

# An Auxiliary Bench Vise, Version 1.1

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In order for me to do my best work, I need the stock to be in whatever odd position is necessary so that I can be in a comfortable position.



If I want to file or hacksaw a piece of stock on a horizontal surface, then my vise is set level.



Once in a while, I need to work at other than horizontal. My vise pivots all the way to the jaws being vertical.



But there are rare occasions when the best position for the stock is at a compound angle. This is where it is handy to have an auxiliary vise.

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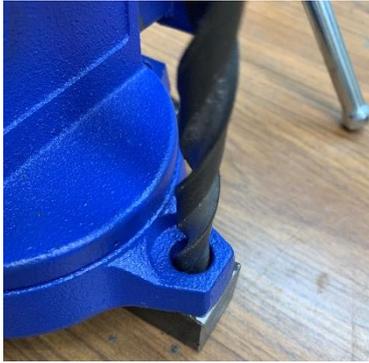
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I started with a \$30 vise from Lowe's and a bar of 1 x 1 inch CRS from my junk drawer.



After sawing the bar to match the lug to lug distance, I placed the vise on the bar.



Then I selected a drill that was a close fit to the lug's hole. Using my battery powered drill, I drilled down enough to clearly mark the location.

Then I moved to my drill press. Cutting oil was used at each step. With a 3/16 inch drill, I went through the bar and followed it with a 5/16 inch drill. The smaller drill isn't removing much material so goes fast. The larger drill then doesn't need to cut at the center so it goes fast too. My 3/8-16 tapped finished the job.

After installing a screw, the task was repeated on the other side. In this way, the two screws must match up with their lug holes.



The final step was to drill 1/8 inch holes 0.15 inches from each end. I drilled in about 1/2 inch. Roll pins were then pressed in place.



These roll pins eliminate an annoying problem. I can only rotate the jaws of the large vise when they are not clamped down. So when I am rotating the main vise jaws with the auxiliary vise on top, the auxiliary vise will tend to slide.



These pins limit this sliding motion.

## Acknowledgment

Thanks to Jim Isbell for pointing a confusing detail.

I welcome your comments and questions.

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