

Loose Bridge Pins

Figure 1

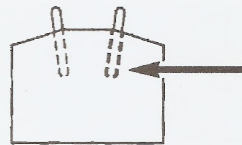


Figure 2

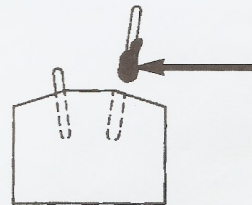


Figure 3

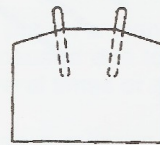
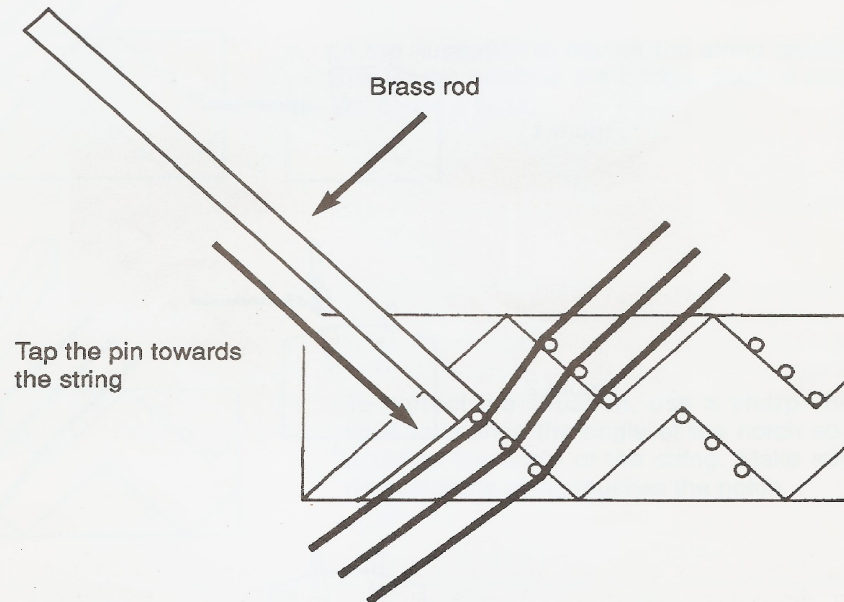


Figure 1 above shows a treble bridge with a loose bridge pin. To correct this type of situation, simply remove the loose pin and dip it in epoxy glue as shown in **Figure 2**. Finally, place it back in the bridge and be sure to wipe away any glue squeeze from the top of the bridge and the pin as in **Figure 3**.

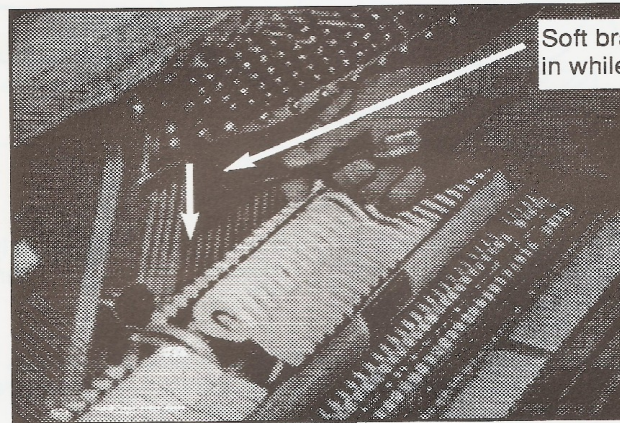
Strings Buzz On Bridge Pins (Side Bearing)



Sometimes a string that is crossing a bridge will have only minimal contact with the side of a bridge pin. When this occurs, a buzz will usually be the result.

To correct the condition, use a hammer to tap a brass rod against the bridge pin so that it bends slightly toward the string as pictured above. Once a sufficient amount of side bearing between the string and the pin is achieved, the buzz should disappear.

