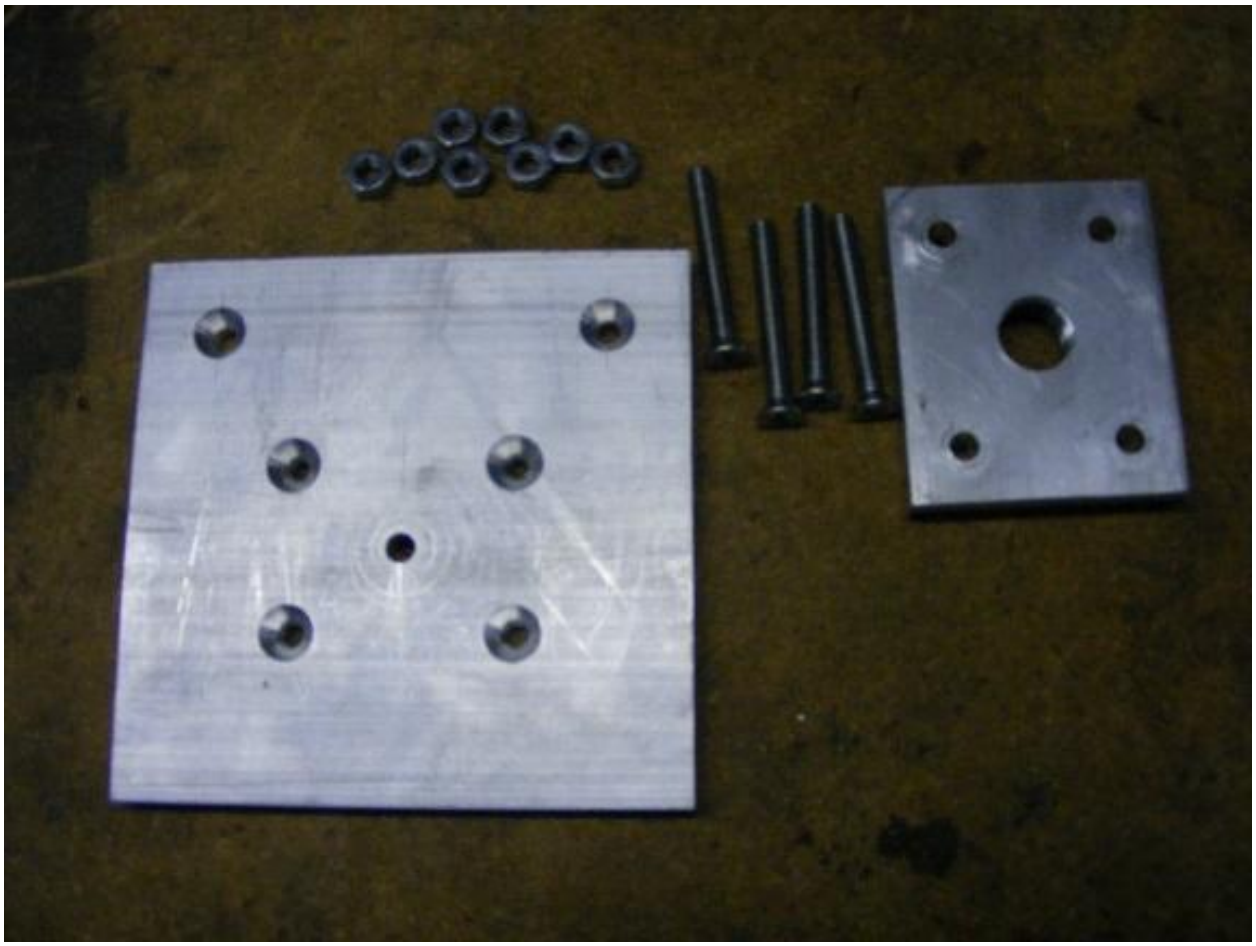
