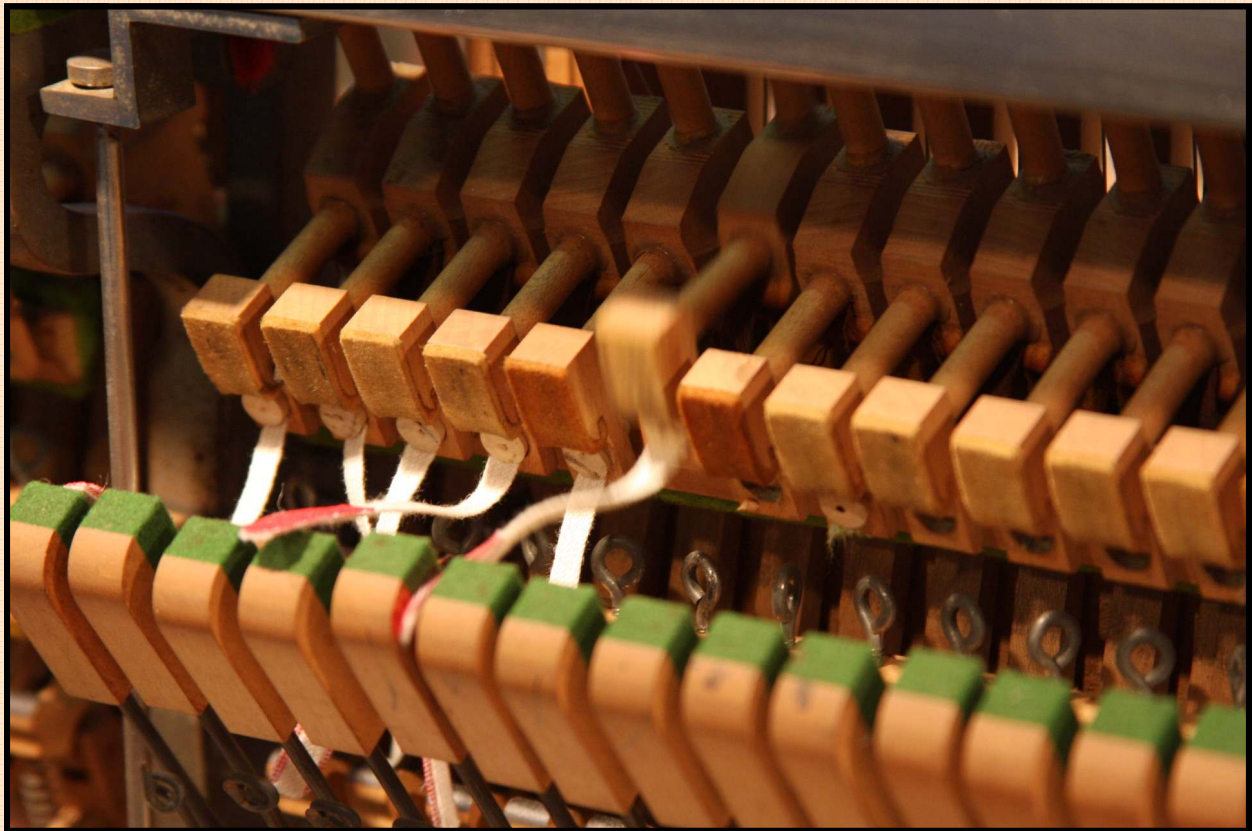


Schaff Piano Supply Company Presents:

Installing Cork Bridle Straps in the Upright Action Basic Procedures



Action Work

By Chuck Behm

Installing Cork Bridle Straps



-Rationale-

For any technician who works on older uprights, it isn't long before one runs into an instrument in need of action repairs. Often this includes bridle straps that have begun to break and are in need of replacement. The correct repair in this situation is to replace the entire set, in that replacement of just the broken straps merely prolongs the problem—the intact straps left in the action will continue to break. The photo above illustrates the problem with partial replacement. This action had been worked on by a previous technician who only replaced the straps that were broken at the time. Most of the rest of the original straps remaining had broken since. Now, to avoid a hodge-podge of strap colors, the entire set, both new and old alike, would need to be replaced.