Stretching New Strings



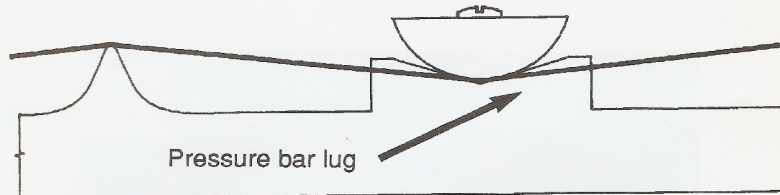
Soft brass rod pushes string in while sliding down.

When new strings or music wires are put on a piano and pulled up to pitch, they will quickly stretch from the tension and go flat. This is caused due to excess elasticity in the new strings until they have been stretched either by tuning several times or stretched with a tool.

To stretch new strings with a tool, use a roller, a wood block, or a soft brass rod. When stretching plain music wires, push the string in toward the soundboard and slide the tool in a downward motion several times. If great care is used wound bass strings may also be stretched, but the tool should be a relatively soft material such as a pine block, and the string should only be pressed in toward the soundboard. *Never slide the stretching tool across the wound portion of a bass string or damage will occur to the string.*

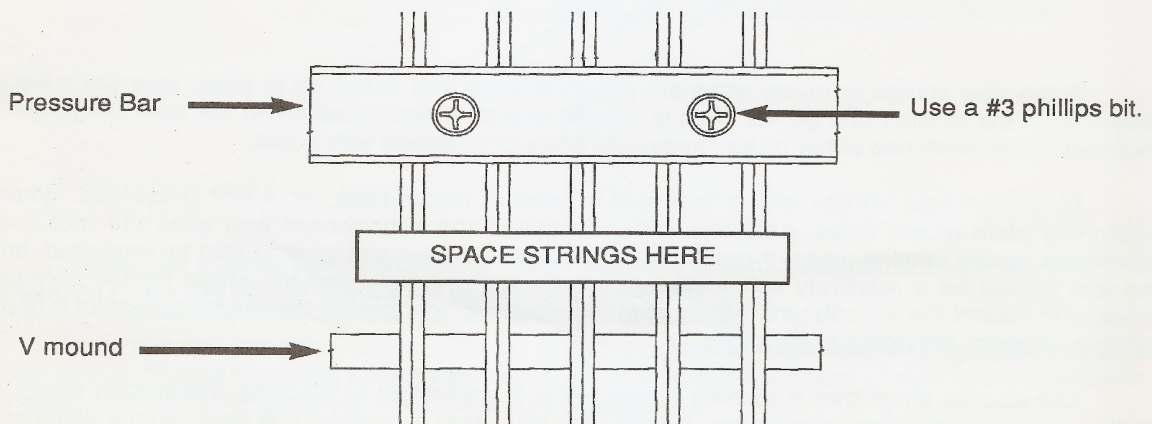
Our studies show that stretching a new string is equivalent to chipping it and then letting it stretch on it's own for about two weeks. Needless to say, great care should be taken so the string will not break.

Spacing Strings



Many times technicians will space the strings before tuning a piano only to become frustrated as they watch the string retreat to it's original position when the tuning pin is turned. This problem can usually be eliminated by the following two steps.

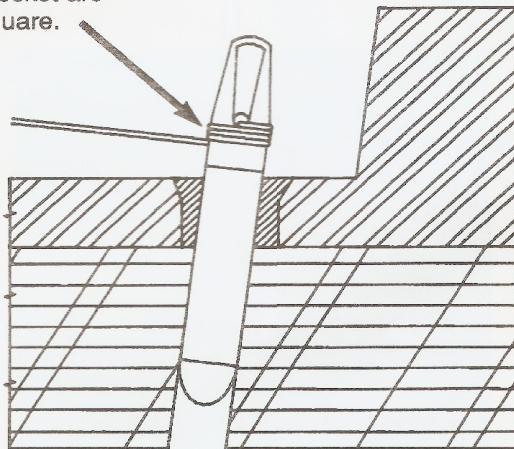
Firstly, make sure the pressure bar screws are tight. In a Kimball piano, there are pressure bar lugs cast into the plate. Simply tighten the pressure bar screw until the pressure bar rests on the lugs. Use a #3 phillips driver.



