, on Powell Street, and another is close to the waterfront.

"After returning to the hotel and getting our car, we drove north out of the city across the Golden Gate Bridge. Another tour which is a 'must' will occur on the third day of the convention. This will be an open day for tours. San Francisco is a very interesting city and I'm sure we are going to have an exciting time. It will be expensive, so start saving your dollars. The post-convention tour to Hawaii looks very interesting.

"Be watching for more information coming from our western region hostess members.

"By the way, we have just learned that Mrs. Peter Wolford (Marguerite) has agreed to be convention coordinator. We appreciate her interest and her willingness to

FREE CATALOG HARD-TO-FIND PRECISION TOOLS



Lists more than 2000 items:
pliers, tweezers, wire strippers,
vacuum systems, relay tools, optical
equipment, tool kits and
cases. Send for your copy today!

JENSEN TOOLS INC.

1230 S. PRIEST DR. • TEMPE, AZ. 85281

serve in this capacity. Let's offer any help we can for her, and support her in this endeavor. Until next month — *Jewell Sprinkle, President, Piano Technicians Guild Auxiliary.*"

HAVE YOU ORDERED YOUR ROCKWELL PRINT?

Sales of the Rockwell print are going well. Julie Berry expressed satisfaction with the response at the Central West Region Seminar in Wichita, Kansas, last November. Even though Christmas 1980 is past, remember there are many other uses for this print as a gift. Birthdays, Easter, Mother's Day, Father's Day, and the Fourth of July are good times to look with pleasure upon that little redheaded boy of many years ago watching the "piano tuner" at work! Only \$3.50 brings you a copy of the frammable print when you write to Julie and enclose your check. Again, her address is 6520 Parker Lane, Indianapolis, IN 46220.

CENTRAL WEST SEMINAR

This writer attended the Central West Region Seminar, hosted by the Wichita Chapter of the Piano Technicians Guild, in Wichita, Kansas, Nov. 8-9, 1980. Although there were no specific activities planned for spouses, we did enjoy a casual and bright weekend.

The seminar was marked by the attendance of three past presidents of the Piano Technicians Guild Auxiliary: Dessie Cheatham, Luellyn Preuit, and Viginia Seller. Also there were two members of the executive board of the auxiliary, Julie Berry, first vice president and membership chairman, and Belva Flegle, treasurer.

A high point in the weekend was the presentation to Dessie Cheatham, at the Saturday evening banquet, of honorary life membership in the national auxiliary.

This was a repeat of the presentation made in Philadelphia by Lu Preuit, but was made more memorable by the fact that on this occasion, Dessie Cheatham was present to receive the award.

WITH PLEASURE FROM BELVA FLEGLE

"It is a real joy for me to share with you this month in our *Journal*. as Auxiliary members, we are miles apart geographically, but there is a bond of closeness that is unique to our auxiliary, created through these pages, our local chapters, our regional seminars, and last but not least, our annual convention — this year in San Francisco.

"Over the years it has been my desire to write to the *Journal* and express my pride in being the wife of a piano technician and the very good and exciting life it has produced for us. Included in that article would be a big 'thank you' to the Guild for creating a professional status for our men. My second topic I would choose for the *Journal* would be sharing with all the ladies about the good times we have at our convention and the new lifetime friends that are made.

"I also believe that, as your new treasurer, it would be advantageous to write about 'money matters' of the auxiliary. Let me say that I feel it is a special privilege to serve in this capacity, and I would like to take some time in this month's *Journal* to explain the change in the auxiliary's fiscal year to coincide with the Guild's. Space prohibits an explanation of all the details, but this was a good change. It was voted upon and approved at our council meeting in Philadelphia.

"Heretofore, our fiscal year has been May to April. The approved bylaws change states that our fiscal year will now be January to December.

"The major adjustment will be in the billing of annual dues for the next year. You can help your treasurer facilitate this change. This is our plan!

1) You will be billed as usual in April of 1981.

2) You will be billed for \$7.50, which will pay through April 1982 plus the remainder of 1982. In

other words, you will not be billed again for dues until November/December of 1982 and that will be for the 1983 dues. At that time, it will be the regular fee and we will once again be billing on a yearly basis. This \$7.50 is a one-time billing for one and one-half years until we catch up to our new fiscal year.

3) This will make it possible for me as your treasurer to bill you only once. It will mean you will only have to write one check rather than two and it will also save postage by having this single billing.

