

The Buckeye Backcheck

Newsletter of the Columbus Chapter of the Piano Technicians Guild

Volume 38 Issue 5 May 2013



MESSAGE FROM THE PRESIDENT



Members,

I will be on vacation and will miss the May meeting. Bryan Hartzler has agreed to fill in for me as well as doing a technical on regulation. Thank you Bryan! The meeting will be at Columbus Piano Leasing.

Please plan to attend. Refreshments will be served and we will have election of officers for this year. Ben and I are planning to do the aural tuning technical later this year. It will be up to the new President if we have a June meeting. I am planning to give the President's box of stuff to someone before the next meeting. I have enjoyed being President and hope to see everyone later. Attendance has been up and down over my time as President. I understand last meeting was not well attended, even though we had an out of town guest giving the technical at Mark's shop. Sorry, I was home sick and could not attend. The best to everyone.

John Schmoll RPT

The Buckeye Backcheck

Newsletter of the Columbus Chapter of the Piano Technicians Guild

Chapter Meeting Minutes April 16, 2013

The meeting was held at Mark Ritchie's shop.

Attendance:

Chris Burget, Ron Kenreich, Mark Ritchie, David Stang, and presenter Chris Purdy

Treasurer's Report:

The Chapter has \$3463.42 in checking.

Old Business:

The May meeting was to be originally held at Graves Pianos, Tuesday May 21. Due to recitals there that night other locations were discussed and Columbus Piano Leasing was offered as a possibility. Ben Wiant and John Schmoll will be discussing aural tuning techniques.

As of the April meeting there was still no Delegate to Council for the upcoming PTG Convention in Chicago.

The Dayton Chapter has planned a tour of the O.S. Kelly Foundry, which will take place on Thursday, May 16th at 5 AM. The tour will go through the foundry section of the plant where participants will get to watch a piano plate being poured. Those members wanting to go on the tour should go the PTG website, sign in and reply to the discussion at: <http://my.ptg.org/Communities/ViewDiscussions/ViewThread/?GroupId=67&MID=240875>

New Business:

Registration of the domain name for ptgcolumbus.org is due to expire in June 2013. Members voted to renew the registration for another five years at a total cost of \$48.90 (\$9.60 x 5 years + \$0.90 ICANN fee). The normal cost would have been at least \$16.99/year, but we had a coupon code that reduced the rate to \$9.60/year.

The Chapter discussed placement of an ad in the brochure of the OMTA's Pianorama event this next fall. Deadline for the ad submission is in September. A postcard sized ad for \$15.00 was briefly discussed but no decision was made and members elected to hold off any decision until the May meeting.

Butts & Flanges

Ron Kenreich showed the group a soundboard cleaning tool that he fashioned out of a strip of steel with velcro attached to the end. The velcro easily attaches to, and detaches from, any cloth you may use for cleaning. This spurred a discussion of various soundboard cleaners people have used over the years including the discontinued Tiger Tail; soundboard steel with swiffer pad; Spurlock's cleaners; and The Sweeper with removable/washable sock... at a cost of roughly \$90!



<http://www.sheargoldmusic.co.uk/grand-piano-soundboard-cleaner/>



http://www.spurlocktools.com/grand_piano_soundboard_cleaners.htm

The Buckeye Backcheck

Newsletter of the Columbus Chapter of the Piano Technicians Guild

Broken Agraffe Removal And Replacement

Former Chapter President Chris Purdy came up from Tennessee and gave the April technical presentation on broken agraffes. He started out with some commentary then invited members to get up and try things out on a piece of a plate cut out from a 1914 Steinway. It had agraffes that were in varied conditions ranging from new to those broken at various points along the tops and threaded shafts.

