

Now release the safety, hopefully the sear returned to its original position and the firing pin did not move forward into a fired position.

If the firing pin moved forward into a fired position you have a potential disaster in your hands that you absolutely must correct.

What happened was this, when the trigger was pulled it moved the sear down and allowed the cocking piece to move to far forward, when the trigger was then released the sear could not reengage the cocking piece. That's why the firing pin moved forward simulating the firing of a gun.

Hopefully this can be corrected by some very careful stoning of the sears contact area. Before you remove any metal make certain you haven't mixed up any parts and that you have the right bolt.

If you have all of the right parts and the problem can not be corrected the only solution left is removing metal from the cocking piece.

However, if everything was done correctly removing metal from the cocking piece should not have to be done.

There is always the possibility that you drilled and mounted the sear out of position. If that's the case substantial repositioning or modifying might be needed, I suggest you investigate every possibility before you proceed.

One final touch that needs to be looked at is the fit of the magazine/trigger guard to the receiver. When I milled the magazine well I followed the template as close as I could, but I found that when the trigger guard was installed a small amount of additional fitting may be required.

For the follower to function the receiver magazine well, and trigger guard must fit flush, any amount of metal that can hinder the movement of the follower must be removed. I found that a hand held rotary tool fitted with a sanding drum seems to do the trick.



Notice the thin blue line on the rear section of the magazine well opening, it's only a few thousandths thick but is enough to stop the movement of the follower. I found that you don't need to remove a large amount of metal. Grinding the surfaces flush is all that is needed.

I was originally going to include a chapter on barrel fitting, chambering, and head spacing, but there must be a hundred books out there on the subject, and every one of them do a fine job. I have decided instead to only cover barrel fitting to my homebuilt receiver.

Earlier I discussed how I changed the diameter of the receiver to handle a barrel shank diameter of 1.125 inches. I made this decision based on the barrels that I have available and the tooling.

I suggest that you build your receiver to handle the standard Mauser barrel shank diameter of 1.100 inches.

No matter what barrel you use there must be some hand work to allow for extractor clearance between the end of the barrel threads, and the receivers locking lugs on the right side.

I originally thought about taking a small boring bar, and opening up that whole area, but after looking at one of my Mauser built receivers I realized that Mauser milled that area alone.

The easiest way I found to do the job is to take a rotary tool with a grinding stone, and carefully make a pocket area for the extractor. There must be adequate clearance for the extractor or the bolt will not close on a cartridge.

The depth that I used for my receivers front ring bore is 1.350 inches this accommodates the standard Mauser barrel shank length of .625 inches.

One thing that I am a stickler on is head space. I like a very tight head space, and prefer nothing greater than .002 inches.

I suggest every builder that is not familiar with cutting a chamber, and the use of head space gauges, research, and become knowledgeable in their use before attempting to replace a barrel, cut a chamber, or build a receiver.

There does have to be some forward camming action on the locking lugs to aid in chambering. The easiest way to cut the camming ramp is to use a pillar file that has safe edges. The right front lug and safety lug can be reached with a file. The left lug can be reached with rotary tool using an inverted cone grinding wheel. You do not have to duplicate the forward camming action of a real Mauser for your receiver to function properly



Notice the angle of the file. The Mauser feed ramp is more than just a simple ramp, it's a combination of angles that allows the bolt to rotate, and move forward at the same time. Using a file takes time but you can replicate the ramp. Make certain your files have a safe edge. (Non cutting)

I had originally come up with a way to replicate the forward camming area of a receiver using an end mill, but it still required some filing in the corners. It involved some fairly complicated positioning of the receiver and is not worth mentioning. I found that a good file with some patients, and practice did a better job.

I had shown in chapter one a receiver action wrench that was used to attach the barrel to the receiver. You will also need a barrel vise to hold the barrel. I made the vise out of 1 ¼ inch mild steel.

I first drilled two ½ inch holes through both pieces, bolted them together, and then bored a 1.475 hole through the middle. The holes on the outside edges are for bolting to a bench.

You will need to make some barrel bushing. I used a piece of 1 ½ inch round aluminum, 1 ¼ inches long. I drilled a ¾ inch hole in the center, and reamed with a #3 Morse taper reamer. You can also buy a similar barrel vise for less than \$75.00 if you shop around on the internet. The choice is yours.



I hope that everyone that reads this book and builds their own receiver, realizes that by building your own receiver you have tremendous control over quality.



This is the top view of a completed receiver. Notice how close the profile matches a large ring Mauser. Notice the position of the bolt stop ejector box. It's necessary for the bolt stop ejector box to set tight against the receiver for it to function properly. The charging clip slot is cut with a 7/16 inch end mill and completed with a 3/8 inch file. The final shape is cut with a small round file.



This is a general view of the receiver with a complete bolt and trigger guard attached. Notice that I have drilled and tapped the receiver for scope mounts. If you build the receiver properly standard Mauser parts like trigger guards, bolts, scope mounts, stocks, triggers, and sears work. The amount of time, and money that can be saved by using readily available parts is enormous, plus with the over the counter options

available makes the home build extremely versatile.