4) If you prefer to send only the yearly \$5, that will be perfectly fine. I will then bill you in April for one-half year, then again in November for the new year.


"If you have never been a member of our Guild, think about it. We would be happy to add you to our growing auxiliary. You have heard it said many times, 'Behind every successful man is a delightful (my addition) woman.' Let's borrow from that and say 'Behind our Great Guild is a delightful, happy, excited auxiliary.' Let's make our Guild proud of us. We are giving them the support and backup they deserve. The reward is a pride that comes to us — the dividends of our investment. — *Belva Flegle, treasurer, Guild Auxiliary*

PLAN AHEAD FOR SAN FRANCISCO

Our first vice president and membership chairman, Julie Berry, has these words for us: "Piano technicians are not known for their ability to plan ahead or for their expertise in scheduling vacation time away from the business. Many of them are so busy keeping up with the tuning calls and the rebuilding jobs that they let time slip away. However, fun-loving, happy people that they are, once the opportunity to recreate is presented to them they tend to relax, unwind and quite enjoy themselves, returning to their work refreshed, ready to dig in once more on all those tunings and rebuilding jobs.

"In July we will all have an opportunity to enjoy one of the best convention cities in the world, San Francisco. We will be staying in a delightful hotel which offers all

**PIANO SERVICING
TUNING &
REBUILDING**
By ARTHUR A. REBLITZ, RTT
"The Technicians' Bible"
\$17.50
+ \$1.50 SHIPPING & HANDLING
THE VESTAL PRESS
Box 97 • Vestal 62, NY 13850
(N.Y. Res. Add 7% Sales Tax)



the amenities a vacationing piano technician and family so richly deserve. Outside the hotel all San Francisco will be waiting for us to come enjoy ourselves and relax a little after a year of working hard.

"Vacation time away from your business is a necessity, not a luxury, or it would not be such an integral part of every big company's employee policy. Just as you save money (either before or after the fact) to pay your taxes, you should save money so that the people who keep your business going can have the vacation they deserve, you included.

"If you combine your trip to the Guild Institute and convention with a family vacation and you do it within the guidelines set forth by the IRS, you can save lots of money on your trip by making it tax deductible. This may be the least expensive opportunity you will ever have to travel to San Francisco and beyond. To pass up serious consideration of this trip as a business proposition would be poor thinking.

"If you picture yourself standing on Fisherman's Wharf next July inhaling the bay breeze, then it's time to start planning now, whether your technician has realized that or not. If you wait until he/she looks up from his/her business long enough to read the pre-registration packet that will arrive next spring, the time for good advance planning will have passed.

"However, if you bank a little money now and a little in a few weeks and a little more after that, your family will be ready to go when the time comes. You will all be able to go together. You will be able to pay as you go without overextending your credit. And after you return you will just have postcards, souvenirs, and happy memories — no lingering bills — to help you face the busy fall season refreshed and relaxed." — Julie Berry

LIFE MEMBERS

From Marian J. Damon, a member of the "sunshine" committee of the Guild auxiliary, comes this article about Camille Gearman. Agnes Huether, our corresponding secretary, had asked Marian to do this article for us, and we are

happy to reproduce it here:

"It is always a joy to remember our life at holiday time and conventions.

"In the central east region, Mrs. Camille Gearman lives near me in Milwaukee, so I asked her daughter, Mrs. Robert Ferry, to tell about her mother's involvement in the Guild over the years. She writes, 'Because Dad (Henry Gearman, now deceased) was president of the Chicago chapter and did a lot of organizational work, Mom acted as his secretary, taking calls and keeping his appointment calendar and writing letters, speeches, and articles. She went with him when she could, but he did travel a lot to get the new organization established in all states.

"Like many wives of technicians, she cleaned and buffed actions,

keys, did refinishing, etc. I can remember when the dining room table held two or more actions.

"Dad forgot his tuning fork one time and he had Mom sound it over the phone. You know it didn't work!

"She's been living with me for 22 years, has been chief cook at times, and is always a loving grandmother. She crochets, gardens, bakes and cans, although she is a little less active now.

"Dad had a lot to do with the Guild. It was his first love, and we both worked hard for its growth."

We thank Marian Damon for getting this article about Camille Gearman, one of our honorary life members, and her daughter for taking the time to write to us of Camille's activities.

ARE YOU LOOKING FOR BETTER BASS STRINGS?