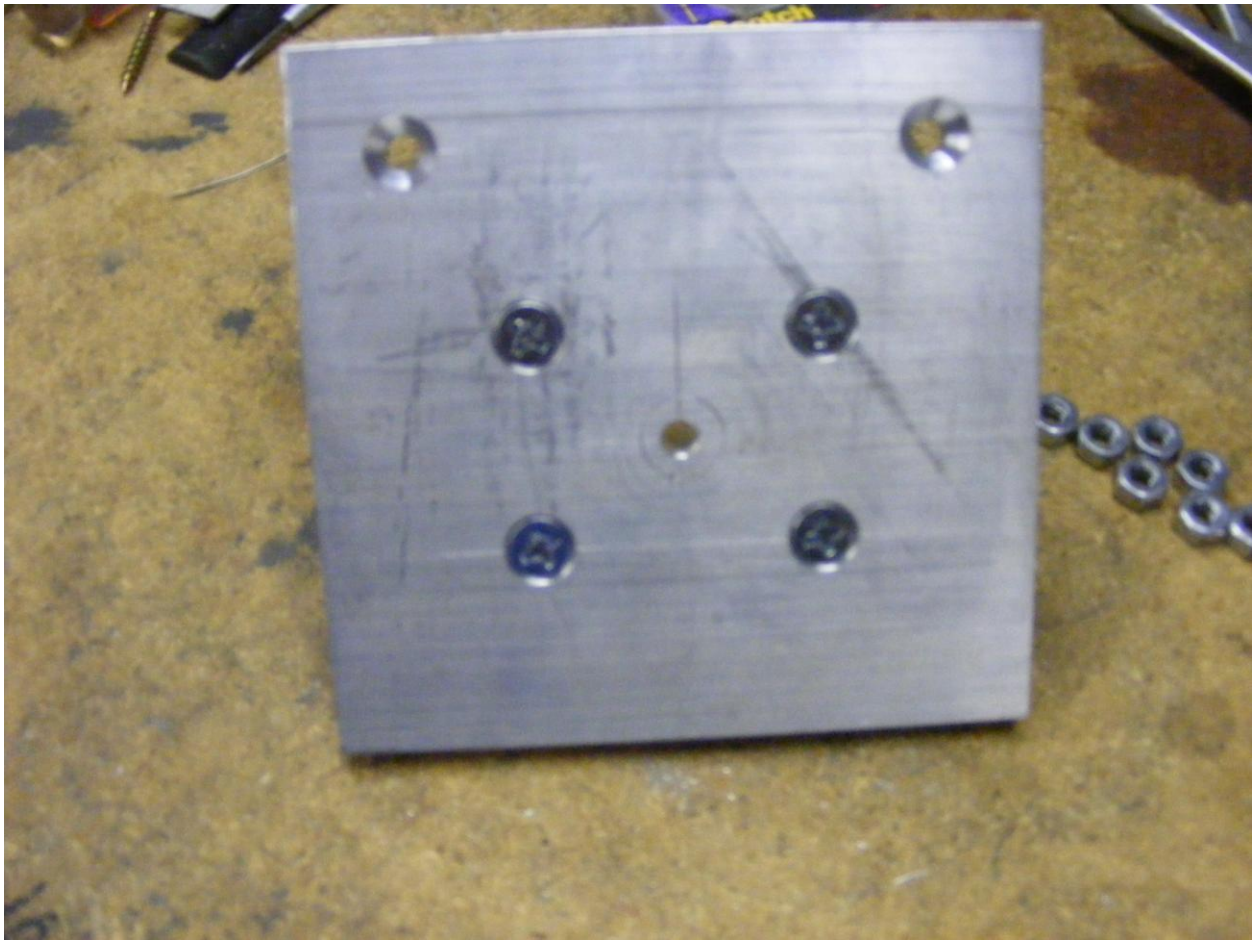
1911 Rail Cutting Jig



