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INSIDE THE ARCHIVE

DISASSEMBLY AND REASSEMBLY OF THE WINCHESTER 1892 TAKEDOWN RIFLE

NRA OFFERS FREE DISABILITY-AWARENESS BOOK • TARGET TRIGGERS: DELIVERING TOP WORK FOR TOP-NOTCH SHOO...

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 022

DIGITAL ARCHIVE EDITION

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RIFLES

NRA Offers Free Disability-Awareness Book

BY AMERICAN GUNSMITH EDITORS SEPTEMBER 2005

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The National Rifle Association's Disabled Shooting Services Department receives thousands of requests annually for guidance with disability-related hunting and shooting-sports problems. More than a few callers tell of being refused entry into an activity because the local organizers have no idea how to include a disabled sportsman or marksman into their programs.

Much of the inability to accommodate disabled sportsmen has been due to a lack of knowledge of what has been accomplished in the past, both through technological advancements and changes in hunting regulations. In an effort to expand the knowledge on this subject, which is important to the future growth of all hunting and shooting-sports activities, NRA Disabled Shooting Services is offering a free disability-awareness booklet.

The booklet is a collection of articles that were written by Dave Baskin, Manager of NRA Disabled Shooting Services. Over the past 15 years, Baskin has become the nation's most widely published author on the subject of disabled hunting and shooting-sports activities.

The booklet contains articles on a variety of subjects, including hints for instructors working with disabled students, organizing a wheelchairaccessible sporting-clays event, rifle shooting as a tool in the physical rehabilitation process, and safety tips for disabled hunters.

In addition, there are historical pieces on the early relationship between departments of natural resources and disabled sportsmen as well as highlights of the first NRA Disability Awareness Workshop, which was conducted for the hunter-education instructors of the Texas Parks & Wildlife Department in February 1996. Other articles chronicle the stories of some truly remarkable people who have succeeded in the shooting sports despite overwhelming challenges.

Whether you are a member of a hunting or gun club, firearms safety instructor, junior program coordinator, or just want to learn more about your fellow sportsmen with disabilities, this booklet will prove invaluable. For a free copy, simply call NRA Disabled Shooting Services at

PEOPLE & COMPANIES

Disassembly and Reassembly of the Winchester 1892 Takedown Rifle

Though the mighty Model 1886 was highly successful, the smallercaliber Model 92 became equally popular and is still going strong.

BY CHICK BLOOD SEPTEMBER 2005

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Every practicing gunsmith or serious student of gunsmithing should spend a few hours visiting the production line in a modern firearms factory. Some faculty members of European gunsmithing schools would sneer at what they see, preferring to teach classes in the art of handmaking a receiver from a solid block of metal. In these traditional courses of instruction, you won't find CNC machining with multiple cutters that simultaneously transforms several castings into the precise components we've come to know today.

John M. Browning was, of course, just such a traditionalist. He used only hand tools along with a bare minimum of hand-powered machines, and he only held what he made to close tolerances when necessary in perfecting his arms designs. Moreover, Mr. Browning did not believe a device had to be complicated in order to accomplish a given operation. He kept his devices simple, and perhaps a little "loose." The result was smooth actions and few problems with his lever guns generated by fouling and foreign matter.

The Model 1886 was one of his best. It was also very heavy and chambered only for long cartridges that included the .45-70, .45-90, .40-82, and .50-110. Although the Model 1886 was a huge success, it soon became obvious that a smaller, lighter version would be

equally welcome in the marketplace. The design of the large-caliber rifle/carbine was downsized, simplified still more, and resulted in the Model 1892.

The 92 was chambered initially in .32-38 and .44 WCF, the same cartridges used in the legendary Model 1873. The M92 became a legend; Admiral Perry packed one on his quest for the North Pole and Annie Oakley thought the world of it—as have generations of ranchers and hunters for over 100 years. There were two sporting versions of the 92. One was a takedown model like the one featured here. What is not featured here is a schematic of the takedown version.