A complete set of bridle straps, correctly adjusted, is essential if one is to remove and replace an upright action from the piano for repair. The primary purpose of the straps is to hold the whippens in place, preventing them from swinging downwards when the action of the piano is removed from the instrument. If a bridle strap is broken or missing, and the action is removed then returned to the piano, the flange holding the whippen in place for that note is easily broken.

Following are the directions for installing cork bridle straps in an upright piano.

-Basic Procedures-



Photo 1: Cut the original straps between the catcher and hammer butt.

Obviously, when a set of bridle straps is incomplete or mismatched, replacement with an entirely new, correctly adjusted set is the best solution. In most cases, this type of work is done most easily in the shop, unless the piano is in a location far from base, and a return trip would be a major inconvenience. For the sake of efficiency I recommend whatever other repair work seems necessary be done at the same time, while the action is already in the shop. Following are the steps involved with installing a set of bridle straps:

1. If the original (factory) straps which passed through the hole in the catcher remain, first snip or cut the old cord in between the catcher and the hammer butt. If any such straps are still complete, they are easier to cut if pulled slightly taut. To tighten a strap to make cutting easier, push forward on the catcher with the thumb of your left hand, while pushing backward on the backcheck felt with your middle finger (Photo 1). Don't push too hard or you will break the old cord. Use a [precision knife \(Cat. No. 280\)](#) to cut the cord between the hole in the catcher and the hammer butt. For any of the original straps which are already broken, grasp the broken end of the cord with a pair of [needle nose pliers \(Cat. No. 239\)](#), and cut the remaining cord as close as possible to the hammer butt.



Photo 2: Factory tabs often crumble when pulled on.

2. Next, remove the tabs any remaining factory straps from the bridle wires by pulling the tab off of the pigtail of the wire. Many times, the tabs of original bridle straps will simply crumble from the pigtail when pulled on (Photo 2), making for a very simple operation. Make sure to remove any residue that remains in the eye of the pigtail.
3. To remove cork insert bridle straps, first pull the tab forward and upwards to loosen the tab from the hook of the bridle wire (Photo 3).



Photo 3: Pulling the strap loose.

To create slack in the bridle strap, trip the jack with the middle finger of your left hand, while pushing and holding the backcheck forward with your thumb. Pull the tab off the point of the hook, and then turn the tab to the left to slide it between the gap in the pigtail of the bridle wire (Photo 4).

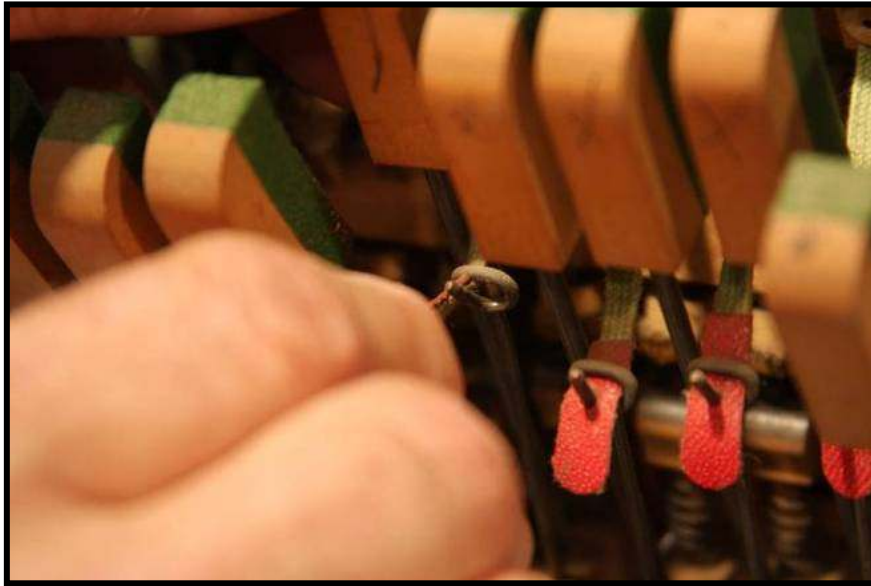


Photo 4: Slide the strap free of the hook.