This is the 1911 rail cutting jig to be used to cut 1911 rail slots on any 1911 or 2011 style frame. Verify that all the above parts are in the package you receive.

The first step is to assemble the screws to the large plate as shown below.

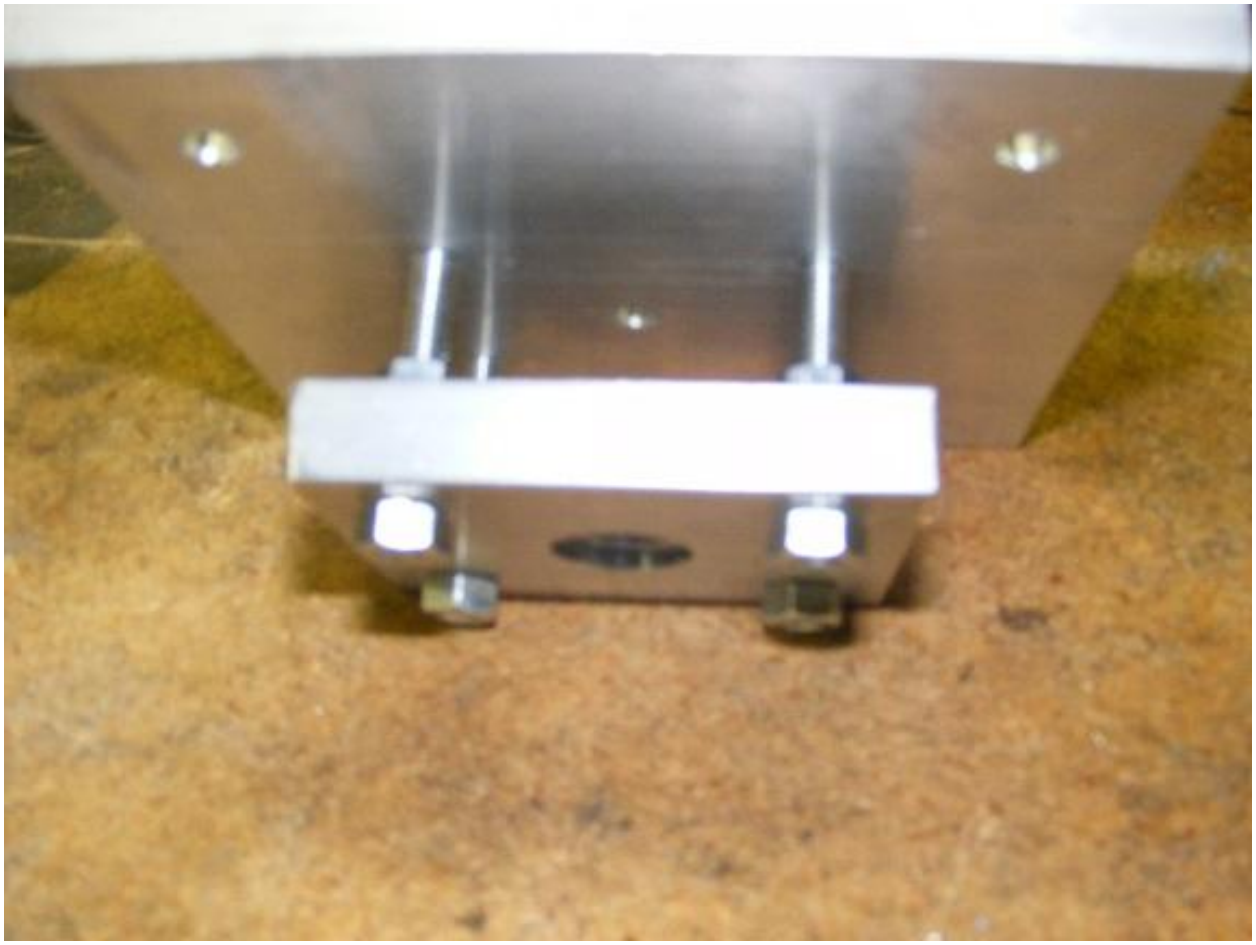


You may apply some blue thread locker if you prefer but I don't think it is necessary. The next step is to check the fit of the bottom plate. This plate is used to adjust the height of the Dremel. The plate should float freely on the four bolts from the bottom. The next picture shows the bottom plate used as a square to check the square of the bolts through the plate. Check two sides of each bolt and adjust, by bending the bolt slightly, if necessary.

The plate should freely move on the four bolts the full length of the bolts. My bench has seen some use, Yeah?