A. ISAAC PIANOS MAKES THEM!

A. Isaac Pianos' strings feature:

- 1-extra bright sounding core wire.
- 2-inharmonicity control-you may now select desired distance from end of windings to agraffes and bridge pins.
- 3-largest range of copper diameters available-from .006 to .085 thou.
- 4-under wrap of copper coated iron or bare solid copper as you prefer.
- 5-calculation of string tensions, load on core wire, inharmonicity, and harmonic structure on all scales.
- 6-shipment of your orders within 5 to 8 business days. EXTRA 24 HR. RUSH SERVICE AVAILABLE ON REQUEST.
- 7-one price (\$80.00 per set) from samples or rubbings.

For using UPS to Canada 2 forms are required; a Customs Cargo Control Document supplied by UPS on request, and a Commercial Invoice, stating value of goods (no more than \$2 to avoid holdups) and origin of goods (U.S.)

When using UPS send to:

A. Isaac Pianos
308 Betty Ann Dr.
Willowdale, Ontario
CANADA
M2N 5P0

Please mark parcel: CUSTOMS CLEARANCE BY FEDERATED CUSTOMS BROKERS

When using mail, send to:

A. Isaac Pianos
P.O. Box 218, Stn A.
Willowdale, Ontario, CANADA
M2N 5P0

A rubbing, folded flat, and sent airmail from any part of the U.S., will reach us in three days.

When sending old string samples, please write this Customs Reference Number T 59750-1 (KAG) on outside of parcel to speed it through customs.

24-HOUR TELEPHONE SERVICE — CALL (416) 226-1171

A. Isaac Pianos



Classified Advertising

CLASSIFIED ADVERTISING RATES are 15 cents per word with a \$3.00 minimum. Full payment should accompany insertion request. Closing date for ads is the first of the month prior to publication.

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

Send check or money order (U.S. funds), made payable to the Piano Technicians Guild, to Classified Ads, THE JOURNAL, 113 Dexter Avenue North, Seattle, WA 98109.

The Journal does NOT provide blind box service. Please include a mailing address and/or telephone number with your ad.

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

FOR SALE

ZUCKERMANN HARPSICHORD KITS — A real challenge for the interested technician. Factory direct shipment at factory prices. Troubleshooting and advice for kit builders. Authorized Agent: Yves A. Feder R.T.T. Harpsichord Workshops, 2 North Chestnut Hill, Killingworth, CT 06417, Telephone (203) 663-1811

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

KEY RECOVERING MACHINES for sale. Prices on request. Send self-addressed envelope. Or, build your own — send \$10.00 for plans, photos, instructions (refund w/purchase of machine). Solenberger Piano Service, 1551 Lynn Court, Santa Rosa, CA 95405.

PRESTIGIOUS ORANGE COUNTY, CALIFORNIA TUNING CLIENTELE. Store connection with Yamaha/Steinway dealer. Very desirable climate. Must sell because of poor health. \$5,000 firm. (714) 750-7852.

MAKE ME AN OFFER on this Pratt-Read style A Upright Player Stack & Bellows. 26 Bass, 32 Center, 30 Treble. Original Mint Condition. Bob Lutzke, 819 North Fourth Avenue, Big Rapids, Michigan 49307, (616) 796-6137

KNABE-AMPICO GRAND. 5'3", 1924 Pneumatics rebuilt and restrung approximately 20 years, block good, operates well, case original and good, 32 Ampico rolls, asking \$4,500. Roby's Piano Shop, St. Albans, Vermont 05478.

TUNING BUSINESS FOR SALE: Norfolk, Virginia beach and all tidewater area. 20 years in business. Many teacher and professional musician accounts. Should easily produce 800-1,000 tunings per year plus repairs. Bruce L. Blanchard, 1741 Indian River Road, Virginia Beach, VA 23456, (804) 426-7587.

HELP WANTED

HELP WANTED — Artist piano-rental company seeks trainee. Work with the greatest pianos and artists in the world. An apprentice or novice technician is sought for long-term training and employment in New York City, with possible relocation to San Francisco or Los Angeles. Must be willing to embrace with equal zeal the following: tuning, rebuilding, truck driving, refinishing, piano moving, regulating, shop remodeling, voicing, road touring and sometimes long and unusual hours. Benefits: work with the world leader in concert piano preparation and provision, all types of artists, all types of music. As a reward for long-term loyalty, profit sharing or other bonus could apply. (212) 582-6798

REPUTABLE PIANO STORE (since 1961), incl. over 100 rented pianos and stock, good income & location. Price on agreement. K. Burger Pianos, 220 Hamilton Ave., Palo Alto, CA 94301, tel. 415/321-6166.

