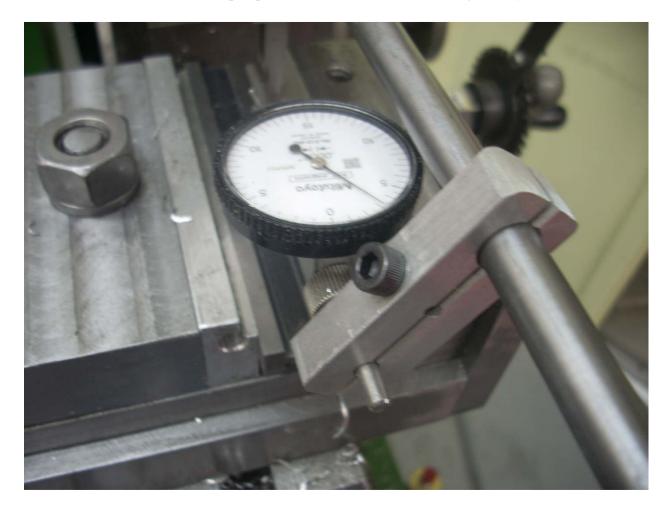
## **Rod Clamp**

## By R. G. Sparber

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This article was written for people new to the metal working hobby.



I needed to clamp my Dial Test Indicator to a rod in order to measure a cut surface. No such clamp existed in my tool box so I quickly made one.

<sup>&</sup>lt;sup>1</sup> You are free to copy and distribute this document but not change it.

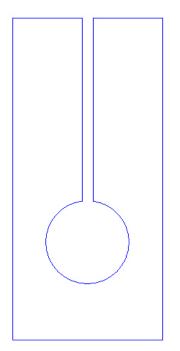


The clamp is made from four pieces. Starting on the right is my lower bar. An Oring fits over the screw on the left and makes handling this clamp much easier. The upper bar is almost a mirror image of the lower bar.

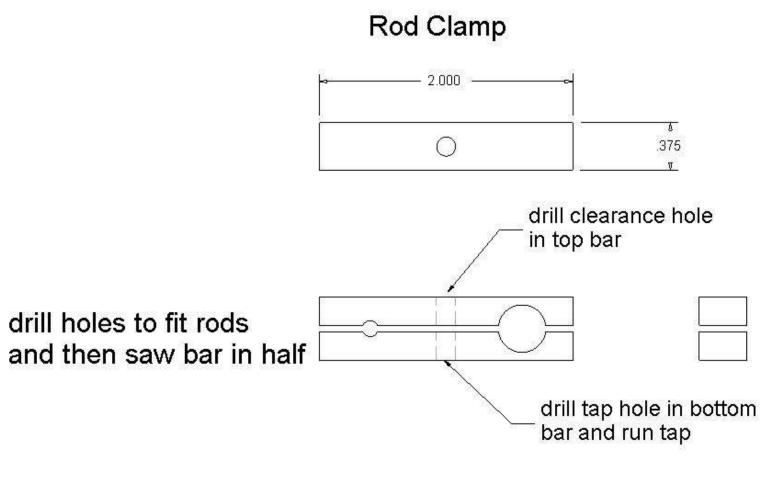


With the clamp assembled, you can see the gap between bars. The O-ring holds the bars apart plus prevents them from rotating when loose. If the bars flopped around while I was trying to fit the bars to it, the aggravation level would be far higher.

This clamp has no built in pivot point as can be found in other bar clamps. The clamping force from the screw directly acts on the two bars being clamped. It takes less force.



Most bar clamps have just a hole and a slot. The pivot point is the flexure of the metal below the hole. This works just fine but does require more force. It also can only accommodate a single bar.



## material: aluminum

R. G. Sparber 12/23/2011

Although I have provided a shop drawing for this clamp, I didn't use one when I made it. I just knocked two holes in the bar with my drill press, drilled my clearance and tap holes, tapped the lower bar, and sawed the bar in half. The saw cut was cleaned up and all corners rounded over on my belt sander.



It was easy to tell when to stop drilling the clearance hole because there was already a hole through the center of the bar from a previous use. I could feel as I broke into this left over hole. Otherwise I would have drilled

my tap hole all the way through, sawed the bar in half, and then opened out the tap hole with my clearance drill. Then I would have tapped the lower bar.

I chose to use a 10-24 thread but there is nothing critical about it. The O-ring was just chosen to fit the screw plus be close to the gap cut with the saw.

One possible improvement to this design would be to run a bead of silicone caulk between the halves rather than using the O-ring. I would first degrease the cut surfaces. Then apply the caulk, clamp on the rods which have been coated in oil, and let it set up for 48 hours. The rods should come right out. Then trim off the excess.

I welcome your comments and questions.

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