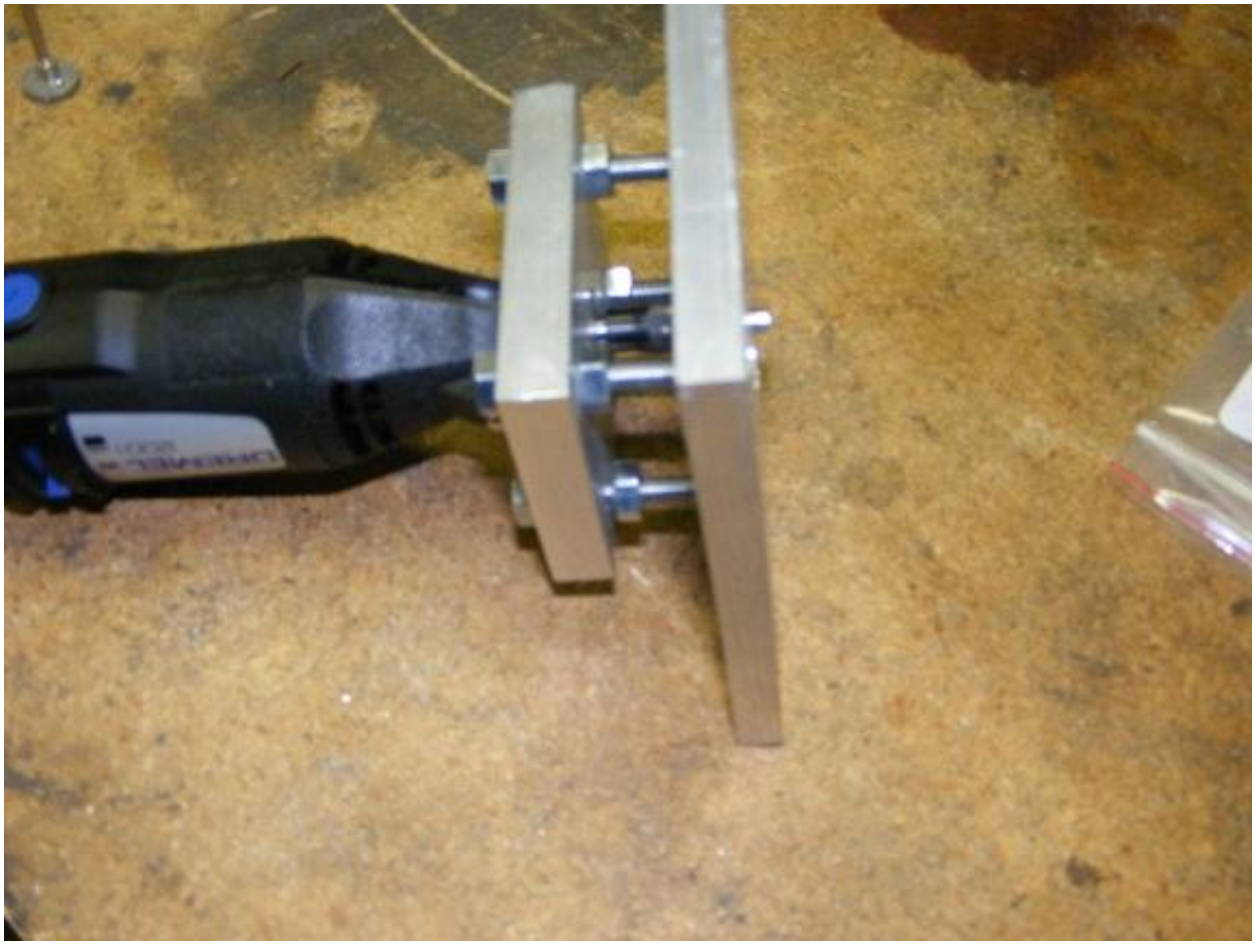
Remove the bottom plate and assemble 1 nut per bolt approximately half way down the bolt. Assemble the bottom plate to the assembly and attach the remaining 4 nuts as shown below. Place these onto the bolts until the end of the bolt is flush with the nut as shown in the following picture. The bottom plate should be loose at this time.

You will notice there is a slight relief on one side of the bottom plate at the large threaded hole. This is the side that the Dremel attaches to; this needs to be towards the bottom. If the Dremel is inserted into the plate from the wrong side the Dremel tool will not thread in fully and will not be square to the plate. You can see the slight relief in the above picture.