First came some explanations of why agraffes break in the first place. He passed around sample agraffes, both old and new. Upon inspection one could see that the older agraffes weren't threaded all the way up to the top of the shaft, so when factory technicians would install these they would tighten them forcing the unthreaded portion into the plate. This torquing them down would often actually thread that top portion but would also weaken the shaft in the process. This was most likely an unforeseen consequence that wouldn't be realized until years later when these pianos were later restrung or rebuilt. After all, the technicians were only torquing them further to get the agraffes better aligned with the strings. Rebuilders reusing the original agraffes would, in turn, often repeat the mistake and possibly further weaken already stressed agraffes. The agraffes may also twist off at the head while reinstalling. This is actually pretty easy to do if one isn't careful. This became very clear when members got up and deliberately over-torqued a few just to get an idea of how it feels to tighten them and then overtighten them to the breaking point. Some popped right off. Age alone can also play a role, in that agraffes are made of solid brass, which is not only weaker than other metals but may crystallize with age, becoming more and more brittle. In some cases the agraffe may even break at the top where the strings pass through them. This may be due to the strings being brought way over pitch in the attempt to stretch them quicker while restringing or from erroneously turning the wrong pin. In either case, the tension is too great and the agraffe either splits at the holes or the whole head pops off while still attached to the strings.

Next came steps for removal. Chris recommended starting as "low impact" as possible and progressively moving to more extreme measures only as necessary. He suggested starting with applying a penetrating oil or lubricant like a teflon penetrant or magnetic catalyst like PB Fabulous Blaster. The longer it sits the better. Also, be mindful of the pinblock and DO NOT let it get near the tuning pins. Now comes removal.

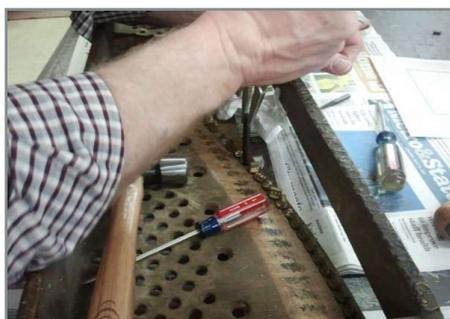
Sometimes when agraffes break there are rough or uneven spots at the break. That can actually be good in some cases. See if it's possible to remove the agraffe with your fingers. If not, try vice grips or needle-nose pliers or tweezers. Anything that might be able to grip any material sticking up. Often the shaft is freely moving since the head is missing and it will merely back out with counter-clockwise rotation. One could then try tapping on a ridge with an awl or similar tool. Tap in such a way that the shaft would turn counter-clockwise. Start out tapping lightly then increase pressure a little bit. He then showed us a tool that was basically a modified screwdriver that had a crescent-like shaped wedge milled out of the tip leaving two points at the end. This tool can be tapped into the broken piece so that the points dig in allowing the shaft to be screwed out. You can also tap a screwdriver onto the shaft creating a slot on top of the shaft that can then be unscrewed with the screwdriver. If none of these options work then an extraction tool is needed.

Chris showed us a couple of screw extracting tools in his kit. The first was the "Grabit" tool. It is a dual-ended drill bit to be used in a reversible, variable-speed drill. One end is a reamer and the other an extractor. One must first use an awl or center-punch tool to start a pilot hole. Do your best to get it in



The Buckeye Backcheck

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the exact center and tap so that a dimple is formed. This is done to minimize any "walking" of the drill bit across the shaft. The reamer end is then used to drill a small hole. Flip the bit around and use the extractor to slowly dig into the shaft and back it out. Again, slower is better here. If this doesn't work move up to next size bit and try again. He then showed us his set of "Easy-Out" bits. Find a very small drill bit and drill a pilot hole in the center of the shaft about 1/8-1/4" deep. Tap the easy-out into the hole, all the while being careful to not use too much force causing the shaft to expand and get tighter in the hole or damage the threads. Then affix a wrench or vise-grip pliers and slowly back out the shaft. Move up to the next size bit if needed. There are also other screw extracting tools on the market as well. We even tried using a reverse threaded, or left-hand, drill bit on one and had some success. All of these tools and methods can be hit or miss at times and there is no "one-tool-cure-all-panacea" for all situations. If none of these work then perhaps the "nuclear option" will be called for.

This last resort consists of drilling out and retapping a hole in the plate and inserting a threaded repair sleeve to hold the new agraffe. The kit can be ordered from Pianotek. The order codes are: AGR-14R for the insert sleeves; and AGR-14RQT for the Q size drill bit and tap. The action will have to be removed and the keybed covered to protect it from oil and metal shavings.