Instead, I'm using an exploded drawing of a non-takedown version in the interest of superior reproduction. But except for the takedown lever itself and the three screws for barrel-tightening purposes, the drawing shown on page 5 will serve to guide you through the disassembly. Field Stripping Whenever you disassemble or reassemble a takedown M92, never fail to fully open the action. This has to be done to get the ejector (#60) out of the way. At the extreme end of the magazine tube (#13) you'll see a lever.

RAISE IT SO IT'S POINTING 90 DEGREES AWAY FROM THE TUBE, AND USE IT AS A

DISASSEMBLY AND REASSEMBLY OF THE WINCHESTER 1892 TAKEDOWN RIFLE CONTINUED

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Above left and It is raised and used to unscrew the tube from the receiver prior to removing the barrel. handle to completely unscrew the tube counterclockwise from the receiver. Secure the barrel (#2) between padded vise jaws. Grasp the buttstock and give the receiver a quarter turn counterclockwise. The barrel can thus be removed. The barrel's receiver insert (see photo) remains attached to the barrel. To remove the forend from the barrel/receiver-insert assembly, back out both screws (#12).

One is located on each side of the forend tip (#11) and both seat in the tip tenon (#8) that's dovetailed into the barrel. Though the gun could be cleaned in this state, I advise you remove the stock by undoing the upper tang screw (#26). In the event the stock is a little stubborn about coming off, bump the front part of the comb to the rear with the palm of your hand or a rubber mallet.

A good, fundamental cleanup of the gun's interior is now possible with no worries about solvents coming in contact with the wood surfaces. However, in cases where "fundamentally clean" isn't clean enough, you're now in a position to continue the disassembly. Detailed Disassembly The finger lever (#45) should be open enough so you can get at the mainspring screw (#39) and the mainspring strain screw (#40). Sometimes, loosening #40 first makes loosening #39 easier, but not always.

Once the tension on the mainspring has been eased, It's the locking-block pin, held in place by the lower screw to retain both left and right locking blocks. you can disengage it from the hammer stirrup (#30) and remove the spring to the rear. A large screw (#32) toward the rear of the receiver retains both the hammer (#29) and the lower-tang unit (#33) which houses the trigger (#36). Pull the trig-

ger to the rear, hold it there, back out screw #32, and lift the hammer free toward the butt of the gun.

The lower tang/trigger unit may be seated very tightly in the receiver. If so, a rod or punch can be inserted in the unthreaded mainspring-screw hole and the unit lightly tapped rearward to get it started. Once started, your fingers can get it all the way out. Drift out the trigger pin (#37) and remove the trigger downward. The trigger spring (#34) is taken out by undoing its screw (#35). Examine the locking block (#42) on the left side of the lever. It appears to have two screws. It doesn't.

The upper "screw" is the locking-block pin (#43). It's held in place by a genuine screw (#44). Remove #44 and you can push out #43 to the left and pull both locking blocks down out of the receiver. Don't get them mixed up. The uppermost forward screw on the receiver is the lever and breechblock-pinhole plug screw (#54). Take

1 Receiver 2 Barrel 3 Rear Sight Assembly 4 Rear Sight Elevator 5 Front Sight 6 Front Sight Screw 7 Tang Sight Screw 8 Forend Tip Tenon 9 Magazine Ring 10 Magazine Ring Pin 11 Forend Tip 12 Forend Tip Screw 13 Magazine Tube 14 Magazine Spring 15 Magazine End Cap 16 Magazine End Cap Screw 17 Magazine Follower 18 Loading Gate it out and fully close the bolt. Install either of the locking blocks to retain the bolt.

Insert a drift punch into the hole on the right side of the receiver, push out the lever/breechbolt pin (#28), and pull out the finger lever to the rear. Take out the locking block you inserted, and the bolt will be freed up for removal.

This can be 19 Loading Gate Screw 20 Cartridge Guide, Left 21 Cartridge Stop 22 Cartridge Stop Joint Pin 23 Cartridge Stop Spring 24 Cartridge Guide Screws 25 Cartridge Guide, Right 26 Upper Tang Screw 27 Breechbolt 28 Lever and Breechbolt Pin 29 Hammer 30 Hammer Stirrup 31 Hammer Stirrup Pin 32 Hammer Screw 33 Lower Tang 34 Trigger Spring 35 Trigger Spring Screw done by tilting the rear of the receiver backward and pushing the bolt out.