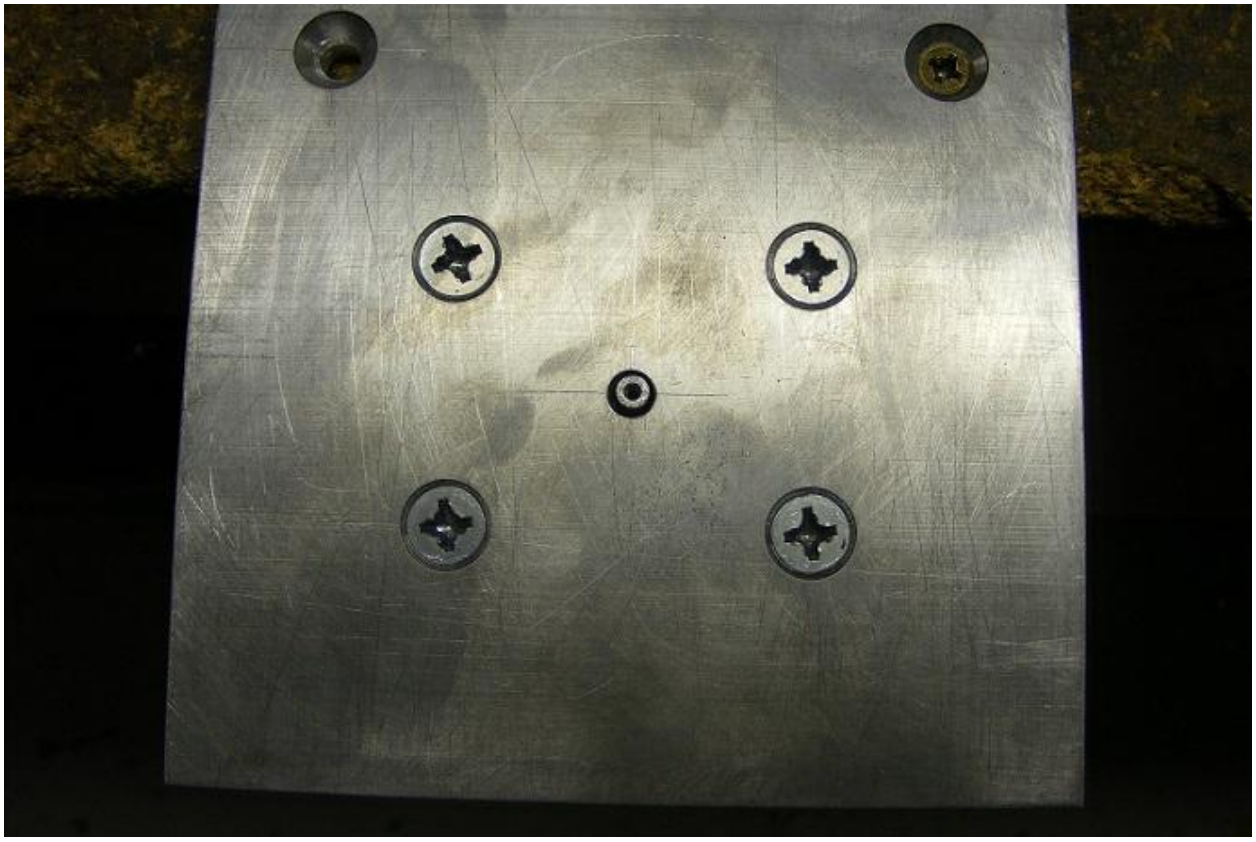
The next step is to assemble the Dremel cutting tool. I strongly recommend the use of reinforced cut off discs from Dremel. Install the arbor into the Dremel collet and tighten. Attach the Dremel into the bottom plate and tighten. Remember that the Dremel has plastic threads; it will tighten sufficiently so as to not vibrate loose but be careful not to over tighten and strip the plastic threads.

The assembled jig should look like this.

