



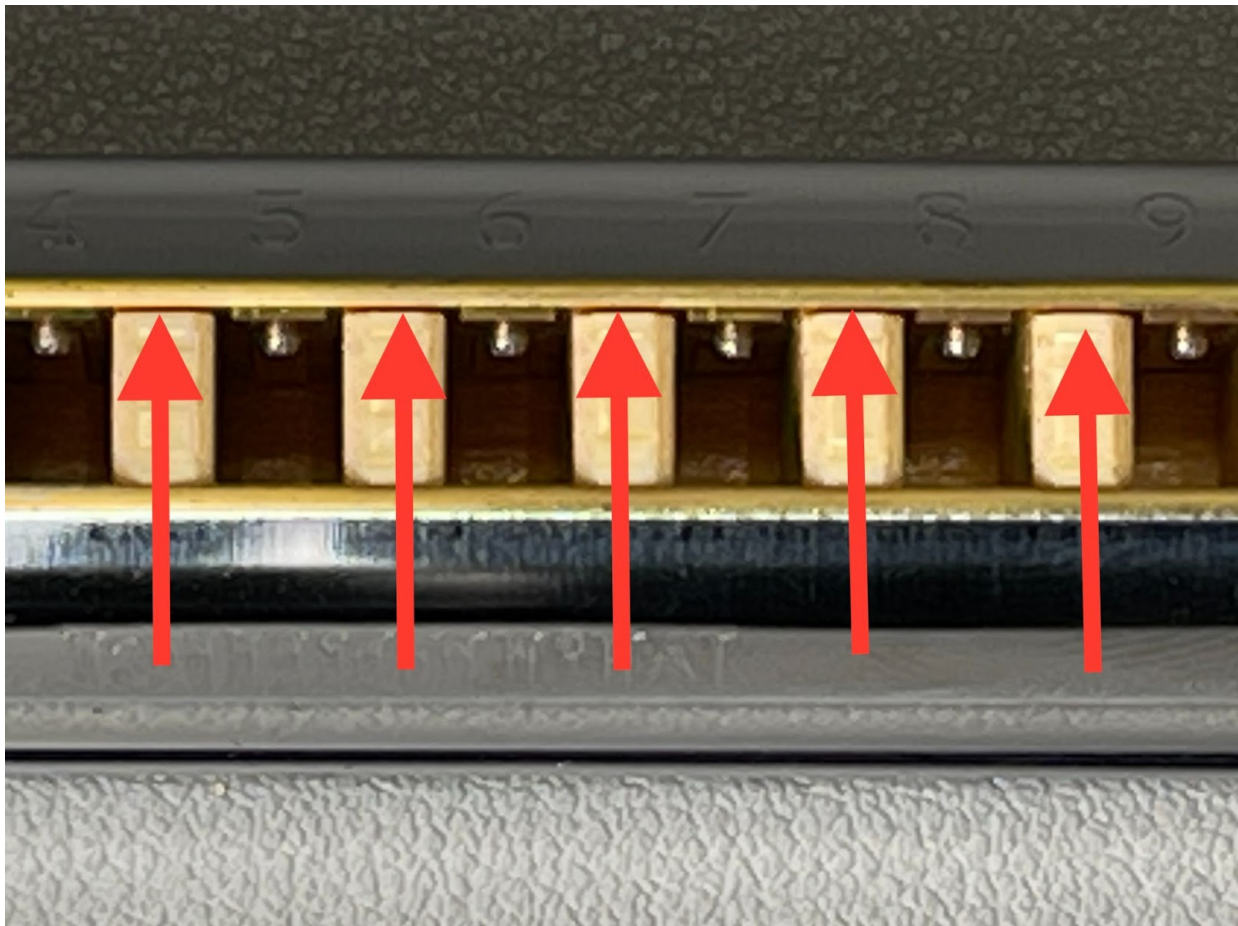
HARPSMITH Benchcraft

How to Repair a Bowed BLOW Reed Plate

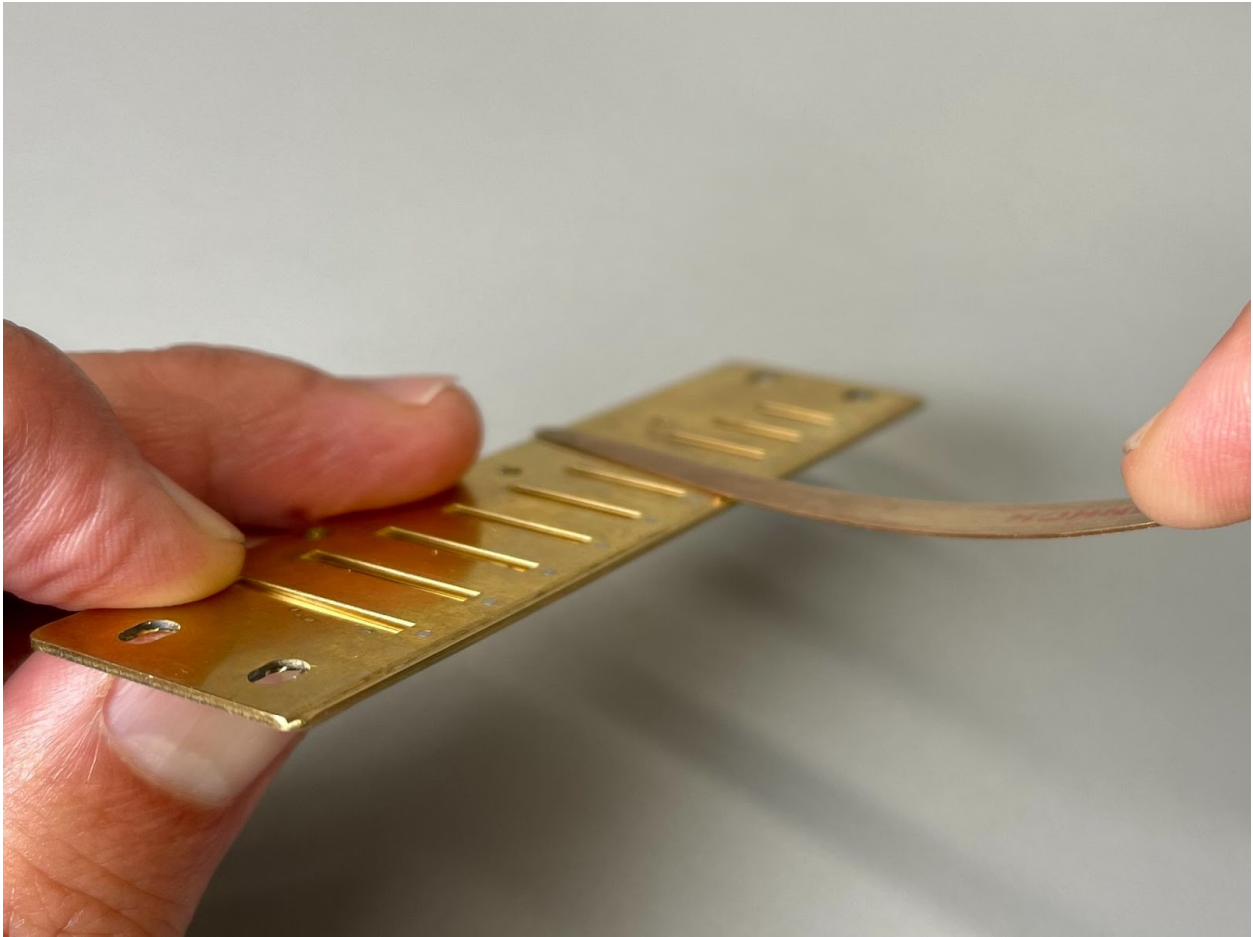
There are many little things that make an excellent “playing” Harmonica. An often overlooked issue is when the BLOW Reed Plate does not seal properly against the Comb.

What it Matters

Improper sealing is caused by either a bowed Comb and/or BLOW reed plate. This defect will result in gaps that degrade air pressure, compromising the playability of the harmonica. For my case study, the HOHNER Crossover Marine Band harmonica had a bowed BLOW Reed Plate:



The red arrows point to the gaps between the top of the Comb mouthpiece tines and the bottom of the BLOW Reed Plate. **Gaps = Loss of Compression!**



Here I am using my reed plinking tool to show the direction of the slope. The leading edge of a bowed Reed Plate will be *higher* than the rear ‘bolt-down” edge.

