

Making a Crank Handle for a Woodworking Vice

While developing an idea for a system designed to hold any shape easily and conveniently, I bought a milling machine to fabricate parts. Having never worked with metal before it was a quick learning process to make the milling machine do what I wanted it to do. One aspect of the milling machine that I immediately fell in love with was the “crank” style handles. I thought: “why couldn’t woodworking equipment, specifically vises, enjoy the convenience of the crank style handles instead of the cumbersome Tommy bar?”

A quick search of several of the catalogs in my office turned up a variety of crank style handles, but none that would adapt directly to my vise. I soon developed an inexpensive way of replacing the Tommy bar on my vise with a very functional crank handle. Below are the directions for making your own crank handle from readily available hardware.

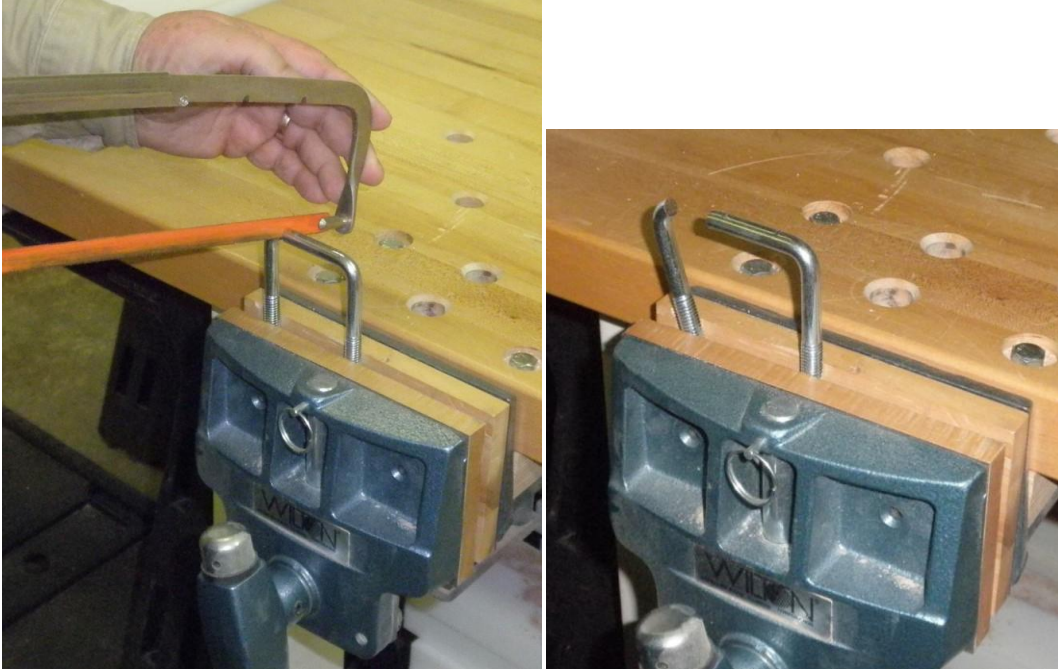
What you need is:

- A square or flat bottom U-bolt of approximately the same diameter as your Tommy bar
- A locking nut or jam nut
- A coupling nut

Note that if the sliding handle on your vise is wood, it’s likely $\frac{3}{4}$ ” diameter or larger. A U-bolt of that diameter is quite expensive if available at all. We show you how deal with that and the end of this article.



First place the U-bolt in a vise as shown.



Saw through one end of the flat side of the U-bolt to leave as long a leg as possible. This is how it should look. You can discard the other piece as we aren't going to need it.

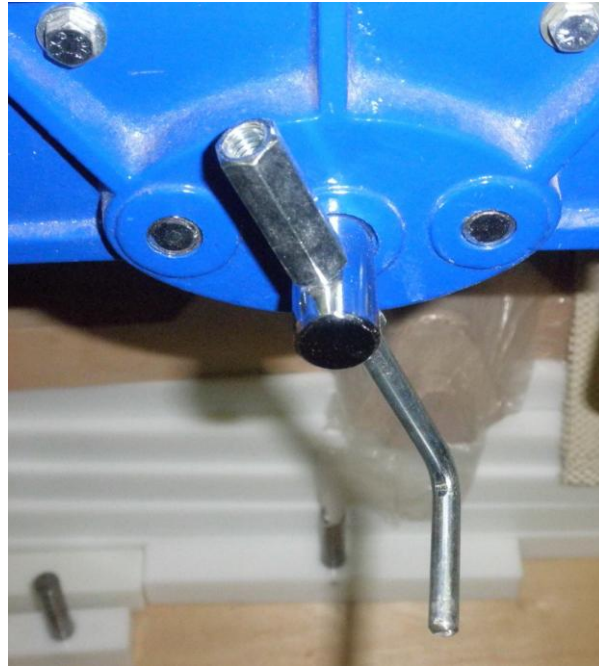
Finish the cut off end with a sander, a grinder, or a file to make it smooth. This is the handle portion so you want it to be smooth.



Thread the jam nut all the way on to the threaded portion of the bolt. You can secure the nut with thread locking compound but if you tighten the nut with a wrench against the end of the threads, it's not necessary.

At this point, insert the threads of the U-bolt into the vise screw hole. Thread the coupling nut on and with the handle part of the U-bolt sticking out at 90° to the vise and tighten the two nuts against the vise screw to secure the handle. The purpose of the coupling nut is to cover any excess threads and add a little counter-balance to the crank handle. If you find you're bumping into the crank handle as you work

around the shop, the nuts can be left just tight enough to let the handle pivot and the vise screw hole and can be used in a free floating manner. You chose the method that best meets your needs.



And here it is! A lot of craftspeople find this sort of handle a real help in opening and closing a vise quickly. Maybe manufacturers will see this and get the hint.

One Procedure for Vises with Wooden Handles

What if you have a large diameter wooden vise handle? A square bend U-bolt with a threaded portion that is larger than $3/8$ " for example, can be very expensive.

One solution is to use a filler piece in the casting for the handle. Shown here is a rendering of a vise with a wooden filler turned to a diameter that fits the bore snugly or with a light press fit. Drill a hole through the filler to accept the U-bolt and assemble as above.