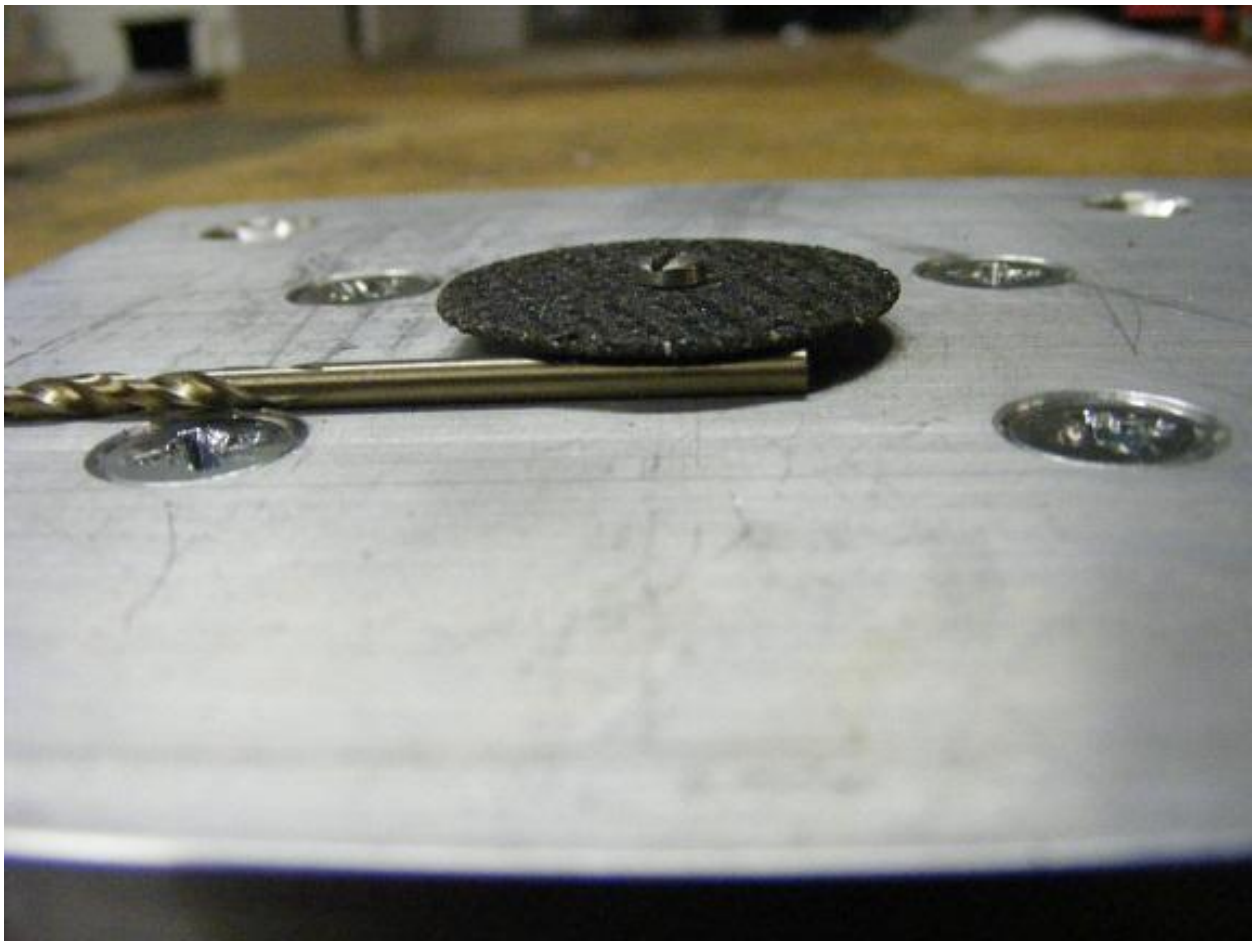


The next step is to attach the unit to a bench or table using screws through the countersunk holes or using clamps. As shown below.

The Lloyds barbecue is not bad stuff for anybody that hasn’t tried it, the containers make good junk cans also.