Solutions

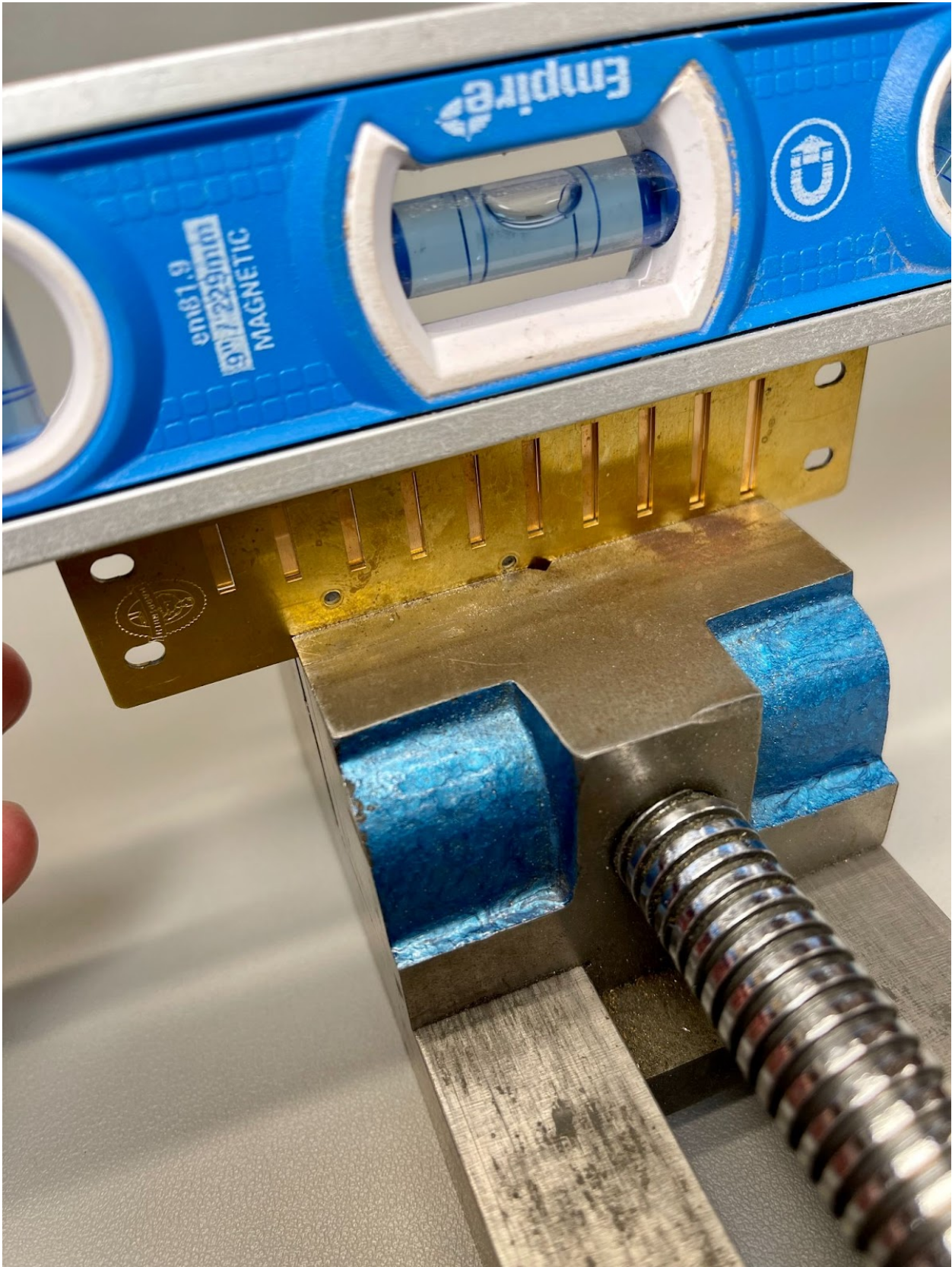
At the HARPSMITH Workbench, I routinely use two methods for straightening BLOW Reed Plates:

1. Wet sand--*flat* the BLOW Reed Plate with 320g~600g silicon carbide waterproof sandpaper and Sprayway Window Cleaner as lubricant. This necessitates I remove and reinstall all ten reeds. *Many people would shutter away from this method, but I am practiced at reed replacement, and can move efficiently through this process.*
2. Straighten the reed plates using vises and tools

