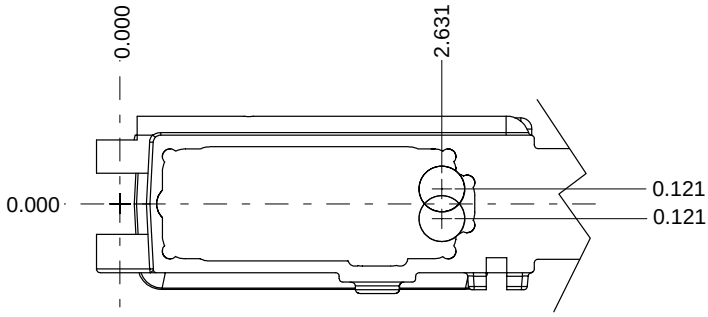
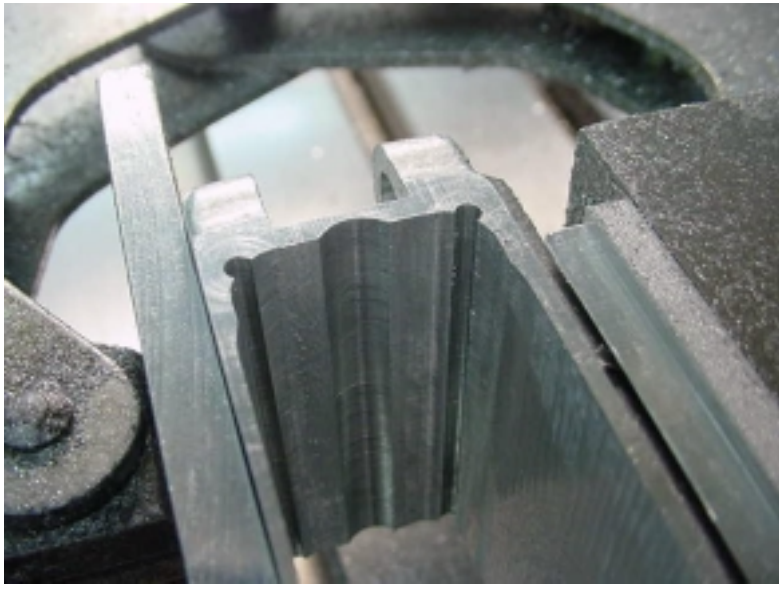
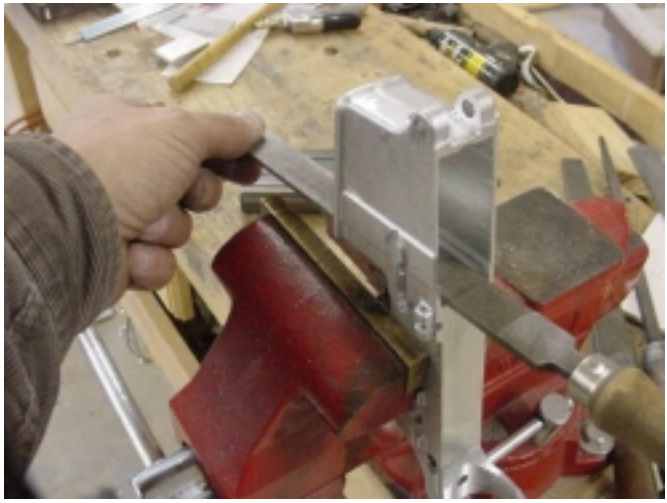
One last little cut we will make knocks off the corners at the rear of the well. Plunge your 3/8” diameter cutter at the co-ordinates shown. While it won’t leave the radius that the drawing calls for, it will provide the clearance needed and is quick and easy to do.





When you have removed all you can with the 3/8 mill there will only be some small cusps in the corners that remain to be eliminated. You can do this with a file or if you make a tool you can ‘stroke’ it out using your milling machine spindle as a verticle shaper.

If you plan to stroke it out, then do not break your setup and turn to page 58.

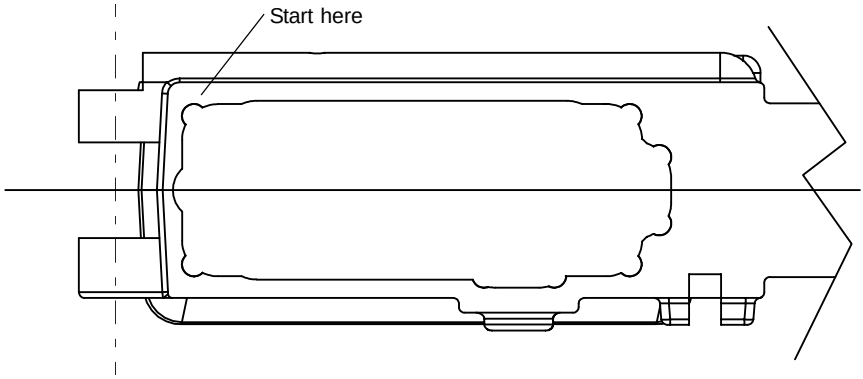


The reason we have left the trigger/hammer cavity solid until now is because we need to grab there with the vise, quite securely, while we file out corners of the magazine well.