Secondly, always make sure to space the strings between the v mound and the pressure bar. Strings spaced below the v mound are the ones that move when the piano is tuned. It is permissible to space below the v mound and then finish spacing between the v mound and pressure bar.

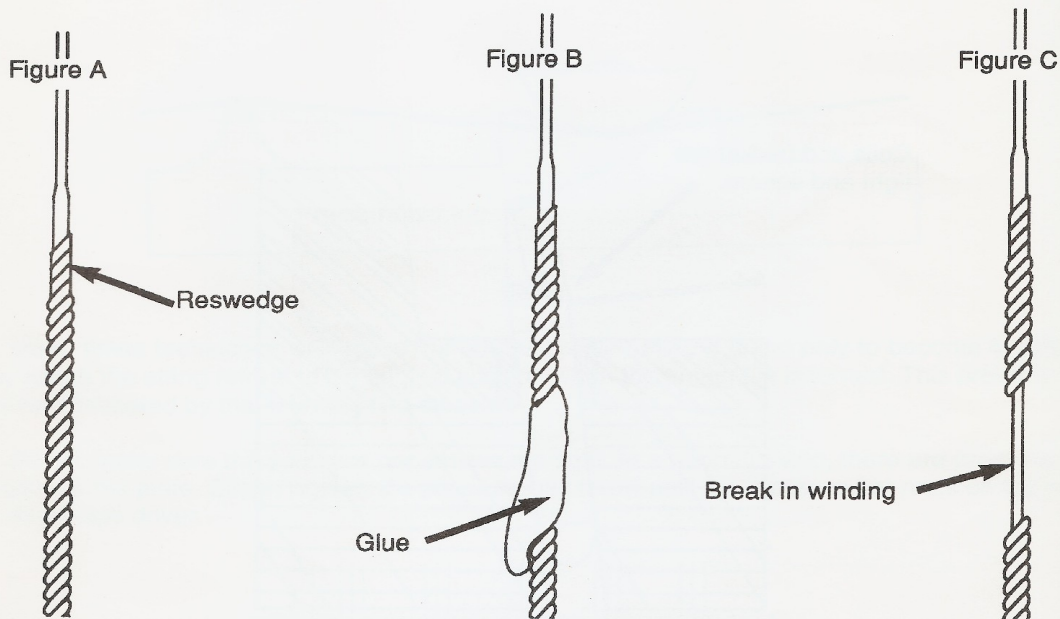
Tuning Pin Coils

Coils and becket are
tight and square.



Above you can see an illustration of a tuning pin with the proper arrangement of coils. Please note that there are three and one half coils, and that the coils and becket are tight against one another.

When replacing strings, or after loosening the tension on strings, tuning stability will suffer if the coils and becket are not tight and square. While special tools are sold to do this job, a simple bladed screwdriver will handle it nicely.