WANTED

WANTED TO BUY — Mason & Hamlin Grand Piano. Want one that was a player. I have a player mechanism to install. Will pay handsome reward. Brady, 4609 Crankbrook, Indianapolis, IN 46250 — (317) 259-4305 after 5 p.m. (317) 849-1469

A KEYBOARD (KEY FRAME AND KEYS), for three-hammer-section-action of Francis Bacon Grand, Serial No. 50879, 57½". Would consider purchasing complete piano this make and size. Mrs. Ruth R. Burnham, 619 Elmwood Terrace, Rochester, New York 14620, (716) 461-3068.

PIANO TECHNICIAN seeking job opportunities; willing to relocate; registered craftsman member. Please write: Walter F. Gramza, Jr., P.O. Box 201, East Rochester, New York 14445

TUNER, 5 YEARS' EXPERIENCE, looking for tuning, rebuilding work in the East. Willing to relocate. Resumes, references supplied on request. Contact: Bill Verity, 11252 Harlan St., Broomfield, CO 80020, (303) 446-7136.

WANTED-PIANO TECHNICIAN full time for music dealer in sunny Florida. Write: Bobb's Pianos & Organs, 304 W. Hallandale Blvd., Hallandale, FL 33009 or call Mr. Bobb at (305) 456-7800.

LONG-TERM OPPORTUNITY: Seeking tuner-technician with rebuilding and restoration experience. Must also be able to provide own transportation for outside work. Salary/Profit-sharing combination. Send references to Lavender Music Piano Rebuilders, 112 Park Place, Dublin, GA 31021, (912) 272-2727.

WANTED

WANTED. Full-Time tuner-technician to work in a beautiful, mountainous part of the country. Full-line music store. Send resume to Hedge Music, 136 N. Bent, Powell, Wyoming 82435, (307) 754-4664

SALES ORDER FORM

Item	Quantity Ordered	Total Price
BUSINESS AIDS		
Ballpoint Pens – gold, writes blue and red-1/\$3.50-2/\$6		
Billings Pads – 2-part with logo imprint, 50 per pad-1/\$2.50-3/\$6		
Bumper Stickers – yellow/blue/white \$1 each		
Coffee Mugs – white pedestal/blue logo 1/\$4-2/\$7.50-4/\$12-6/\$16.50		
Dash Cash – emergency coin dispenser, white with blue logo-\$1.75 each		
Flashlight Pens – gold, comes with battery-1/\$4.50-2/\$8		
JOURNAL Binders – brown with gold letters-\$6.50 each		
Key Ring – heavy plastic with laminated blue/gold logo-1/\$1.50-3/\$4-6/\$7.50		
Logo Cut Prints – all styles 50¢ ea. sht.		
Logo Emblem Patches – colorful 3" sew-on patches, all are priced the same: 1/\$1.75-3/\$3-6/\$4.50. Indicate colors: blue/white, blue/gold, black/gold		
Logo Metal Cuts – reusable metal on wooden blocks – all sizes are priced the same: \$15.00 each. Indicate size/type: 1 1/4" round, 3/8" round, 1/2" round, 1 1/4" piano or 3/8" piano		
Logo Rubber Stamps – mounted on wooden handle, all sizes are priced the same: 1/\$3.75-2/\$6.50-3/\$9.50. Indicate size/type: 1 1/4" round, 3/8" round, 1/2" round, 1 1/4" piano or 3/8" piano ...		
Logo Stickers – peel-off backing, blue/gold/white – A and B styles. A – for inside glass B – regular 8 1/2" logo-1/\$3-2/\$5-6/\$10		
3 1/2" logo-1/\$1.50-2/\$2.50-6/\$5.50 1 1/2" logo-10¢ each (Min. order 10) (B only)		
Piano Service Appointment Forms – small, green 5-part – 50/\$4.50-100/\$8-500/\$30		
Piano Service Contract – letter-sized, 3-part 20¢ each		
Piano Service Sales Agreement – letter-sized, 2-part 10¢ each		
Pocket Protectors – white vinyl with blue logo-3/\$1.25-6/\$2		
Service Stickers – red and blue with logo. Plain-100/\$4-200/\$6-500/\$12 Imprinted with your name/address-\$45/1000		
Teacher Recital Program Covers – 100 for \$7		