This maneuver works better if you pull the tab slightly toward you, so the cord (the cloth strap), and not the tab, is in position in the gap. Occasionally the pigtail will be very tight, and will need to be pried open slightly using the tip of a [jeweler's screwdriver \(Cat. No. 3275\)](#) before the old strap may be removed (Photo 5). Also, the use of a pair of needle nose pliers will help in pulling off stubborn tabs.



Photo 5: Opening the pigtail.

4. If the bridle strap being removed has a cork insert, carefully pull the cork free from the hole in the catcher. If it doesn't come free, then most likely it has been glued in place and will need to be drilled out. Select a drill bit from your drill index that just fits in the hole of an empty catcher (Photo 6).

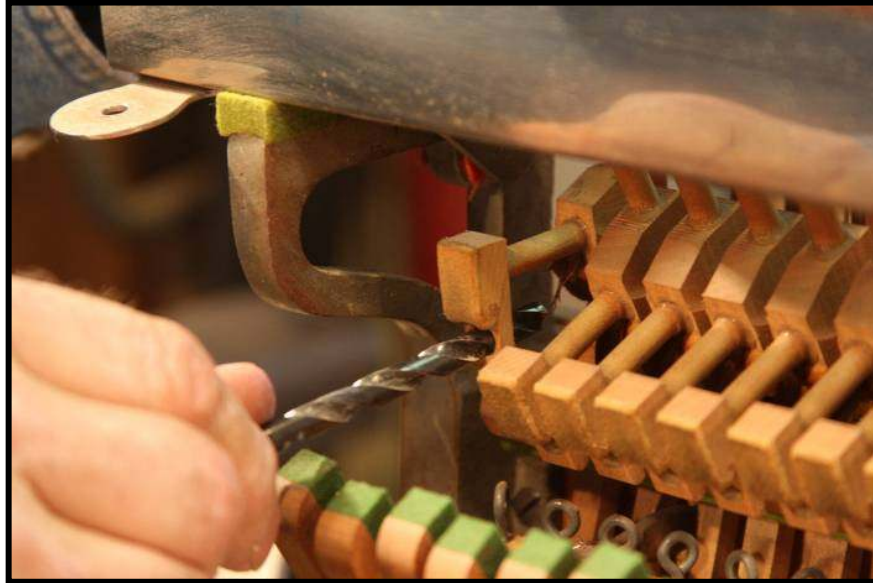


Photo 6: Selecting the correct bit size.

With the correct drill bit, drill out the corks that have been glued in place. Care must be taken when drilling, in that the drill will tend to wander at first. Make sure that the drill is centered on the cork before drilling through (Photo 7), as it will tend to wander at first in the soft cork.

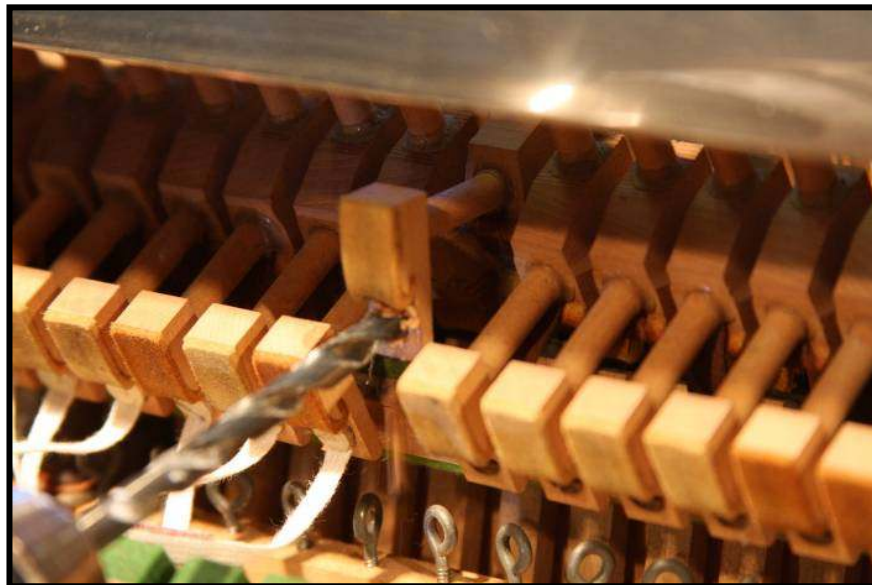


Photo 7: Center the bit as you drill through the cork.

