

IMPROVING THE M1 RIFLE'S TRIGGER

... IS A TASK THE OWNER OF THE TYPICAL SERVICE RIFLE CAN PERFORM WITH A FEW HAND TOOLS.

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There are many things to complain about where military rifles are concerned. Weight and poor or inconvenient sights—for sporting use—are common sore points; so is recoil. But, by far the most common gripe concerns a military rifle's trigger pull. It's a reasonable gripe. Most military rifles have lousy triggers.

Our own M1 rifle is no exception. The hand-fitted National Match versions have, as a rule, pretty crisp trigger pulls. The service rifle, however, can be pretty well depended upon for a



FIG.1



FIG.2



FIG. 3



FIG. 4

heavy, creepy but not quite unmanageable trigger pull. And, what can you do about it?

The answer, happily, is "something." Short of locating a retired service-team armorer who has a large supply of parts and expertise and having him rework the trigger, an M1 rifle owner can do something about the gritty-grindy pull of its trigger. He can do it with three tools, a little patience, and about 45 minutes of thoughtful working time. Best of all, he incurs only a minimum risk of ruining the trigger or, worse, rendering it dangerous.

The technique discussed here is that used by U.S. Marine Reserve team armorer Mike Ginger for smoothing up an

M1 or M14 trigger. While this technique will not decrease the weight of pull, it will shift the effort somewhat to give a lighter final stage. It also removes the bumps and shuffles oftentimes felt in that final stage, and thus yields a better trigger pull.

Begin by removing the trigger housing group from the rifle. Set the assembled stock group and barrel and receiver group aside. Weigh the trigger pull. It must be at least 4 1/2 lbs. If it is not, it will be necessary to increase the weight of pull (for safety reasons, even if you don't plan to shoot your M1 in competition). That, however, is the last step in the procedure.

Begin disassembling the trigger hous-

ing group by letting the hammer down to the uncocked position. Then press forward on the rear of the trigger to take hammer spring pressure off the trigger pin and drift the trigger pin from left to right out of the trigger housing. Remove the trigger and the hammer spring housing, hammer spring and hammer spring plunger and set them aside. Now drive the hammer pin from left to right out of the trigger housing and remove the hammer.

Inspect the parts you have removed. Check the trigger carefully to make sure the notches that hold both the sear and disconnector hooks on the hammer are intact and free of nicks, chipped spots and

FIG. 5



FIG. 6

gouges. Check, too, to insure that the area around the trigger pin hole is not cracked.

Inspect the hammer, particularly the hammer hooks that engage the disconnect and sear surfaces, for wear and for breakage or other damage. Check, also, to make sure the hammer spring housing is free of cracks and dents, and that the hammer spring plunger is straight.

One advantage to this method of smoothing up an M1 trigger is that it does not depend on parts swapping. However, should any part of the trigger housing group be unserviceable, it will have to be replaced. Trigger parts are readily available from surplus dealers such as Amherst Arms, Gun Parts Co., SARCO, or Sherwood Distributors. Or, these parts may be ordered through the DCM. DCM prices are lower, but delivery takes longer.

When all the trigger parts have been inspected, it's time to begin the smoothing-up operation. Start with the trigger housing clamped in a vise. Use a fine triangular India stone to remove the finish and flatten the rough edges of the tool marks on the surfaces around the hammer pivot point. Then move back and do the same thing to the trigger pivot points (**Fig. 1**). Do not remove too much metal: all that is necessary is to even up the rough spots. And, if you take off too much, you will wind up with sideplay in the hammer or trigger making the mechanism unsafe.

When the trigger housing is done, turn to the hammer. Using the same stone, polish the sides of the hammer in the area around the hammer pin hole. Then strike the finish from the flat surface in the middle of the left side of the hammer that the safety catch engages (**Fig. 2**). Set the hammer aside and pick up the trigger. Lay the trigger flat, on a hard, square surface—a bench block is ideal — and use the stone to smooth the side of the trigger where it passes through the trigger guard (**Fig. 3**). Turn the trigger over and repeat the operation. Take care that the stone is kept square with the work and not tipped at the beginning or end of the stroke. Remember the object — remove finish and high spots, not metal.

The only other operation performed on the trigger is the polishing of the bottom surface of the sear. Extreme care must be taken during this step to insure that only a negligible amount of the metal surface of the sear is removed — we're after finish, remember, not metal — and that the polishing leaves the bottom surface of the sear square, so that when reassembled the sear will bear evenly against the sear hooks on the hammer.