Built into the finger lever area friction plunger (#46), friction-plunger spring (#47), and friction-stud stop pin (#48). The spring is small but mighty.

When and if you ever have to drift out the pin, be very careful and (need I remind you once again?) wear eye pro- Winchester Model 1892 Lever-Action Rifle (Specifications subject to change without notice) 36 Trigger 37 Trigger Pin 38 Mainspring 39 Mainspring Screw 40 Mainspring Strain Screw 41 Locking Bolt, Right 42 Locking Bolt, Left 43 Locking Bolt Pin 44 Locking Bolt Pin Screw 45 Finger Lever 46 Friction Plunger 47 Friction Plunger Spring 48 Friction Stud Stop Pin 49 Carrier Assembly 50 Carrier Stop 51 Carrier Stop Spring 52 Carrier Stop Pin 53 Carrier Screws 54 Lever and Breechbolt Pinhole Plug Screw 55 Breechbolt Assembly 56 Extractor 57 Extractor Pin 58 Firing Pin 59 Firing Pin Stop Pin 60 Ejector 61 Ejector Spring 62 Ejector Collar taction when working on this or any other firearm.

When you took out the lever/ breechblock pin'hopefully you noticed it is beveled on one end'you gained access to the ejector (#60), ejector spring (#61), and ejector collar (#62). Don't pull these from the front of the breechblock just yet. First, study

DISASSEMBLY AND REASSEMBLY OF THE WINCHESTER 1892 TAKEDOWN RIFLE CONTINUED

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1.

PISTOLS

Target Triggers: Delivering Top Work for Top-Notch Shooters

The smoothest target trigger requires lots of stoning and honing, and just when you think you're nearly finished you've only just begun.

BY CHICK BLOOD SEPTEMBER 2005

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Because trigger pulls of less than 4-1/2 pounds are never recommended for defensive handguns, only a portion of what you will read in this article applies to them. Consider, for example, the full-cock notch. It's factory established at a little less than 90 degrees on the M1911, which is the target pistol I'm dealing with here. The M1911? A target pistol? You bet.

As standard military issue for so many years, the classic .45 ACP frustrated thousands of basic trainees who attempted to hit a moderately distant target with it once, let alone often. Fortunately, people like the late Jim Clark realized the potential of the weapon as a target gun. Because he' along with a few others before him and many others since'd evised ways to greatly improve the mechanical repeatability and trigger of John Browning's warhorse, it has become the favorite among bull's-eye busters.

The more competent and experienced among these shooters represent your market for the techniques that will be covered

here. Most of these techniques do not apply to defensive hardware intended to be carried by civilians or law-enforcement agencies. What Does "Prepping" Mean? In this case, prepping refers to using an appropriate fixture and putting the best possible finish you can on hammer and sear angles with a white ceramic stone.

That stone, plus India and black ceramic stones and a hammer-squaring file, are included in an all-in-one kit sold by Brownells. Each stone is 1/2 x 1/2 x 6 inches and perfectly square. The file has safe surfaces on two sides. With the ceramic stones, distilled water is used as the clean-up and cutting fluid. An M1911 hammer intended for personal defense comes from the factory with its full-cock notch under 90 degrees.

If targets are to be the gun's sole point of aim (forever), the notch is altered to be exactly 90 degrees. This enhances sear disengagement. To accomplish the alteration, the hammer is secured in a smooth-jawed vise

or a fixture with the hammer shelf facing upward. One safe edge of the squaring file is placed on the shelf.

Taking extreme care to keep the file's cutting side parallel with the hammer-pin hole, the face of the full-cock notch is lightly filed until it is perfectly square to the shelf along the full width of the notch base. After squaring, any file marks on the hooks are polished out with a fine stone and honing oil, then the shelf is polished. Using the fixture, the India stone and a feeler gauge, begin lowering the hammer full-cock hooks to .018 inch in height.