5. Having removed all the old bridle straps, clean the action with a vacuum and / or compressed air gun. If the catcher has a hole where the original bridle strap passed through, the easiest replacement to make is to use a set of [cork bridle straps \(Cat No. 6516, S, M, or L\)](#). If there is no hole on the bottom of the catcher, you may use a set of [spring clip bridle straps \(Cat. No. 1500\)](#). Most older uprights do have a hole at the bottom of the catcher, so more often than not, you will be using a set of cork bridle straps. These bridle straps come with small, medium and large corks , all of which you will find need for on a regular basis if you work frequently on older instruments.

For the technician who is serious about the piano business, this is the type of supply that should be kept on hand at all times. I maintain an inventory of six boxes of each size of cork bridle strap, so we can do an extensive amount of action work without having to worry about running low (Photo 8). Whenever I order a set of strings or other custom item, I glance over my shelves and include with the order what I need to bring my stock of supplies back up to normal.



Photo 8: Inventory on hand.

One method of building inventory, when it comes to shop work, is to devote a certain percentage of the profit from each job to investing in tools and supplies. (One added benefit from this practice is the perception by customers who visit your shop or work place is that you are running a business as opposed to a hobby. The more professional your business becomes, the more work [and profit] you'll find coming your way.)

6. To install the a new set of cork bridle straps, use a [cork inserter \(Cat. No. 141\)](#), coupled with a [combination tool handle \(Cat. No. 26\)](#). Choose the correct size of cork insert by first placing a medium cork on the point of the cork inserter. Try the fit by pushing the cork with the inserter into the hole in the catcher, while supporting the catcher from behind with your finger (Photo 9). This is important to do, as forgetting to do so will all too often result in a either a broken catcher shank, or a broken catcher.

Caution: Be very careful that the when pushing the cork into the hole of the catcher that it doesn't break or slip all the way through. If the cork were to break with your finger behind the catcher, a puncture wound would most likely be the result.



Photo 9: Check the fit while supporting the catcher.

If the medium cork is too loose (it follows the inserter back out instead of remaining lodged in the catcher), try a large cork strap. If it's too large, with more than just a bit of cork showing once it's put in the hole, try a small cork strap.

Occasionally, the hole on the catcher will be a bit too large for even the large cork to hold well. Then and only then would I advise resorting to a drop of glue on the cork to insure that the strap is secure.

7. As you begin, start from either end of a section, and insert all the corks for the entire section, without fastening the tabs on the bridge wires (Photo 10).

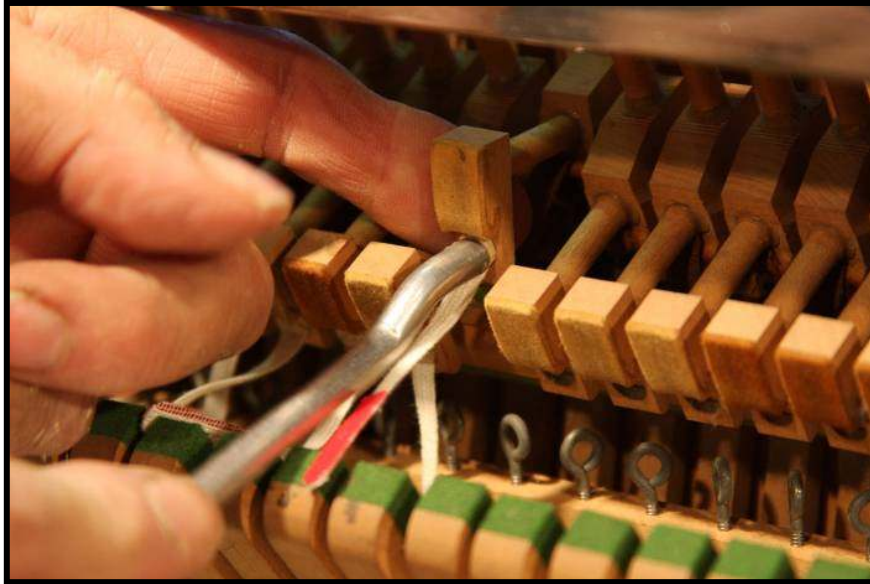


Photo 10: Insertion.

