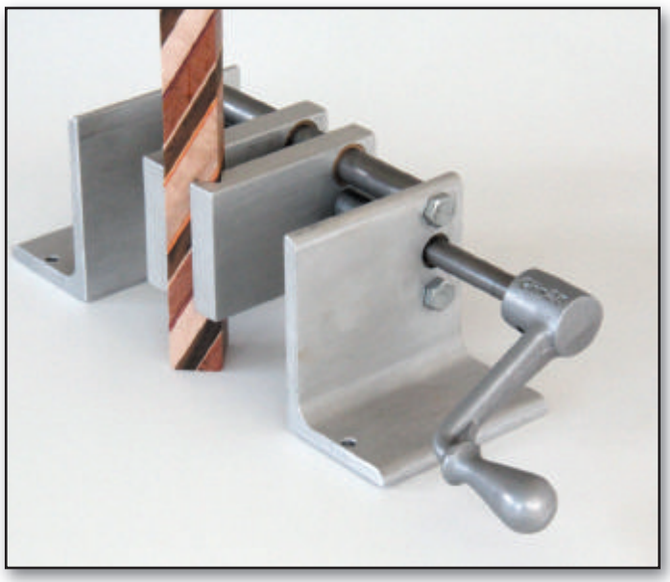
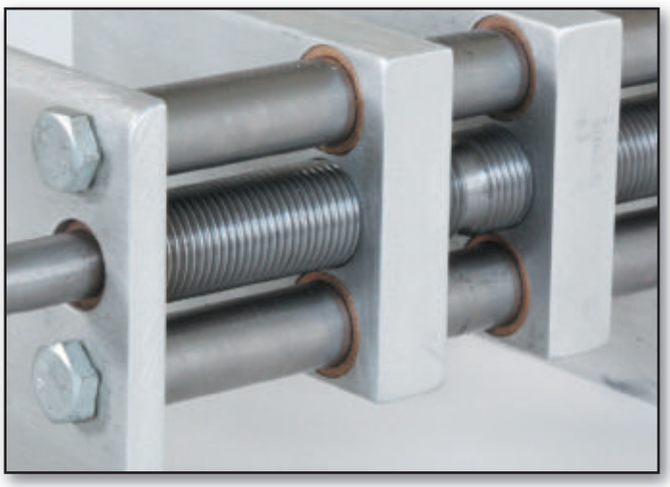
Geist Pen Vise and Sanding Fixture

by Kurt Hertzog

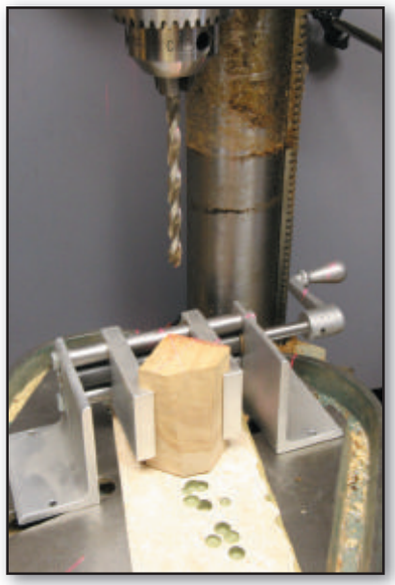


The Tim Geist drilling vise is an aluminum drilling vise with a 4" throat across diagonals built with a single-sided guide mechanism.



It is a quality made product with oilite bushings, cleaned-up edges and holes, and quality hardware.

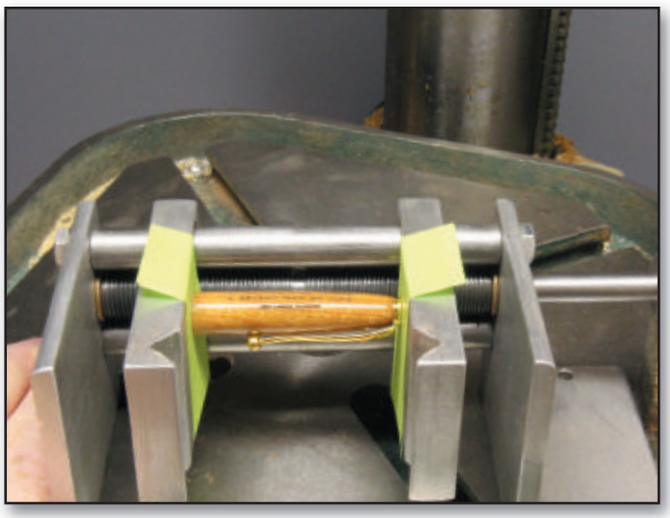
Pen and bottle stopper makers are forever drilling blanks, and there is a host of positioning and holding methods available—from a homemade fixture to a quick clamp to the commercially obtained pen drilling vises. Over the years, there have also been machine shop manufactured versions crafted by penmaking machinists. The makers come and go, since the vises are often fill-work in their machine shop. The vises are often well made and quite "pricey." A new maker has come on the scene. Tim Geist, a machinist by trade who is located in Parkersburg, West Virginia, has designed a rock solid pen vise and an accessory sanding jig.