Drill out the agraffe shaft with the Q size bit doing your best to hold the drill as perpendicular to the plate as possible. Frequently lubricate while drilling because much heat will be generated. If possible, drill completely through the plate. Next, tap the hole with a 3/8" tap with 24 threads per inch. Lubrication is recommended here as well. Placing the tapping bit in a T-handle is helpful in maintaining a proper vertical angle and gives better leverage and control. Start tapping the hole, and after every couple of turns back out the tap about a 1/4-1/2 turn and continue. This will free the leading edges of the tap of debris and make it easier to progress. Take your time here and do not rush this, and use slow and even pressure and speed. This will help insure consistency in the threading. (Mark commented how he loves the feeling of a tap cutting into steel, and, I must say, it is a satisfying sensation. I concur with Mark.) After this, clean the hole and the area around and below it. Do whatever you can to remove all the shavings. We used a shop vac. A bristled gun barrel or air brush hose cleaner can be useful too. Now install the new agraffe into the repair sleeve and then screw that into the newly tapped hole. If successful, it should easily screw right in. Agraffe shafts come in two sizes: 1/4" and 7/32". The repair sleeves only accept 1/4". Also be sure to choose the correct single, double or triple unison. Tighten and align the agraffe taking care to not over-torque. If more than a 1/4 turn is required to get an agraffe to line up, remove it and try another because the thread on another may begin in a slightly different place on its shaft and line up better. There are also spacing washers available that may help with this but they may raise the string height slightly. You could also counterbore the bottom of the agraffe head and use a washer so it doesn't stick up as high.

That pretty much sums up what Chris showed us and what was explained in his outline. There were some other things to be said about all of this. Chris went on to show how sometimes plate struts inhibit clearance for tapping, so expensive tap extensions may be needed at times. Also, we were working on a piece of a plate, on a bench, in a shop, with no strings. If this is to be done in a customer's home, then all precautions need to be taken to not damage neighboring strings/parts, so cover as much of the area as possible and only expose what is needed. If using newspaper or something like that, just be mindful of the potential heat generated if you're "going nuclear". Hopefully, this is a situation none of us will have to deal with but at least he provided a blueprint of how to deal with it if it does. Many of us have had various broken bolt/screw issues come up in other situations and many of these tips would apply. Anyway, here's to a nuclear-free world!

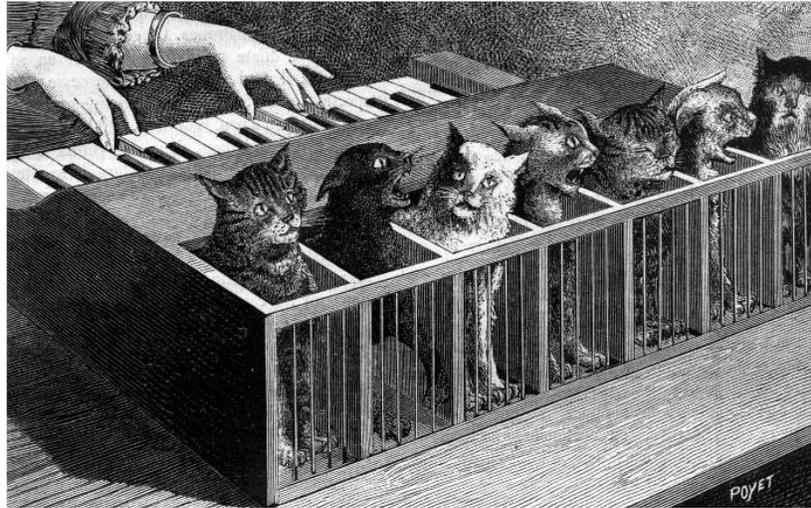


The Buckeye Backcheck

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www.ptgcolumbus.org

Keep Working On Those Unisons!



Columbus Chapter of the Piano Technicians Guild

President John Schmoll, RPT
Vice-President Bryan Hartzler, RPT
Treasurer Ron Kenreich
Secretary Christopher Burget

*Contributions and pictures for
the Buckeye Backcheck and the
web page are always welcome,
(even if they are only
peripherally related to pianos)!
- Chris Burget*

Upcoming Events

Chapter Meeting

**Tuesday, May 21 2013,
7:30 pm**

Columbus Piano Leasing
6493 Proprietors Road
Worthington, Ohio 43085
614-436-2246

columbuspianoleasing.com

Topic: Regulation Tips
Bryan Hartzler, RPT

This newsletter was created using the open-source program Scribus running on the Linux Mint operating system.

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Comments, articles, and advertising requests may be sent to the editor:

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