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Restoration of 1898-1905 Phonoharp Company The Special Columbia Model 3 1/2 Chord Zither



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Background

Chord zithers, often called Guitar Zithers, were very popular from the late 1800s to mid 1900s, and hundreds of thousands were made by several companies. One of the most popular companies was Phonoharp, of Berwick, Maine, and later Boston. The Phonoharp Company began production of its namesake, an instrument called the Phonoharp in the early 1890s. Phonoharp produced chord-zithers in great numbers and offered a wide variety of different models.

The Phonoharp Company was incorporated on April 27, 1892, in Maine, where it did business both in Berwick and Portland. Within a year the company had opened offices in Boston, eventually moving all there in 1897. The company produced instruments until 1926 and was dissolved in 1928. A new company, International Music Corporation, was established in 1926 and immediately sold to a group of investors including Oscar Schmidt and two executives who worked for Phonoharp. Oscar Schmidt Company is still in existence today, producing mainly autoharps. It produced chord zithers, based on the Phonoharp design, through the 1960s.

First patented May 29, 1894 by Frederich Menzenhauer (another very popular zither company), the chord-zither is one of the most playable of all fretless zithers. The term chord-zither refers to its distinctive feature, namely a section of strings that are grouped into chords for the purpose of self-accompaniment. This feature is shared by many other fretless zithers. The chord-zither was offered in many different models, the difference in them being either the number of chords and melody strings or the comparative dimensions of instruments sharing identical stringing configurations.

This Columbia Zither Special, Model 3 ½, is a 5-chord zither with single melody strings, and was produced around 1898 through 1905. (The years approximate from existing research.). Later models had doubled melody strings. I found no serial number, or other identifying marks, to be able to determine this instrument's date of manufacture. It could be as early as 1898 or as late as 1905 (last year listed in Sears catalog). This instrument came to me in decent shape and needed some repair work, but not extensive like other instruments I've restored.

Valuation

Chord zithers from several U.S. companies were made in the hundreds of thousands and were sold door-to-door from the late 1800s through the depression years and by Sears Roebuck and Montgomery Ward catalogs from the turn of the 20th century up to the 1960s. Because so many have survived, prices are relatively low compared to other stringed instruments. Occasionally, very well made and ornately decorated zithers from Germany, Austria, and other Eastern European countries come up for sale and fetch slightly higher prices. It's the more recent popularity of online auctions that has kept prices low for most of these instruments. I've seen prices range from as low as \$10 to over \$1000, depending on condition and rarity of a particular model.

But, for many people, the value of an instrument is not monetary, but sentimental. To be able to have a restored piece of family history on display, to know its use, its background, and who played it, and to be able to pass it down to future generations, is priceless.

Phonoharp Columbia Special Day 1: Assessment



On the first day, I always look over an instrument to see how much work is needed to repair or restore it.

This Phonoharp Special Columbia Zither (Model 3 ½), was in decent shape. The frame wasn't warped, as is often the case with zithers stored for years tightly strung, and had only one small area at the tail pin block where a glue joint was beginning to fail. The main problem was a large crack in the back along with a couple of smaller ones. The top had no cracks, but it did have a very weathered "alligator" skin surface, probably caused by being in the sun or stored next to a heater (or in an attic that gets very hot in the Summer).

Phonoharp Columbia Special Day 2: Remove Strings and Tuning Pins



The strings were in bad shape, being old, brittle, and corroded, and couldn't be salvaged. On Day 2, I removed all the strings and tuning pins, which were pretty rusty.

I didn't notice on the first day when I was assessing damage that one of the tuning pins was missing. It was the very first string. For some reason, the tuning pin had been removed and lost. The hole was not broken or worn enough for it to fall out, so I have no idea why it was removed.