Last view before mounting in a stock





This is the final goal, a shootable Bolt Action Rifle. The stock is an over the counter synthetic stock that is pre-inletted for a large ring Mauser. The barrel is off a 1914 Enfield that was chambered for a 30-06. The barrel has been cut down, rethreaded, and chambered to 308. The barrel was also cut down to accommodate the sights. The sight bases are held in place with a glass bedding compound. The sights are some left over Mauser stuff that I was too lazy to throw away, but hey it works.

Remember, Spread the Word. Share this Book with your friends and tell them, they too can build their Own Personal Use Firearm.

Enjoy!

Final Thoughts

After I finished the receiver I had one fear, had I created a design too complex for the average home builder?



My first thoughts were that I spent 8 years working out my design and build techniques for my receiver and only a very few people would ever be able to build it.

The cost of broaches and machine tools is not insurmountable. No matter what design or type of firearm a home builder makes, there is a cost in machine tools and tooling.

I deliberately used tools in the building of my receiver that are common in most shops. A modest size lathe is required for the eccentric turning, but a \$1000 dollar Mill/Drill can be used for all of the mill work.

I do throw in one ringer, a tool post grinder. Yes those grinders are high priced, if you bought a new tool post grinder it would break the bank, but used ones are available. I have seen pictures, and plans on the internet for building tool post grinders in the home workshop, often for less than \$100 bucks, so that shouldn't be a problem either.

After the attack on September 11, 2001 people began to awaken to the need for personal security. People came together and formed builder squads all across this country; they built AR15's and shared in the cost of the jigs and other needed equipment.

I see no reason why builder squads could not be formed to share in the cost of buying, or grinding the broaches. I would like to see a supplier that sells to home builders; offer a set of broaches and files that are pre-ground in a kit form for broaching a bolt action receiver.

I spent the last 4 years trying to find the best build techniques that work with commonly found tools, machines, and materials. 4140 pre-hard steel is readily available, and can be bought in three foot sticks; this is enough for four receivers. I suggest that you build four receivers at a time.

The broaches that I used for my receiver cost me less than \$200 bucks, if I only get 20 receivers out of my broaches, that's \$10 dollars a receiver.

I paid around \$45 dollars for my 1 3/4 inch 4140 pre-hard steel in three foot sticks, that's a little over \$11 dollars for a receiver.

The barrels that I use are used Springfield and Enfield take offs that I cut down and re-chamber. I have never paid over \$30 dollars for a used barrel; even the barrel blanks that I use have been less than \$40 dollars.

The other parts I use are end of the day gun show pickups. The out of pocket cost for my home built rifle is around \$150 dollars each, and this includes a new synthetic stock.

I built my rifle for survival purposes, and \$150 dollars for a high powered bolt action survival rifle with no paper trail, in my opinion is damn good deal.

Since starting the journey in homebuilding in 1998, I have had an attitude change. I guess 8 years of Bill Clinton gun control will do that to a man, especially one that believes in freedom.

I do not encourage anyone to violate the law, local, state or federal. I don't know what the future will bring, and I can not understand why the Republican controlled congress is not repealing gun control laws, but for me, I am going to continue to build these receivers until the day I die.

The USA maybe the last armed citizenry in the world, the United Nations wants a total ban on firearms held by private citizens. Gun control is an issue like slavery that I can not accept.

If there is one single event that has caused me to change, it came after I read a book from Jews for the Preservation of Firearms Ownership titled "Gateway to Tyranny". This book clearly shows how our gun control laws are an annotated version of German gun controls both used, and created by the Nazi's.

For me the line has been drawn, everyone with the ability and desire to build their own personal use firearm should do so, even if those firearms are kept hidden or buried.

The AR 15 may be the easiest firearm for the beginner to home build, 80% lowers are available and require very modest tooling to complete. There are other types of firearms that can be built 1911's, and AK 47's are just two of the more common types being built.

Even I have another firearm design; it's for a Mosin Nagant. My Mosin design uses no broaches, but does require welding a piece of metal on the rear of the receiver for the rear tang, and trigger mounting.

Originally I was going to make that design the topic of this book. The problem with the Mosin Nagant is the bolt, if you use the Mosin bolt you're married to the Mosin cartridge. I came to the conclusion, no matter how difficult the Mauser design might seem it's the best choice for a survival rifle.

It's my sincere hope that every reader copies and shares this book with friends, family, and fellow gun owners. Anyone with the skill or desire to build a web site to feature or promote my work is welcome to do so.

I believe that our country is in trouble, if we are going to remain free, we must restore a Bill of Rights culture in this nation.

Writing a book is a new experience for me, I hope that you will be able to understand my build techniques, and build your own rifle.

The past eight years have seen a great amount of change in my life, my father who told me the story of his grandfather and his love of guns has passed on.

Sadly, the knowledge of his grandfather's homebuilding seems to have died with him. I have a feeling there was more to learn but that opportunity has passed.

Through all things good and bad, I would like to say that if it wasn't for the support of my beautiful wife I don't think I would ever have been able to finish this book. I have a feeling that she is as relieved as I am that this adventure is over.

Yours in freedom

Raymond Benwood