With a 1" space underneath the jaws for a drill-through block, the vise works nicely for odd shapes encountered for wine stoppers, as well as the more regular pen blanks.

The vise and sanding jig are both well made with the hand-finishing work very evident. All the corners are nicely rounded and the drilled holes are deburred. Both vise and sanding fixture are eminently functional, but without any fluff. Crafted from aluminum, they are delivered bare—no fancy anodizing to add cost—just well designed, well made, and serviceable. The drilling vise will accommodate stock that is 4" across the diagonal. Using it as an assembly press, you can fit 3-1/2" between the flat jaws up near the thread and guide bars—the area that should be used for the most strength and least stress on the mechanism.

The sanding jig solves the problems inherent with sanding the ends of glued-up pen blanks. The jig pilots the blank on the inside diameter (ID) of the tube regardless of



The vise works nicely as an assembly tool with 3-1/2" between the platens. Here I've inserted some *Post-it* note paper as scratch and mar protection for the pen parts.

the diameter. The V-block upper will accommodate various punch diameters to be used as needed, depending on the brass tube ID. A set of inexpensive punches is a handy accessory to this sanding fixture and an inexpensive set can be bought at Harbor Freight, Busy Bee, Enco, or other retailers. Since there is no real stress on the punch, anything can be used that will give support for the tube on the ID of the brass. Even wooden dowels will work nicely as long as they are straight and parallel-sided.

The drilling vise is used as expected. Clamp the block to be drilled into the jaws, and position the vise on the table of the drill press. The jaws of the vise are thoughtfully designed to allow for a "breakout block" to be slid underneath the blank being drilled. As an assembly fixture, a few pieces of tape on the faces of the clamp blocks in near the screw and guide bars will prevent the aluminum face from marring the finish on gold or wooden pieces.

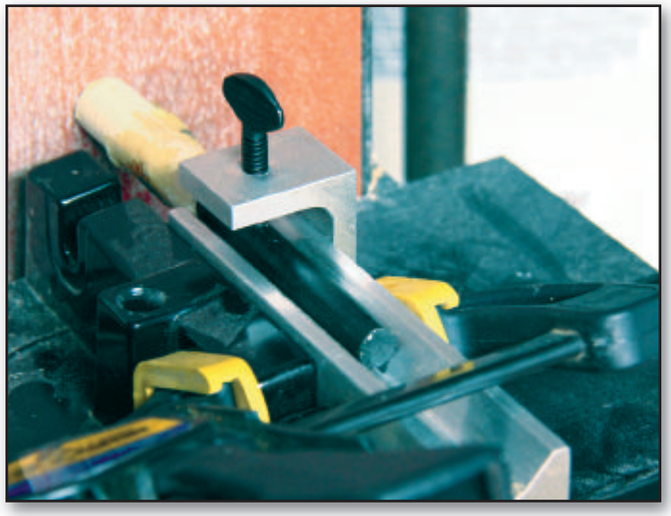
The sanding block is also pretty straightforward to use. Insert the proper-sized punch or dowel under the screw with sufficient extension to support the brass tube, but not be contacted by the sanding media. Clamp the sanding block to the cross slide of your disk or belt sander after you've ensured that it is square to the sanding face. Check to make sure the platen is perpendicular to the sanding media as well. The glued-up block is slid on the punch and the face of the block is sanded to the brass. Aligned properly, a sanded face that is perpendicular to the ID of the brass tube will be achieved.

I've found that the sanding fixture also makes a great cutoff jig. You can use the pilot punch to support pen blanks when using the bandsaw to trim the excess stock away. The punch supports the blank nicely, and the cut is with respect to the ID of the tube, rather than the flat edge of the blank. Obviously, the flat edge of the blank may not be parallel to the ID of the tube. If the blank is already rounded, cutting this way can be done safely without searching for a V-block to support the blank during the cut.

Though there are many drilling vises in my shop, having purchased some for myself as well as reviewing others as they became available, I can vouch for Tim Geist's drilling vise and sanding fixture. It does what it promises and is available at a very reasonable price. I've mounted it to a wooden base for convenience.

Tim's drilling vise and sanding fixture can be purchased separately, and they are only available from his website. You can find the Tim Geist drilling vise and sanding fixture at T.V. Geist Manufacturing on the web at www.timstoolcrib.com, or call 304-295-8166.

The sanding block is designed to clamp the proper punch or dowel, allowing for the ID guidance of the pen blank being perpendicularly sanded to the glued-in brass.



With the platen and fence aligned for perpendicularity, the sanding block clamped to the fence will allow the user to quickly and accurately sand the pen blank back to the brass.