



The Buckeye Backcheck

Newsletter of the Columbus Chapter of the Piano Technician's Guild
Volume 48 - Issue 7 - November 2023

Next Meeting

Tuesday, January 23, 2024 @ 6:00 PM

Hofbräuhaus Columbus

800 Goodale Blvd.
Columbus, OH 43212

Happy New Year! We hope everyone has been able to enjoy some downtime after the hustle and bustle of the holiday season. PTG Columbus will kick off 2024 with a casual meeting over dinner, and all are invited! (This is a pay-your-own-way event.) **If you plan to attend, please RSVP to Justin Swain so we can get a proper headcount. You can do so by replying to this email.**

At dinner, we will be discussing the technical demonstration scheduled for February 17th at Stanton's Music. We plan to service the performance piano located in their recital hall as a group. It's a great opportunity for new people to learn concert prep. Please help spread the word to any folks who would benefit from such an experience.

Chapter Meeting Minutes

November 21, 2023 7:00 PM - Kawai Piano Gallery

Attendance:

David Stang, Jack Johnston, Wayne Strautman, Andrew Kovaleski, Justin Swain, Kim Hoessly, Tim Swanson, Katja Ryabtseva, Tim Felix, Jennifer Dutiel, Jesse Heetland, Gabriel Heetland

Treasurer's Report:

\$1,882.40

Old Business:

- Andrew is on the Chapter Health Committee and will report on its activities.

New Business:

- Discussed the Baldwin L at Stanton's:
 - Kim says the piano needs a cleaning, hammers filed, some voicing, mating hammers to strings, leveling strings, touch up regulation (currently low aftertouch) and everything is very uneven.
 - They have reading sessions there and musicians accompany singers.
- Talked about offering OMEA teachers a class about what can be done to improve practice pianos.
- Discussed visiting the Charles Walter factory in Indiana. Wayne has access to a van. Timing is still up in the air, with some thinking early in the year would be better, while others suggest summer timeframe. Next steps: send out a survey to gauge interest, and figure out logistics: accommodations, fuel cost, etc. We want to make sure we go when there is manufacturing going on.

Butts and Flanges:

No Butts and Flanges this meeting.

Technical Presentation

Accordion Repair with Tim Swanson



Tim's Background

Tim just moved back to Columbus from Philadelphia. In 2013, he graduated from Renton Technical in Band Instrument Repair Technology. He transitioned to accordion repair in 2020. He found it valuable to expand into other instruments.

Accordion History

The accordion is a product of the Industrial Revolution, but has roots 4,000 years ago in ancient China. The Sheng was an ancient instrument that had vibrating reeds. You blew with your mouth, and air went into tubes of various sizes. It wasn't until medieval times that they had the idea to use bellows. There are signs of it dating back to the 4th century. It wasn't until the Sheng made its way to Europe in the late 18th century that the free reed became known to Europeans. In 1810, a Frenchman decided to remove the pipes, thus inventing the harmonium. In 1822, German inventor Friedrich Buschmann devised a heavy/awkward version of what is the accordion today. In the last 200 years, the instrument has reached all corners of the globe: german polkas, tangos, french musettes. It was not so popular in the US with the advent of rock and roll music. Accordions were mostly made in Italy (Castelfidardo on the Adriatic coast) and Germany (Trossingen). Now, a lot of manufacturing is done in China, and overall

quality has diminished. There are still professional grade accordions being manufactured in Italy.

Accordion Basics

The accordion has three main parts:

1. The treble (keyboard side). Standard is 41 keys and 19 inches across. But they come as small as 25 keys. They start at F3 and go to A6. But with switch mechanisms, you can get pitches from F2 to A7. They operate slides under the pallets and open/close holes to activate a reed.
2. The middle — the bellows or “lungs” of the instrument. Helps the player control expression. This is cardboard and leather gussets with aluminum corners. A wood frame with rubber, foam, or suede gaskets.
3. The bass (button side). Controlled with the left hand, it can range from 12 to 120 buttons. Pitch range can go from E1 to C2, and can go as high as C6. Construction can be overwhelming to look at, but it is an old mechanical computer. There are six rows total. The first two rows are just bass notes by themselves. The third row buttons play a major chord, next a minor, next dominant seventh, next diminished. It is laid out in a circle of fifths, so the next row up is a fifth.

The accordion Tim demonstrated is a 4-reed: 1 bassoon, 2 clarinet reeds, and a piccolo reed. Reed block has individual reeds waxed using a combination of beeswax and rosin. The steel reed tongue is what vibrates, then a plastic valve. This allows sound on both push and pull.





Common Problems

A recurring scenario is that someone passed away and family members found an accordion in a closet untouched. It is out of tune, moldy, etc. That situation typically requires an overhaul. The best preventive care is to play the instrument. It regulates itself if you play it. If you let it sit, the valves will get old, stiff, or start to curl. If a valve curls, it won't close all the way, so you might get a slapping noise. Or you might get a farty noise with the valve trying to close but can't. Another common problem is there are really tight tolerances on the reeds (as tight as .001 inch). There are still people in Italy handmaking them today. It doesn't take much to clog up the reed. All it takes is a tiny piece of dust. You can take an exacto knife and flick the reed to knock it out. Compression problems is another common issue. Often the gasket will get compressed and allow air to sneak through, causing the accordion to open and close way easier than it should, so you get lost air.

Tools of the Trade

Unlike other instrument repair, there are hardly any expensive specialty tools required to work on accordions. Exacto blade for reed work. Phillips head and flat head. An oyster shucker to remove reeds from reed block. Anything needed for a speciality task (like key bending) can be made yourself with steel stock from the hardware store. Wax holds the reeds in. Someone waxing a lot of reeds will have a hot pot and wax spoon. Contact cement for attaching reed valves. Those are the essentials. With everything else, you figure out a way. It's also helpful to have a test bellows. You can't tune the reeds when they are in the accordion, so you have to use a test bellows. You have to measure the pitch in the accordion first, then use the result to make adjustments on the test bellows. The pressurized air in the accordion affects the pitch.



Tuning

The way you tune a reed is by removing material. If you want to flatten, you remove material from the bottom third of the reed. It makes it weaker and allows it to vibrate more. To tune sharp, you remove material from the tip. It makes less weight at the tip to swing back and forth. There are two schools of thought. Traditionally, a file is used to file the tip and a steel scraper digs a divot in the bottom of the reed to flatten it. Tim was taught to use a small rotary tool. The argument against this method is that it removes too much material. Tim has never broken a reed in his 2,000+ repairs. You have to be very careless for that to happen. The middle reeds are tuned differently from one another, causing the musette sound or “wet tuning”. Polka style is 3 middle reeds tuned in unisons. Some tune 15-20 cents apart. For Scottish folk, it’s sometimes 30 cents apart. Portuguese, 50 cents apart. Once you tune, you don’t have to tune again for almost 20 years.

Final Facts

- With a lot of older accordions, restoring back to 100 percent operation is difficult, but you can get it most of the way.
- There is no decay on the accordion, it will play continuously as long as you keep pushing and pulling the bellows.
- A complete overhaul would take several days and would cost about as much as a new accordion.

Thank you, Tim, for a very informative presentation!

- Officers -

President - Wayne Strautman, RPT
Vice President - Andrew Kovaleski, RPT
Treasurer - Ron Kenreich
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