Both hooks must be identical in height when you're finished. Continue lowering with the black, then the white ceramic stones, but don't lower the hooks below .018 inches. In doing this prepping, use a straight forward and back motion. Each completed motion equals two

TARGET TRIGGERS: DELIVERING TOP WORK FOR TOP-NOTCH SHOOTERS

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Above left and It includes six grits of adhesive-backed paper and two precision-ground steel honing bars. When mounting a grit paper to a honing bar, the author leaves a gap between the paper and the metal edges (left) as extra assurance against contamination from sweat or skin oils that could lessen the effectiveness of the honing process. strokes. The aim is to polish out all marks left by the previous stone. Then confirm the absence of those marks under magnification.

Clean off any stone or metal residue with alcohol between stones. And one more time'd on't lower the hammer hooks below .018 inch. Some hammer fixtures, like one of those shown here, also accommodate the sear for prepping. Other fixtures are dedicated. One is for the hammer, the other for the sear. A fixture should be employed since cutting perfect primary sear-engagement surfaces can't be done by eyeball. A .030 or .020 feeler gauge is used to cut engagement angles on target sears.

For prepping a relief angle, however, a sear may be taken from the fixture, placed on a square stone as pictured, and stroked away from the back of the stone to remove about

.010 inch of material. The feeler gauge is used for this to both limit the abrasion and protect the lower hooks of the sear. Now check your prep. This is best done with external hammer and sear pins (from Brownells), because pin locations can vary some from frame to frame.

Therefore, the hammer/sear you've just prepped might check out on a hammer/sear engagement jig whose pin locations don't quite match those of the frame in hand. As a result, those vital components could fail to operate as they should when finally installed. They might even produce a rotten trigger pull. Realizing this, the folks from Brownells have come up with an adjustable engagement jig that can position hammer and sear pins exactly to where their holes are located on the frame with which you're working.

Regardless of whether you use external pins in existing holes or the adjustable jig just mentioned, coat the hammer/sear mating surfaces with a black permanent marker or Dykem blue, and hand function the two parts. Perfect contact and escape, meaning identical, at both of the hammers' sear-engagement hooks means you've made a mar-

riage. Install the parts and check the pull. It ought to be under 4 pounds and feel smooth with no creep.

But this is still not good enough for Both must be prepped and honed, but to avoid hammer follow, the hooks should not be taken down below .018 inches. those highly competitive, highly experienced target shooters. Finishing the Job You should have been using some magnification right along to check engagement, release, and the 90-degree angles. If not, equip yourself with at least 10-power magnification from here on out. An Optivisor would work and so would a jeweler's or engraver's loupe.

Why emphasize the need for magnification? Let's do some math. A meter is 39.7 inches. A millimeter is one thousandth of that. A micron is one millionth of a meter. The particles in cigarette smoke equal 5 microns. The particle size of the honing grit you'll be using to finally polish off the trigger job you thought you'd finished is 3 microns. Before starting to hone, prepare a "mini clean room" in your working area. Clear off and clean up an area on A B

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One part in the Wilson set is dedicated to M1911 hammers; the other to their sears. The Series I handles both. your bench. It has to be large enough so you can work without creating dust or allowing any extraneous grit to contact the honing papers you'll be using. Wash your hands, wash the Powers hammer/sear stoning fixture with denatured alcohol, and do the same to the parts themselves. Finally cover your work area with an old bed sheet. No, I don't get a cut.

But here, as often in the past, I recommend the Powers Series 1 fixture (from Brownells). Unless I missed it, though, this extremely fine product for precision honing wasn't in their latest catalog. I've called that omission to our friends from Iowa. The product was developed by Bill Laughridge of Cylinder & Slide, Inc. His Micro Lap Honing System comes with 6 different grits of honing paper. The finest grit measures a minuscule 3 microns, but you'll be using all the grits one at a time.

Grits are numbered on the adhesive backing of each paper, with #1 being the coarsest. (Actually, this is as fine or finer than the surface of crocus cloth, which was my old reliable standby for final polishing before turning up the system. Included with the six 8-1/2- by 11inch papers are two steel honing bars. One is 1/2 x 1/2 x 6 inches exactly. The other is exactly 1/2 x 1/2 x 2 1/2 inches. Wash them both with the alcohol.