Buzzing Strings

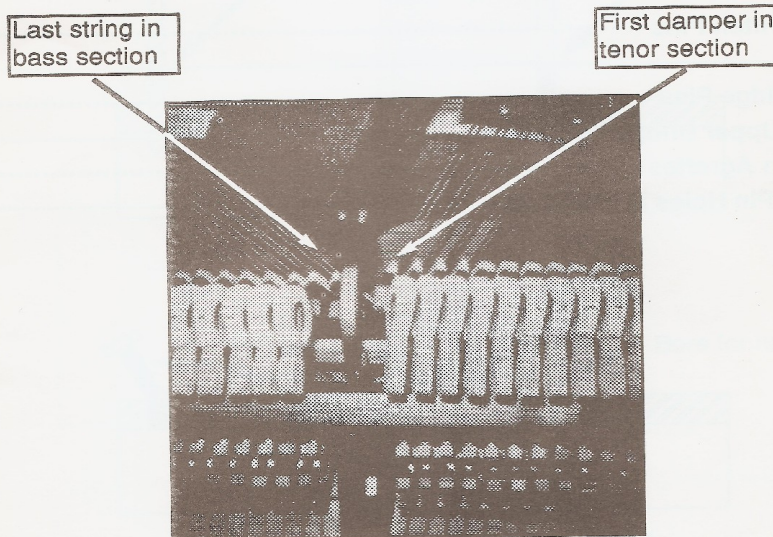
Many, many things can cause strings to "buzz". The more obvious ones are loose windings that necessitate taking the string loose from the hitch pin and giving it a twist in the direction of the winding, or the string touching the bridge notch. Above are three examples of "not so easy to find" string buzzing problems.

Figure A shows the swedging of the string. Often this swedging is not tight and although it is not easy to see, it will cause a buzz. Simply crimp the swedge with pliers.

Figure B shows where glue has dripped onto the string during the hammer or damper gluing operation. Because the glue tends to be clear when it dries it is difficult to see. However, as it dries it separates from the string and causes rattles and buzzes.

Figure C is very hard to find. Sometimes in strings with very fine copper windings, the copper will break, become loose, and buzz. However, even though it is broken, it looks like nothing is wrong. To find this condition you will have to actually try to slide the winding along the core wire. If it is broken, it will slide apart.

#1 Tenor Damper (Buzz)



If you detect a buzz coming from the first damper in the tenor section of the piano, that damper may be slightly touching the last string in the bass section. Because of the opposing angle of the strings in the bass and tenor sections, the first damper in the tenor section usually has very little room in which to operate. In fact, it is not as long as the other dampers for just that reason.

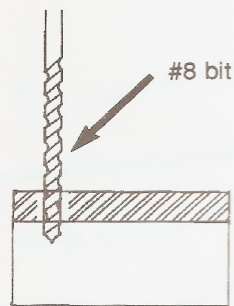
If you decide that the bottom end of the first tenor damper is in fact touching the last bass string, simply remove the damper by unscrewing the damper drum screw and slide it off of the damper wire. Then, use a razor knife to cut off a little of the bottom of the damper and return it to the piano.

Kimball Piano Grand And Vertical Troubleshooting

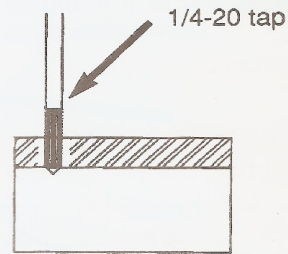
Section Four

PLATES

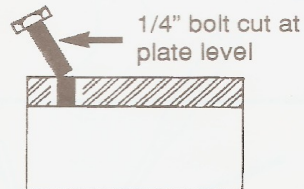
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Repairing Loose Hitch Pins

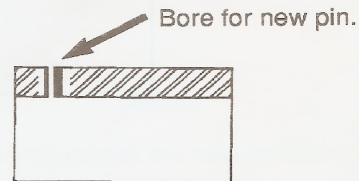
Step 1



Step 2



Step 3



Step 4

The easiest way to repair a loose hitch pin is to pean it or replace it with an oversize pin (.170) available from the Kimball Piano Service Department at 1 - (800) - 422 - 1611. However, if the situation requires that the plate be dealt with, follow the steps listed below.

- Step 1.** Drill out the plate with a #8 bit.
- Step 2.** Tap out the hole with a 1/4-20 tap.
- Step 3.** Thread a 1/4" (20 threads per inch) bolt into the hole, mark it at the plate, unscrew it and cut half way through it at the plate mark. Rethread it into the plate and break it off through the cut.
- Step 4.** Center punch the new pin location and bore for the new hitch pin. (#23 bit)