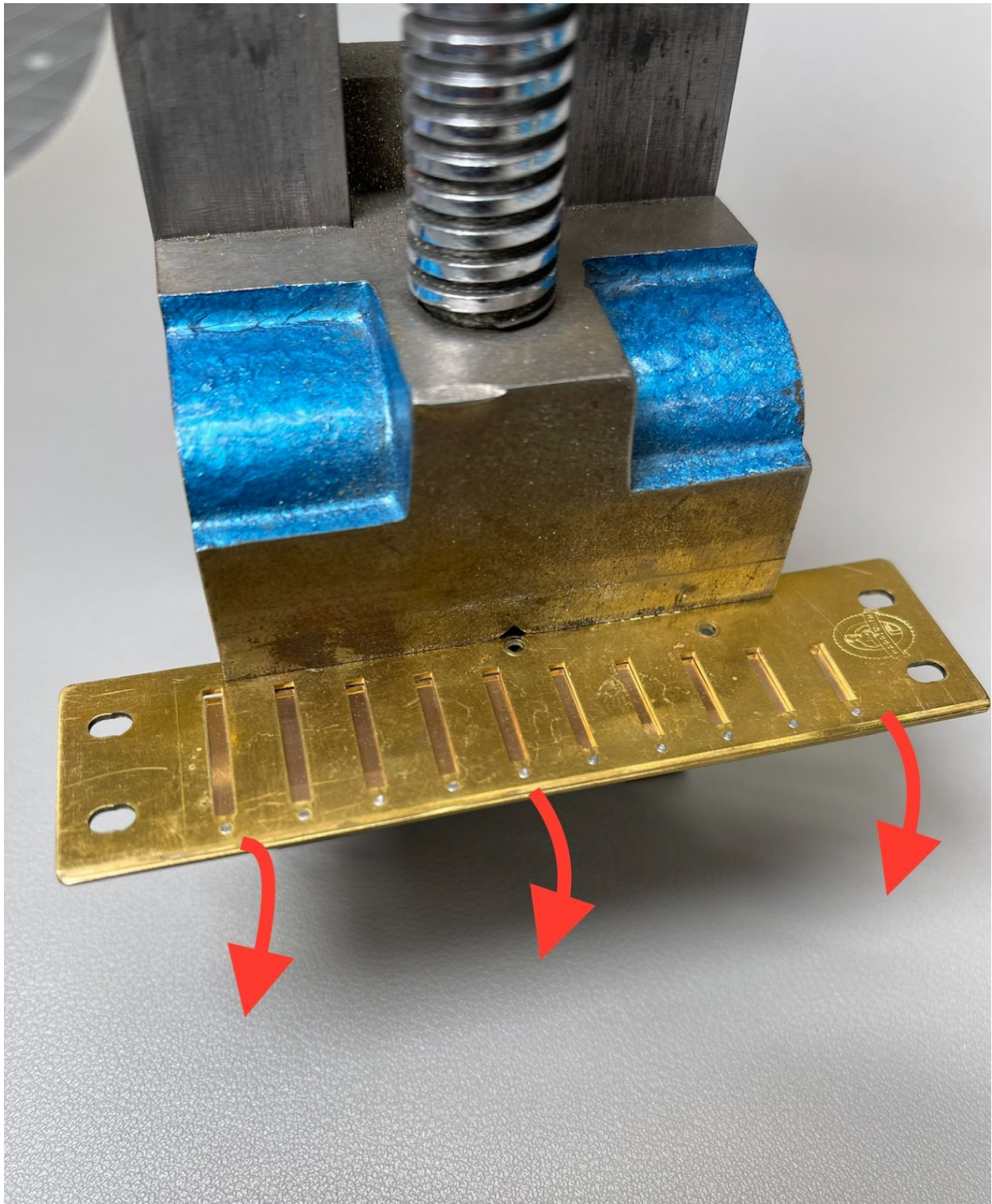
Go Deeper

Let's look at two proven How-to-Fix methods using vises and tools:

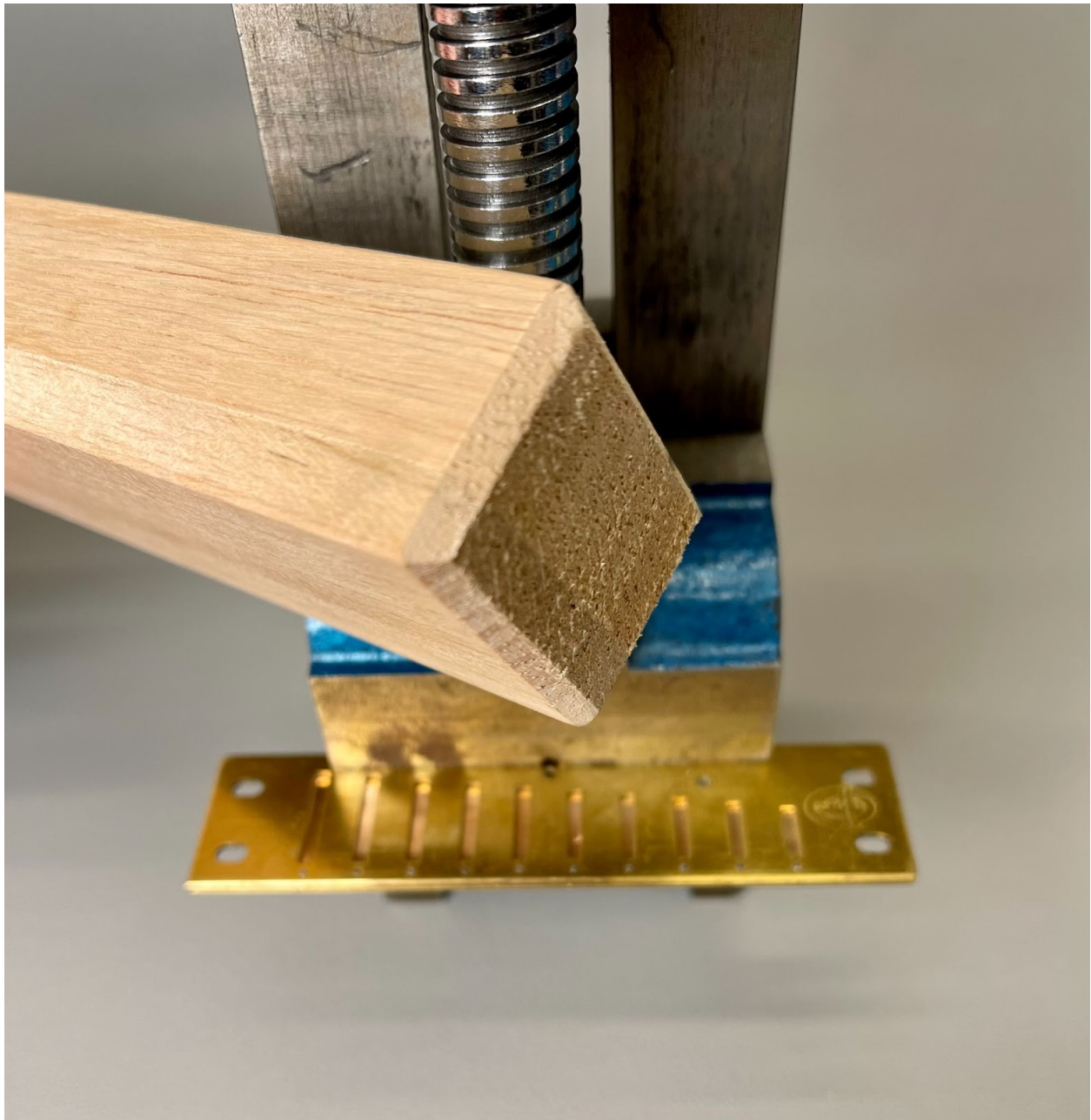
How-to-Fix #1



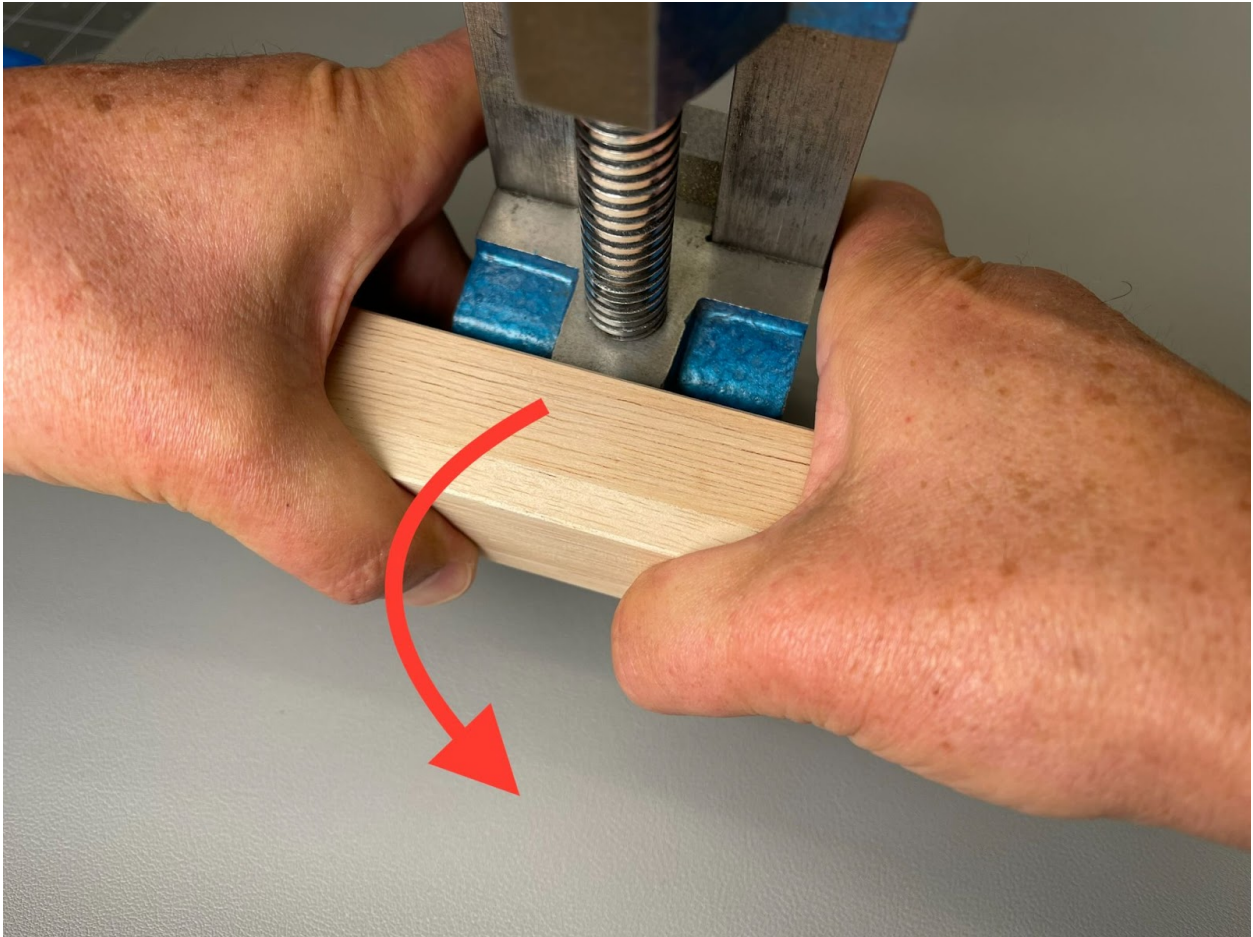
Clamp and level the Reed Plate to a small machinist vise. *Be careful not to damage the reeds!*



Turn the vise on its end. The goal is to bend the leading edge of the Reed Plate downward.



Using a straight block on top of the Reed Plate will ensure even and leveraged pressure.



While securing the vise with your hand, rotate the block downward. Typical Reed Plates are made of .9mm Brass and tough to bend. This procedure will challenge your best Kung-Fu grip.

If you are careful--tapping downward--the full length of the leading edge of the reed plate with a 22 oz Urethane Soft Face hammer works well. ALWAYS CHECK YOUR PROGRESS AGAINST A STRAIGHT EDGE.