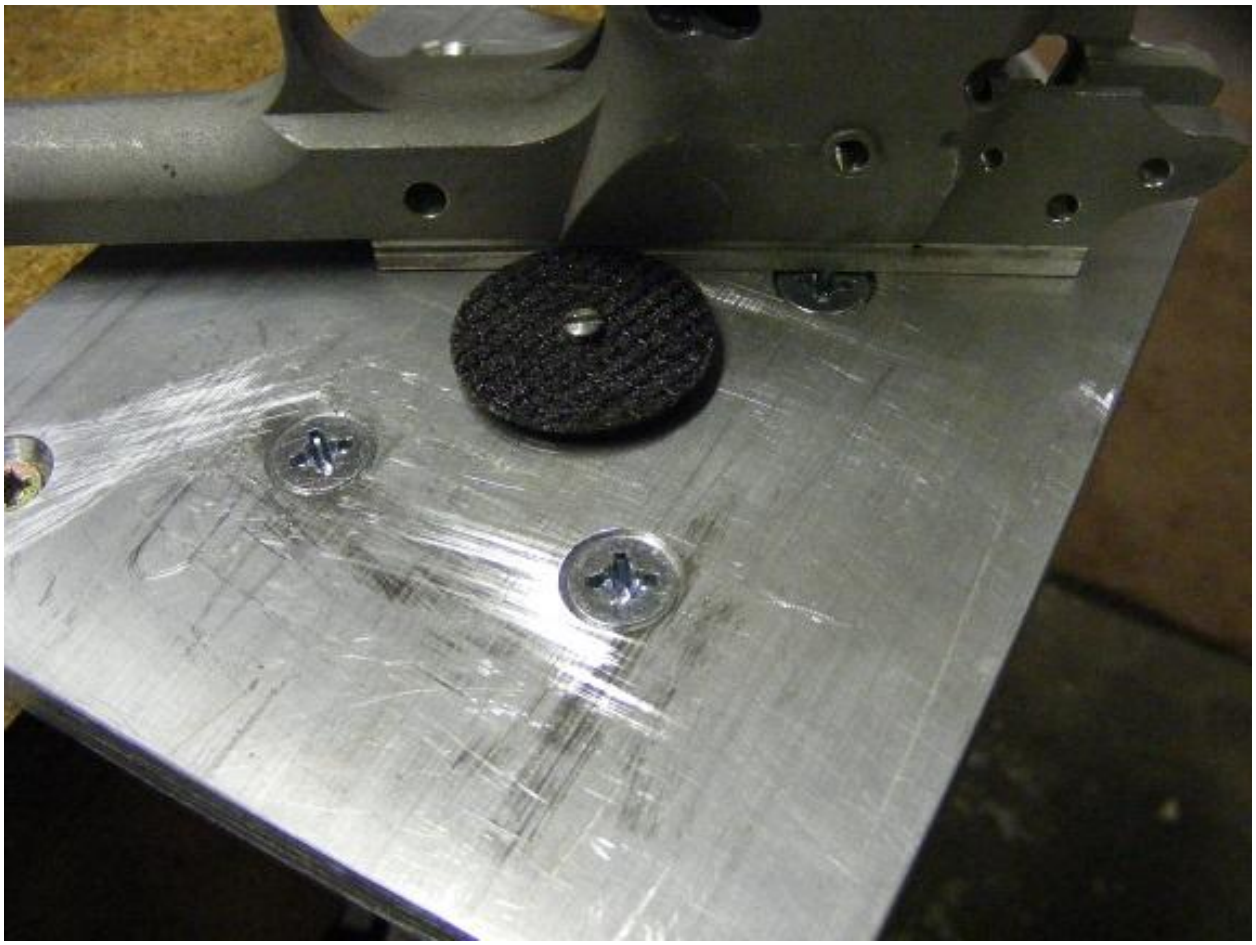


The above picture shows the plate and the arbor in the center hole. If you chose to, using a caliper, you can adjust the bottom plate/Dremel up so that the arbor is protruding from the top plate the desired/required thickness. This is accomplished by loosening the inner nuts and tightening the bottom nuts to move the plate up. Be careful to keep the bottom plate parallel to the top plate, otherwise your cutter will be at some unknown angle and will not cut the same from one side to the other. You can also install the cut off wheel at this time and use a drill bit to adjust the height of the cutter above the table. This is shown in the following picture.



The inner nuts should be loose at this point, the outer nuts are used to adjust the height, the plate is rigid and supported on four corners so the adjustment here needs to be relatively the same. Check the clearance of the drill bit from all four sides and verify that the bottom plate is resting on all four bottom nuts. When you have the proper clearance tighten the inner nuts to hold the plate in place, snug them but do not over tighten them. They are 7/16's nuts.

The next step is to cut your rails. This can be accomplished in a number of ways and I will explain a few. The basics are to place the frame upside down onto the plate and run it along the cutter removing material from the rail slot area. This is shown in the following picture.



The key here is that the top surface of the frame has been cut to its finished dimension. If you are using one of my drill fixtures I explain that process in those directions. The top surface should be 0.450” from the centerline of the slide stop hole or approximately 0.350” from the edge of the slide stop hole. If this is not the case then you need to fix that issue.

One method I have used is to use a #38 (0.1015”) drill bit to set the height of the cutter, this places the bottom surface of the cutter so that the remaining rail is 0.1015” thick, which is 0.0015” oversized for the rail. This leaves a little room to fit and clean up. Cut both sides of the frame before adjusting the cutter. For the next cut you will take the thickness of the cut

off disc, 0.090” in my case, subtract that from 0.219”, which is 0.129”. Now using a #30(0.1285”) drill bit adjust the height of the cutter and repeat the cutting process. What you have accomplished is cutting your rail slot close to the print dimension, close enough to have some fitting left to do. You should easily be able to clean up the slot with a rail file such as the one available from Brownells or Midway or any other 1911 tool supplier.