Starting with the #1 grit, use an X-Acto knife and a straightedge to cut a 1/2-inch-wide strip across the shorter dimension of the paper. Peel off the backing and press the strip accurately onto the long bar. You should have a 1/2- x 2-1/2-inch strip remaining. Press it with equal accuracy onto the short bar. The long bar will be used to hone the sear; the short bar to hone the hammer hooks. With a permanent marker, identify the number of the grit on the backing you have removed.

You'll be able to reapply the backing to a strip after you've finished with it. I've found I can get two uses from each strip, but instructions must be faithfully followed. Be patient! There are no shortcuts to be discovered here. And don't press down on the steel bars as you hone, or you might strip off the grit and wreck the paper before it has done its job. Pour a couple of ounces of distilled water in a clean cup or alcoholwashed cereal bowl. Wet your finger in the water and wet the paper on the honing bar.

After every hundred strokes, wet and wipe off the honing paper with tissue paper that has been dipped in the distilled water. This rids the grit of any residue. When you're through with one paper, wash your hands, dump out the contaminated water and replace it with fresh water before moving on to the next grit.

The honing motion in every case differs from the stoning motion, and you still must use the alcohol-washed .018 gauge or its equivalent. (The gauge and the fixture should be cleaned with the alcohol between each grit.) To hone, move the bar in a figure-8 pattern. After every hundred figure-8s, wipe off the sear or hammer with alcohol, and check your progress under magnification. If you see any marks remaining from the preceding grit, wash with water and keep using the current grit paper until they disappear.

Then it's okay to move on to the next finer grit. When you reach the final two grits, it will be almost impossible to see any marks without a very strong incandescent light to assist your magnified inspection. By the time you're done, you'll have racked up 1,000 back and forth stoning strokes plus 1000 figure-8 honing strokes and considerable time spent doing it.

You'll need a heck of a lot more than 10X magnification to find even a slight scuff on hammer/ sear engagement surfaces and you'll probably have the trigger pull down around 2 pounds with no hammer follow. Of course, stoning fixtures and the honing kit can be used to put a precision finish on any trigger job. By doing so, you'll begin to understand why some custom-built M1911 pistols go for upwards of \$3,000. I

PEOPLE & COMPANIES

Converting Remington Safeties To Left-Hand Operation

Left-handed shooters receive very little attention from firearms manufacturers, it seems. With the following methods, many of the safeties on Remington firearms can be converted to help the lefties out.

BY DENNIS A. WOOD SEPTEMBER 2005

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Many lefties have little choice but to use a right-handed gun, and are forced to fumble with a safety made for the other 90 percent of the population. If, however, the left-handed owner of a Remington firearm asks if you can convert his safety, your answer, in many cases, should be an emphatic "yes." This conversion can be done with nothing more than a drill press and some careful work with a file or rotary tool.

The left-hand safety conversion detailed here will cover the trigger plates for numerous shotguns and rifles. The shotguns include the Model 870, 878, SPT-58, 1100, and 11-48. The rifles that can be converted include the Model 740, 742, 7400, 4, 760, 76, 7600, and

6. In addition, the rimfire rifle Models 552 and 572 can also be converted to a left-handed safety in a similar manner.

Removing the Trigger Assembly For the abovementioned firearms, there are two retaining pins that retain the trigger assembly in the receiver. These pins are pushed out of place quite easily. Once you have the trigger group free of the receiver, we need to remove the safety and its components. Place a piece of tape over the entrance hole in the top rear tang of the triggerguard before you drift out the safety-spring retaining pin with a 3/32-inch punch.

This will contain the spring and keep it from launching up and out of the trigger plate. With the retaining pin removed, the safety

spring and detent ball can then be removed. Once those parts have been taken out, the safety itself can be removed. Plugging the Hole At this point, we need to plug the hole that captures the safety spring and safety-detent ball. This hole will run from about .140 to .145 inch in diameter. An aluminum plug should be made up to fit this hole as closely as possible.