How-to-Fix #2

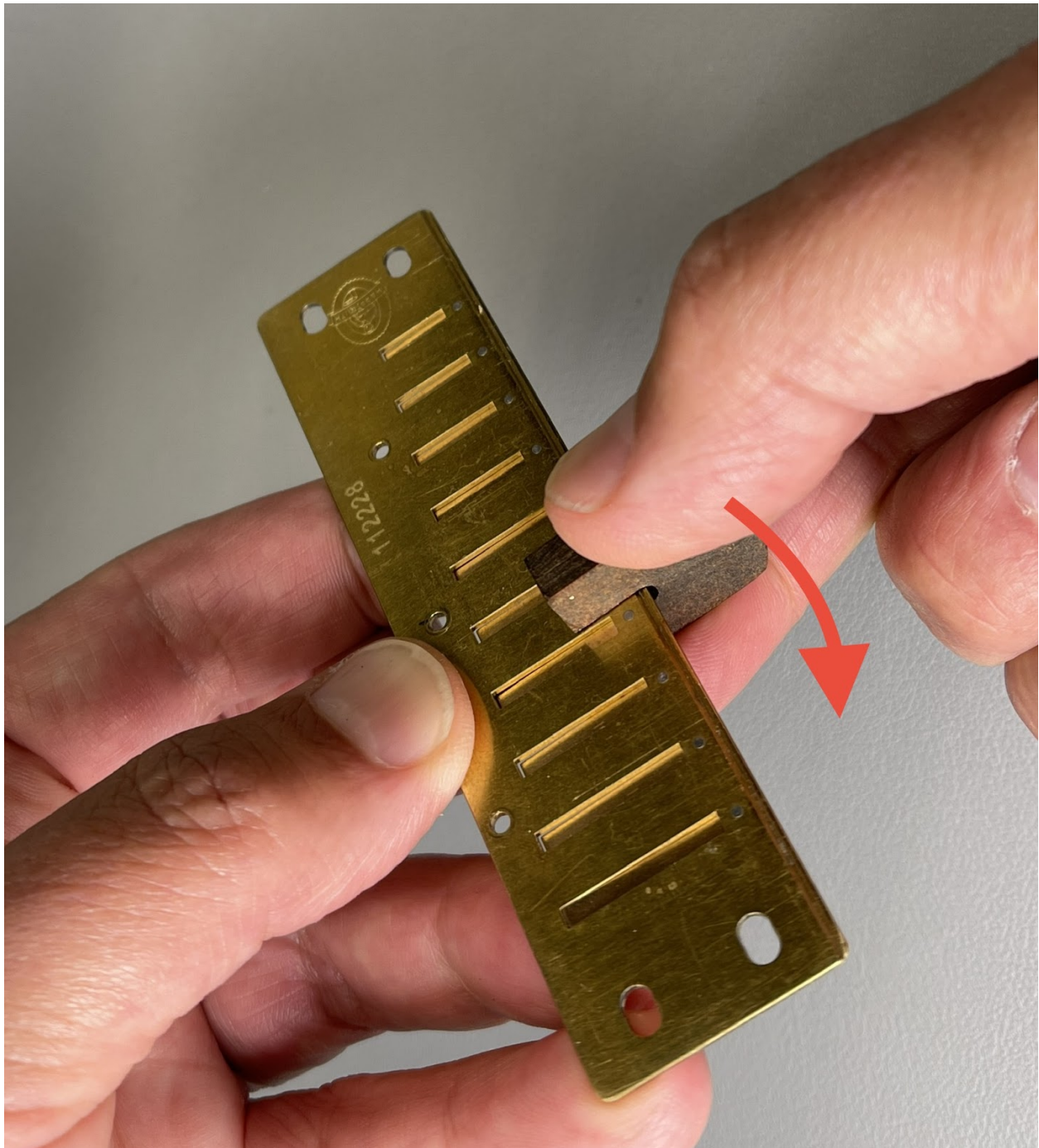
Using the Zajac Reed Plate Claws <https://harp.andrewzajac.ca/FLTPK>



Here is an earlier version of Andrew Zajac's novel tool--the Reed Plate Claw. The new model (see above link) has an extended handle facilitating greater leverage for straightening a bowed Reed Plate--especially when using two opposing claws. (I ordered my updated set yesterday).



Slide and position the “pin” over the hump of the Reed Plate bow.



Typical Reed Plates are made of .9mm Brass and tough to bend. When using one Claw, clamping the rear edge of the Reed Plate (re: How-to-Fix #1) into the machinist vise will be necessary.



Here is a view of the pin from the Zajac Reed Plate Claw positioned over the high spot of the bowing reed plate (staying clear of the reeds). Continue to move in between all ten Reed Plate slots--applying downward pressure to evenly straighten the BLOW Reed Plate. **Always check your work against a straight edge to inform you to stop or continue with another pass.**

Mastering these techniques will surprise you with a better performing harmonica--and what Serious Harmonica player doesn't want that!?

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