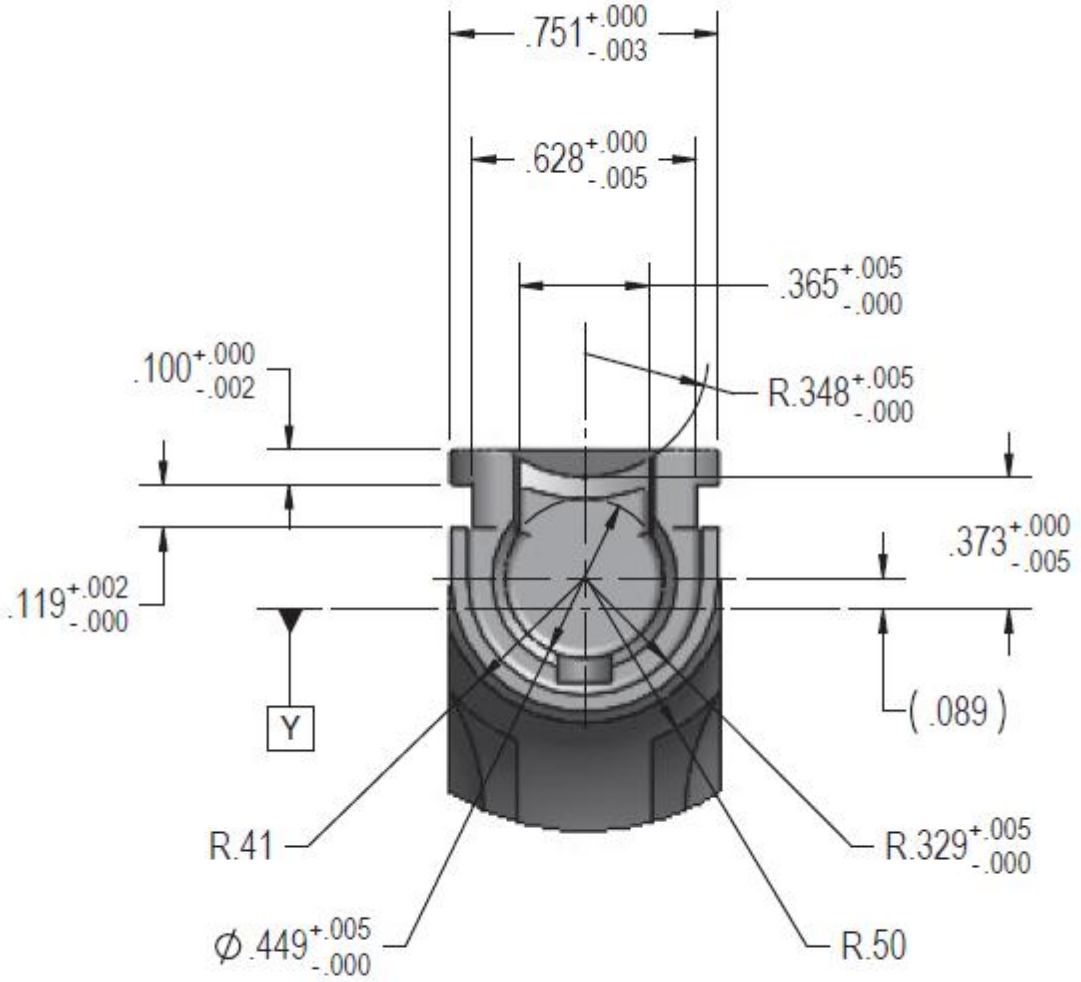
There are other ways to cut the slots, you can stack cut off wheels to get closer to the final slot width of 0.119”, you can go to Mcmaster Carr and get one of the wheels on there that is closer to the final dimension, I believe they have one that is 0.115” wide.

The basic concept is to set the cutter height at least 0.100” above the table and parallel to the table, this is the least dimension preferable for the frame rail. Make sure that your cutter is smaller than the 0.119” dimension.

The depth of cut is entirely up to the operator. This does not have the precision of a milling machine but it will be as precise as the operator chooses to make it. It is a tool and will provide more than acceptable results if you do your part. I have attached a dimension detail for those of you who do not have it. This is what you want to end up with.

The center hole in the top plate can be enlarged to accommodate other collets, chucks or cutters that you may prefer to use. The method of cut is entirely your own.

As with any of my tools feel free to contact me with questions or suggestions, my email is hoagiem58@gmail.com.



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