If you have access to a metalturning lathe, it's a simple matter to turn an aluminum plug .142 inch in diameter and around one inch long. I've made aluminum plugs out of .187inch (3/16) aluminum rod, broken .22-caliber aluminum cleaning rods, #10-32 aluminum threaded rod, #10-32 aluminum bolts, and even alumi-

CONVERTING REMINGTON SAFETIES TO LEFT-HAND OPERATION CONTINUED

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num nails that are used for cedar shingles. They all work equally well. If you don't have access to a metal lathe, the needed diameter can be achieved using your drill-press chuck and a smooth-cut file. Working very carefully, check your progress often with a micrometer and make sure you are wearing eye protection. Once you've made the safety-spring hole plug, check it for fit and make sure it protrudes a little bit at the top of the trigger-plate tang and into the safety hole.

When the fit is right, it will need to be installed permanently into the trigger plate. I've used either Loctite 277 (high-strength, permanent) or Acra-weld epoxy to bond this plug; both will work equally well. Allow the bond to set up for a couple of days. After the plug is permanently affixed to the trigger plate and the bond has set up, we need to clear out the safety and safety-spring retain-

ing-pin holes. I made up an aluminum plate that will hold the trigger plate flat or upright for the next couple of steps.

This fixture is nothing more than a 3- 1/2 inch-high by 2-1/2-inch-wide aluminum plate, 3/4-inch thick that has had a 1/4-28 hole tapped through it at the upper right-hand corner. In use, the trigger plate has a 1/4-28 bolt going through the rear trigger-assembly pin hole that secures it into the receiver. It's very important to maintain perpendicularity of the triggerplate to your drill press chuck while the safety and safety-spring retainingpin holes are opened up.

The safety-spring retaining-pinhole will need to be opened up using a #37 (.104) drill. The hole in the trigger plate through which the safety fits will require that a four-flute 11/32-inch-diameter end mill with a 3/8-inch shank be used. The end mill has a flat bottom face and will cut straight down. If an 11/32-inch

drill bit is used, there is the chance that the drill will wallow out the sides of the safety hole and cause a sloppy fit.

Therefore, the use of the end mill is preferred, as the four flutes stabilize much better in the hole. Drilling the New Hole We now have the original safety-spring and detent-ball hole plugged, and the safety-spring retaining-pin hole and safety hole opened up to where they were before we glued the plug in place. The next step will be to drill anew hole into the top rear tang of the trigger plate so the safety will work for our left-handed customer.

From the very outside edge of the trigger plate, we need to measure from that outside edge to the right 13/32 inch and scribe a short line. Next, measure 1/8 inch back from the shelf rear face, exactly in front of where we plugged the old safety-spring hole (continued on page 21)

and scribe another small line. These two lines should intersect at the spot where we need to drill the new hole for the safety spring. Using a sharp center punch, dimple a spot where these two lines intersect. To prevent drill-walking, I prefer to use a center drill to get this hole started. If you've made a holding fixture as describe above for the triggerplate, now would be the time to secure the trigger plate on it.

Alternatively, you could use a drill-press vise just as long as the jaws are protected with either strips of leather or plastic and the trigger-guard bow has been taped up to prevent damage. With a small level, get the top face of the rear tang of the trigger plate as level as possible. Spot the intersect point that has been dimpled with your center drill. Remove the center drill and replace it with either a 9/64 (.1406) or #28 (.1405) drill.

Feed this drill into the spotted hole and down until this drill goes through to the center of the safety hole and then quit. Clean up the triggerplate of any aluminum chips from the drilling, and reassemble the trigger plate. This time, however, you can insert the safety into the left side of the trigger plate. Conclusions This is not a difficult job to pull off, once the plug has been bonded into place. It can be done quickly and safely if you take your time and make your measurements accurately.

And your friends and customers of the southpaw persuasion will no doubt be impressed and pleased. I

SHOTGUNS

Problem Solving with “Slip-of-the-Step” Ejectors

Precise shaping and accurate heat treatment of the levers is essential for reliable functioning with this type of ejector.

BY SERGEY LYALKO SEPTEMBER 2005

ORIGINAL PP. 14-16

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Recently, a beautiful high-grade shotgun, made by W. W. Greener around 1910, came into my shop. The shotgun was without any means of extracting the used shells; neither the ejectors nor the extractors worked. You can see in the photo below that the gun is opened, but the used shells are still unmoved from the chambers. Disassembly showed clear evidence of a previous attempt to repair these ejectors. Obviously, this attempt was not successful; and in addition, it left the extractors completely disabled.