Phonoharp Columbia Special Day 3: Smoothing Top



I've not worked on any instruments with a surface crackled as much as this before, and I really wanted to try to smooth it out. My biggest concern was the decals. Any excessive rubbing, sanding, or refinishing could harm them. My first test was actually the best one. I used a cotton pad soaked with denatured alcohol and it "softened" the finish enough to smooth out quite a bit of it. I rubbed it close to, but not over, the decals. To get in and around the decals I used cotton swabs. The alcohol also helped clean the surface and helped to bring out its glossy look.

The tail pin cover (the long piece in the right of the photo) had one of its stand-off blocks come loose. Two screws go through these to fasten the cover on the end of the zither.

Easy fix. Re-glued and taped.

Phonoharp Columbia Special Day 4: Fixing Back Cracks



Because the frame and top were in good shape and no glue joints, other than one tiny spot, had failed, I didn't have to remove the back to repair the cracks. I injected glue into the cracks and did a little judicious clamping to close them up.

Phonoharp Columbia Special Day 5: Gluing Tail Block Joint



To fix the one small corner at the tail block where the glue joint had failed, I once again injected glue into the separation and clamped it closed.

Phonoharp Columbia Special Day 6: Cleaning Tuning Pins



On Day 6 I used my rotary tool to clean the corrosion off of the tuning pins. There were 36 to clean so it took several hours. As for the missing tuning pin, the 37th, I found an old one the same size in my parts stash.

Phonoharp Columbia Special Days 7 through 10: Refinishing Back and Sides



Now that the back cracks were closed I spent the next four days refinishing the back and sides. When this zither came to me the back was scratched and worn and quite a bit of the black finish on the sides had been rubbed off. I used a water-based semi-gloss black enamel to coat the surfaces. I applied one to two coats a day, rubbing the paint with 0000 steel wool between coats to remove brush strokes and/or dust specks.

Phonoharp Columbia Special Day 11: Touch Up Gold Paint



The bridges had a coat of gold paint that matches the gold in the border decals. A few areas had the paint rubbed off, so I used some of my gold-leaf paint to touch them up. It matched the original color quite well.

Phonoharp Columbia Special Day 12: Polishing Process-Back and Sides



After letting the paint cure for a couple of days, I began the polishing process. I first use powdered pumice, then rottenstone, and then a paste wax. I did the back and sides first, then the top.

Pumice is a light abrasive, and rottenstone is a very light abrasive. I use a cotton pad soaked in mineral oil to rub the powders first in a circular motion to remove brush strokes and dust embedded in the paint, then back and forth in the direction of the wood grain.

Phonoharp Columbia Special Day 13: Apply Swelling Liquid



Before re-installing the tuning pins, I filled all the pin holes with my special “swelling” liquid. This is usually used by furniture restorers to swell the areas where chair rungs fit into chair legs. It works quite well in the old zither pin holes so the tuning pins will fit more snugly.

Phonoharp Columbia Special Day 14: Reinstalling Tuning Pins



Reinstalling 37 tuning pins took a while. Now with the holes swollen from the liquid I put in them, they fit tightly and very well.

Phonoharp Columbia Special Days 15 & 16: Restringing



Finally, it's time to restring. Again, 37 strings take some time to install. On Day 15 I installed the 20 chord strings, and on Day 16 the remaining melody strings.

I order the strings I use from Germany. There are several companies making zither strings but only two that make them for this style of chord zither. I choose Lenzner strings not only because they are well known in Europe for the quality of their strings, but because they offer full sets for chord zithers with configurations of 3 to 6 chords.

Phonoharp Columbia Special Day 17: Tuning



The last day was time to tune up the zither. I have a digital tuner that attaches to a part of the instrument with a clip, usually clipped to one of the tuning pins. When a string is plucked, the vibration is picked up through the clip, which has a contact microphone on it, and displays on the tuner's screen. Again, 37 strings took a while to tune up. Also, being new strings, they tend to stretch out for a little while and need retuning a few times until they're stable.

Phonoharp Columbia Special Day 17 (continued): Completion



For being a mass produced zither over 100 years old, this 5-chord Phonoharp Columbia Special has a beautiful tone. I'm happy I was able to restore an instrument this old to be played and enjoyed again.