8. Once a section is filled in with new bridge straps, attach the tabs to the bridge wires, working this time from right to left. Hold the tab with your right hand, while turning it on edge (Photo 11) so that it slips in the gap in the hook. To give yourself a little slack in the strap, push the backcheck for the note forward with the thumb of your left hand, while tripping the jack with your finger, as shown. Although this method may seem a bit awkward at first, it quickly becomes routine, and you will find that you can move along the line very quickly.



Photo 11: Hooking the tabs.

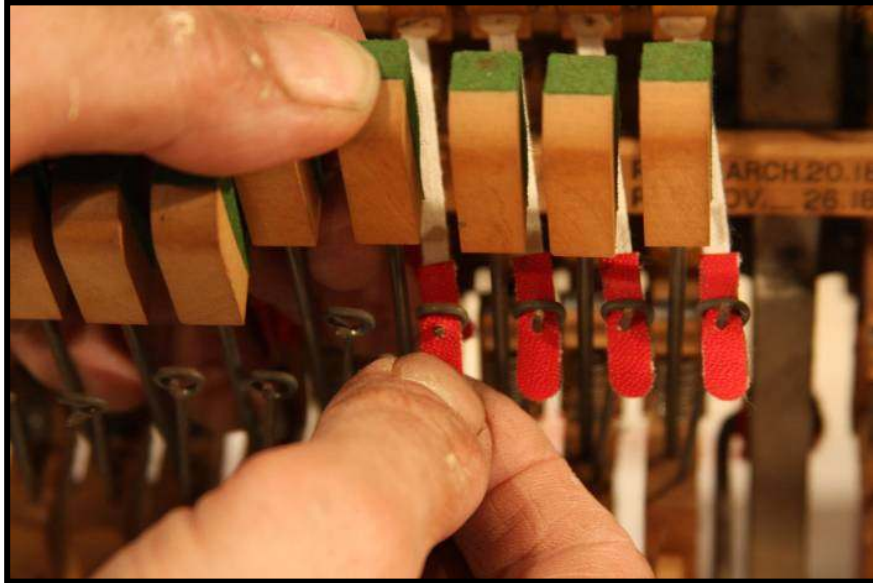


Photo 12: Lining up the tabs.

9. Swing the tab around in position, and push the hole in the tab down onto the point of the hook. Pull it snug, and adjust its alignment (Photo 12).



Photo 13: Regulating the bridle straps.

10. Regulate each bridle strap (Photo 13) initially on the bench by checking to make sure that the jack is not too low or too high in relationship to the hammer butt. Test by putting a finger under the sticker cloth at the bottom of the action and pushing up. If the jack does not trip, it is because the jack is resting too low, and is catching under the hammer butt felt. If this is not corrected, the hammer will block up against the strings when the action is returned to the piano.

To correct, trip the jack with the finger of your left hand while pushing the backcheck forward with your thumb. At the same time, bend the bridle wire slightly backward with your right thumb while pushing up on the underside of the whippens with your middle finger. If the jack is resting so high that it does not slip in place under the hammer butt, bend the bridle wire slightly forward for more slack in the strap.

When the action is returned to the piano, complete the regulation process by depressing the left (soft) pedal and observe that the straps become almost taut, but not to the point where the whippens wink – the keys should not move.

A new set of bridle straps is a positive step bringing an upright piano action back into condition. With a complete set of bridle straps, the technician can remove the action for repairs, and return it to the piano again without the aggravation of blocking hammers. It's a job worth knowing how to do correctly.

Tools and supplies:

For your convenience, all the tools and supplies necessary to complete this repair are listed with corresponding catalogue numbers.

Tools:

Precision knife.....	Cat. No. 280
Needle nose pliers	Cat. No. 239
Jeweler's screwdriver	Cat. No. 3275
Cork inserter.....	Cat. No. 141
Combination tool handle.....	Cat. No. 26

Supplies:

Cork bridle straps.....	Cat No. 6516 - S, M, or L
Spring clip bridle straps	Cat. No. 1500

Important note: Ordering information is given
for the use of Schaff account holders only.

To order, call Schaff Piano Supply at 1-800-747-4266

Notes on Procedures