Show A or B

Item	Quantity Ordered	Total Price												
JEWELRY														
* Membership Pin – lapel-type, gold with blue and white logo-1/\$3-3/\$6-12/\$18														
* Tie Clasp – bar type, gold with blue and white logo-1/\$3-3/\$6-12/\$18														
* Tie Tack – gold with blue and white logo-1/\$3-3/\$6-12/\$18														
PUBLICATIONS and MISCELLANEOUS														
Chapter Publicity Manual – \$5 each														
Pamphlets – 10¢ ea.-100/\$8-500/\$35														
A-440 and Your Piano														
Baldwin Postcard														
Care of Your Piano														
"How Often Should My Piano Be Tuned?"														
Piano Pointers														
Reminder Cards														
"Should I Have My Piano Tuned in the Summer?"														
The Tuner To Turn To														
The Unseen Artist														
Piano Action Handbook – by Merle Mason-\$2.50 ea.														
Piano Parts and Their Functions – by Merle Mason														
Members-\$14 hardcover, \$10 softcover														
Nonmembers-\$18 hardcover, \$14 softcover														
* What is a Registered Piano Technician? – card with Code of Ethics – 7¢ ea.														
All items below are available free from the Home Office.														
Lending Library List														
Magic Kingdom Club Application ...														
Members Benefit List														
Reader's Digest Reprint: "The Other Masters of the Keyboard" - limit 10 per order														
Serviceability Improvement Suggestions Form														
"Thank You for Your Membership Inquiry"														
The Piano Technicians Guild - "The Facts"														
* For use by Registered Technicians only SUBTOTAL														
ADD SHIPPING AND HANDLING														
<table border="1"> <tr> <td>If order totals:</td> <td>Below \$5.00</td> <td>\$5 to \$9.99</td> <td>\$10 to \$14.99</td> <td>\$15 to \$24.99</td> <td>\$25 or More</td> </tr> <tr> <td>Add:</td> <td>\$1.00</td> <td>\$1.50</td> <td>\$2.00</td> <td>\$2.50</td> <td>\$3.50</td> </tr> </table>	If order totals:	Below \$5.00	\$5 to \$9.99	\$10 to \$14.99	\$15 to \$24.99	\$25 or More	Add:	\$1.00	\$1.50	\$2.00	\$2.50	\$3.50		
If order totals:	Below \$5.00	\$5 to \$9.99	\$10 to \$14.99	\$15 to \$24.99	\$25 or More									
Add:	\$1.00	\$1.50	\$2.00	\$2.50	\$3.50									

Washington State residents only add 5.3% sales tax

ORDERS UNDER \$10 MUST BE PAID IN ADVANCE

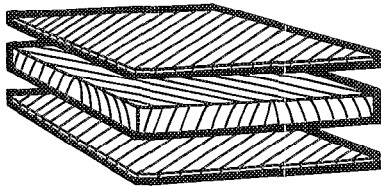
Enclose check or money order for this amount **TOTAL U.S. FUNDS**

Name _____
 Address _____
 City/State or Province _____
 Zip/Postal Code _____ Phone _____
 Chapter _____ Nonmember _____
 Member's Number _____



MAIL TO: PIANO TECHNICIANS GUILD
 113 DEXTER AVENUE NORTH
 SEATTLE, WASHINGTON 98109

PLEASE FEEL FREE TO PHOTOCOPY THIS ORDER FORM



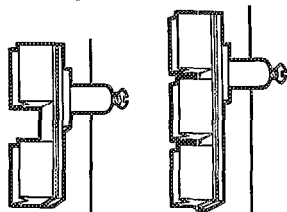
The grain of the wood in both top and bottom layers of the new soundboard runs parallel to the general direction of the treble bridge. The fine grain of the inside layer runs in the direction of the ribs.

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

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



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



Pencil point proves performance of new Wurlitzer Soundboard

Wurlitzer's new all-spruce Duraphonic Multi-radial™ Soundboard transmits string vibrations more efficiently than any other.

To prove its responsiveness, touch the point of a sharp pencil to any area of the board and strike a note as you hold the pencil gently against the surface. Test it top, bottom, sides and center. You will feel vibrations that are both strong and evenly distributed.

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

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

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

WURLITZER®
The Music People
DeKalb, Illinois 60115