Mike Gingers technique for accomplishing both these goals is to hold the trigger upside down on a hard surface such as an unpadded portion of a work bench. Place one surface of the India stone flush against the bottom flat of the sear, and press down firmly. Let go of the trigger so

that only the pressure of the stone holds the trigger upright, and, maintaining pressure on the stone, slide it straight back and forth across the sear (**Fig. 4**). In this manner any tendency to tip the stone will result in tipping of the trigger, and the stone and sear surface will remain parallel. Check the sear every two or three strokes, and stop when the surface is evenly bright.

Through all the stoning, keep the stone clean and well lubricated. Gingers uses Birchwood Casey's "Sheath" for this purpose despite the availability of commercial honing oils, because he maintains that Sheath is an effective cleaner as well as being a good lubricant.

With all appropriate surfaces polished, reassemble the trigger housing group. Lubricate the pivot points that you polished with a good grade of gun grease — Rig, Hoppe's, Lubriplate, Plastilube, or the like — or use a Teflon-bearing spray such as Break-Free. Be sure to get a coat of lube on the hammer spring and plunger, and put a dab of grease on the nose of the plunger where it bears against the hammer.

When the trigger housing group has been reassembled, check both the hammer and trigger pins, operating the mechanism by hand and looking for any rotation of the pins in their holes. If either pin does turn, stake it lightly in place (**Fig. 5**).

One last thing to do, check the weight of pull again. For use in both NRA and National Board-sponsored service rifle matches, the trigger must hold a 4 1/2-lb. weight. That's also a minimum safe weight of pull. If your trigger won't hold that weight, there is one more step to be performed.

Take a 1"x8" strip of 220-grit, Wet or Dry or emery cloth and insert it between the rear of the trigger and the attached disconnect, abrasive side against the trigger. This is done with the trigger housing group assembled, the hammer uncocked. Hammer spring tension in the assembly will hold the cloth in place. Making sure the abrasive surface touches only the trigger, slide the cloth back and forth using about half the length of the strip. Check the weight of pull about every fourth stroke until the trigger will hold the 4 1/2-lb. weight (**Fig. 6**). Now you're done.

The procedures described here will not make the M1 trigger pull lighter. They will make it smoother and easier to pull cleanly. The last technique changes weight of pull by changing the point at which the disconnect sear comes in contact with the disconnect hooks on the hammer. It increases the length of the first stage pull and increases the weight of the second stage. It also yields a shorter, crisper final stage.

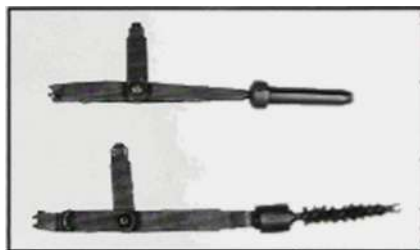
Carefully and thoughtfully done, the operation described will result in a safe, reliable, easily managed trigger pull for your M1 rifle.

M1 Combination Tool

After receiving my DCM-M1 rifle, I purchased a GI combination tool for it. Will you tell me how the various parts of this tool are used?

Answer: To learn the uses of all the implements built into or onto the M1 rifle combination tool, one must go back to an edition of FM 23-5, the basic field manual for the M1 rifle, dated July, 1940, or earlier. This is because one function of the tool was done away with by production changes in the rifle made in 1940. The several functions of the tool are listed below.

The chamber cleaning implement—a slotted rod on early tools, a chamber brush on later versions—is used to clean the chamber. Patches are folded through the



The many differences of the older (top) and newer M1 tools are most evident in substitution of brush for the slotted tip.

slot in the early tool or wrapped over the brush in the later model. In the later model, the rear of the fitting that holds the chamber brush may be used to disassemble the extractor/ejector without removing the bolt from the rifle.

The folding screwdriver, pivoting in the middle of the tool handle, has two blades, a small one ground onto the tip of a larger one. The larger blade fits the gas cylinder lock screw. The smaller blade fits the buttplate screws, the sling and stacking swivel screws, and the elevating pinion tension screw on the most recent type of rear sight (post-1947, and used on the M14 rifle as well).

The tools built onto the end of the tool handle opposite the chamber cleaning tool include a pin drift, used to drive or start the clip latch pin, follower arm pin, trigger pin, and hammer pin; an ejector guide, used in conjunction with the pin drift to reassemble the ejector and its spring; a manual cartridge extractor, and a spanner for adjusting tension on the rear sight elevating pinion on M1 rifle sights used only through about 1940 or '41. The spanner has no use on sights of the most recent type or on those common during World War II.

In addition to the combination tool the handle of the M10 cleaning rod serves as a multi-purpose disassembly/assembly tool for the M1 rifle.—J.B.R.