

HAMMER, SEAR & TRIGGER PULL

7 CHAPTER

The hammer, sear, and sear spring are all shown in this chapter because of their close relationship with each other. You really can't work on one without effecting the other. The thumb safety is also effected, but is covered in another chapter due to the fact that you can install a thumb safety without effecting the trigger job.

A good way to learn about how the trigger, sear, and hammer work together is to install them on the outside of the frame. Just lay the parts on the side of the gun, and hold them in place with their pins. Now you should be able to get a good idea of how the sear holds the hammer cocked, and how it will catch on the half cock notch if necessary.



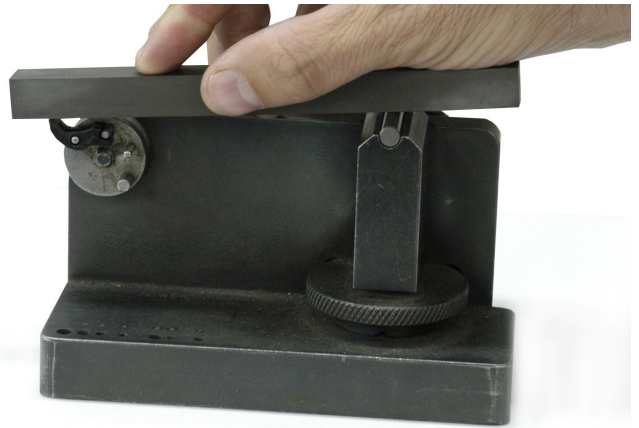
This is our sear jig. It is extremely simple and easy to use. You will also need a medium cut Arkansas stone about 1/2" x 1/2" x 6", and a fine cut India stone. These are expensive, but well worth the money and will last many years if you don't drop them on the floor. One slip and they will break like glass. These are available from Brownells.



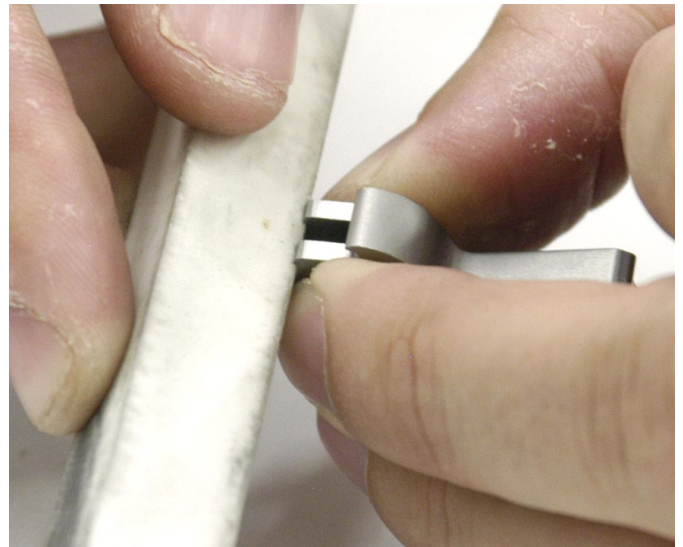
Complete instructions are included with our jig, but basically you stone the top of the sear with the medium Arkansas stone until the surface is flat clear across. Do not take off any more than necessary, and make sure the included shim is in place. Once the angle is set, rub it firmly with the fine India stone to get a mirror surface. Note the left index finger is holding the sear securely against the adjustable screw stop.



Set the clearance angle on the back of the sear with the medium Arkansas stone. It should be at 45 degrees to the top angle just established. This can be done by hand as explained in the jig instructions and should take up about 1/3 of the top flat surface. What this does is cause the trigger to break sooner by eliminating creep. Don't take too much off, you can always take more later if necessary. If you want to spend the extra money, Ron Power makes a universal jig that will allow you to stone it perfect each time. This jig is adaptable to many other types of pistols as well and is a very useful tool for the pistolsmith. It will pay for itself many times over.



Stone the hammer sear hooks with the fine India stone only. This will smooth up the 90 degree hooks to a mirror finish. With the medium Arkansas stone, take the height of the hooks down to 0.020". This is the height of the feeler gauge (shim) that comes with the jig.



Bend the sear spring to remove some of its tension. We always try to keep the disconnecter (center) leaf and the sear (left) leaf the same height at the top, no matter where they have to be. You need to always make certain the disconnecter snaps up positively, and the sear moves freely to block the hammer from falling. This will take a bit of trial and error to find out what works best with your particular set up.



Reassemble the pistol's basic components and try out the new trigger. If it is still too heavy, try to bend the sear spring a bit straighter, then reassemble and try again. If the trigger has too much creep, stone a bit more 45 degree clearance on the sear. Pull weight should be set by a trigger-pull scale, or lifting a trigger-pull set of weights. We use both in the shop, but I prefer to use the weights.

Trigger pull work is probably the most time consuming job in pistolsmithing. It usually takes several times disassembling the pistol and reassembling it to try again. Try to keep this to a minimum if you are trying to make money on the job. Don't reassemble any more parts than necessary. Put a punch in the frame to hold the mainspring housing instead of pressing the pin in and out each time. Do not assemble the grip safety, it is not needed. Do not install the Thumb Safety until the job is completely done. You should install the slide to keep from snapping the hammer against the bare frame, but you don't need to install the recoil spring or plug.

Don't try for less than a three pound pull. In fact a good crisp four pound pull will last many years of shooting and will be absolutely reliable. If you decide to do this type of work for others, be sure to warn them of the dangers of a .45 with a trigger job. Improper handling and slamming of the slide is not only abusive; it can be dangerous as well. Proper handling procedures are reviewed in Chapter 3.

Last of all, be sure to check the thumb safety for proper operation. You have changed the height of the sear, so the hammer and the thumb safety may not block the sear properly. If there is ANY movement in the sear when the trigger is pulled, you need to install a new thumb safety, or weld up the old one so it can be properly fitted again. See Chapter 8 for details on this operation.