Use a sharp file. If you don't have one, go buy one! Take long slow deliberate strokes. Check your progress often using the 1/8" holes for guides. File until you can get a magazine started. With the mag in the well you can look through and see where the tight spots are. What generally happens is that the mag fits at the top and the bottom, but is tight in the middle of the well. This is because we apply more file pressure near the edges. With a straight edge on your file, find which side is the belly (convex). That is the side to use when fileing the high spots in the middle.

Once you have a mag that goes through, try all your magazines and choose the tightest one. Now make that one fit easily and you are done.

Stroking out the Corners



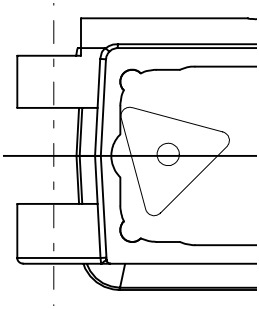
The drawing above shows the magazine well after all milling has been compleated. The 1/8” spot faces will help you to clear out the corners. If you happen to have a Bridgeport with the slotter attachment (vertical shaper) then you know what to do. For those who aren’t as lucky, we can use the quill to move a tool up and down and carve out the corners for a real good looking job.

You should make a tool holder as illustrated in fig. 4. Buy, beg or borrow a triangular carbide insert with 0.046” corner radius and mount it on the tool holder.

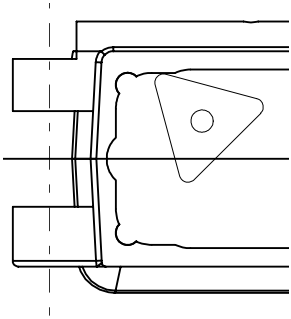
Chuck the tool holder in a collet and put your machine in the lowest speed and gear you have. Because of play in the spindle spline, you will want to use a spring or elastic to pull the radial play out of the tool. Rotate the belts by hand to get the initial orientation of the tool.

Start with the corner shown above since it is the easiest to see.

Touch your tool off on the left flat surface and set X zero.



Touch your tool off on the top flat surface and set Y zero.



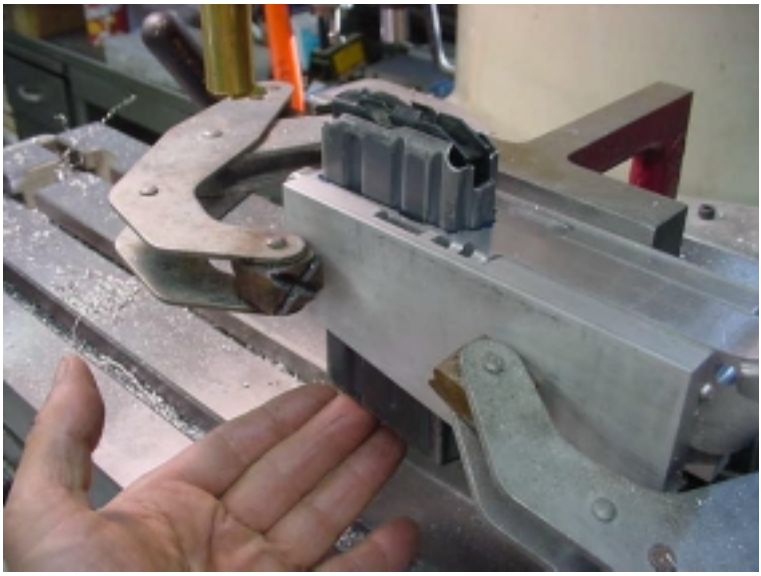
While stroking the quill up and down, move the tool towards the corner with the table locked at Y zero. Once you see the tool is taking a chip you only want to advance the table when the tool is up and out, and then advance no more than 0.005” per stroke. Keep going until you reach X 0.017.

Now move to the area where you set X zero and locking the table at X zero, repeat the operation while moving along the Y axis until you reach Y 0.017.

One last little stroke at X 0.005, Y0.005 and you are finished with that corner. The opposite front corner is cleaned out in the same fashion after re-positioning the tool.

For the four corners at the other end, you will only be able to get a zero for one axis. Move out from that zero 0.017” and then procede towards the corner along the zeroed axis. Stop when you just cut tangent in the 1/8” spot face and set this point zero for the other axis. Then complete the corner as you did with the first two.

Finally, for the two corners near the magazine catch, just do these by eye using the 1/8” spotface as a guide.



Check your magazines for fit. They should be slightly loose. If they won’t fall free then things are too tight somewhere. Look for the tight spot and see if you have a bent mag before cutting any more on your lower forging.