I believe it was done without a clear understanding of the principles behind this device. This article is about Greener's ejector and its repair. W. W. Greener used several types of ejectors on his double shotguns, but this one is quite special since it is a direct descendant of the first successful ejector design on the side-byside shotgun patented in 1874 by Joseph Needham.

Interestingly, it was Needham's idea to split the extractor in two halves to implement selective functionality of the ejector, which

means that only the used shell is thrown out of the chamber. Needham's design was based on the “slip-of-the-step” principle. This principle in turn stemmed from the early single-shot-rifle ejector designs.

Several years before Needham's patent, such rifles as the Peabody, Martini-Henry, and many others with a falling block used a simple ejector activated by the block's downward motion during the breech opening. If you look closely at the hinge-pivoted falling block, it is somewhat similar to the hinge-pivoted barrels on the shotgun. Needham noticed this similarity and applied it to each barrel as if it was two rifles put together.

He also connected his ejector with the mainsprings of the locks, so that the energy of the springs might be used for striking the ejector arms. Compression of the springs and the strike of the ejector arms happens in one cycle of the barrels opening. In 1884, Greener borrowed the idea and slightly modified Needham's design, slimming it down. The real beauty of his mech-

anism is in its extreme compactness. It's even hard to find any indication of ejectors on the gun.

Figure 1 shows all three parts of the gun where you would normally expect to see components of the ejector mechanism. None of them are present on the Greener gun. There are no rods protruding through the action or ejector hammers in the forend. The only visible parts that participate in ejecting, beside the ejector arms, are the hinged block (1) on the barrel lump and a pair of two small ejector levers (3). There are two invisible parts, however.

These are extensions of the hammers, identified as #6 in Figure 2, along with other parts. (The numbers of parts in the photo, Figure 1, correspond to the numbers in the schematic drawing, Figure 2, for easier reference. These W. Greener shotgun came into the author's shop with non-functioning ejectors and extractors.

PROBLEM SOLVING WITH "SLIP-OF-THE-STEP" EJECTORS CONTINUED

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Here we see the forend, action, and barrels of the Greener shotgun. At the bottom of the photo, note the hinged step block (1), the slip step (2), the toes of the ejector levers (3), the cocking tooth (4), and the ejector arms (5). Hammer extensions are the parts that actually slip off the step. I call the block (1) a "step block" to be consistent with the name of the whole principle, slip-of-the-step.

When the barrels open, the hammer extension (6) slips from the step (2) and hits the ejector-lever toe (3), which moves the opposite shoulder of the lever toward the ejector arm and strikes it. After that, the hammer extension stops at the cocking tooth (4). It will not be raised until the hammer is put on full cock at the last stage of the barrels' opening.

Note that if the lock has not been used, and the hammer is still cocked, then no ejection will take place, since the hammer extension will be fixed above the slip step. One other interesting feature of this type of ejector is that it does not need resynchronization. Resynchronization is a major problem on double-gun ejectors, with symptoms varying from simple uneven shell striking to complete ejector malfunction.

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This issue would require a separate discussion, but the point I am trying to make here is that slip-of-the-step ejectors cannot suffer from resynchronization, since the timing of strike is totally predefined by the position of the step. The interesting question now is: Why didn't the ejectors work on this Greener despite the presence of both ejector levers in place?

As you can see in Figures 1 and 2, only the short toe This drawing illustrates the principle of the Greener ejector and its parts: step block (1), slip step (2), ejector lever toe (3), cocking tooth (4), ejector arms (5), hammer extension (6), ejector lever (7), and extractor rode (8). of the ejector lever accepts the strike of the hammer extension. This toe, as well as the whole ejector lever, must be hardened to a spring condition.

Such hardness will withstand stresses and bending forces developed by the hammer-extension strike. A much harder lever would crack, and a softer one would wear out quickly. The toes on both levers were absent, which makes me think that during a previous repair the levers were either annealed or not heat-treated at all. The solution in this case was to make new levers, and to pay close attention to proper hardening.

PROBLEM SOLVING WITH "SLIP-OF-THE-STEP" EJECTORS CONTINUED

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The old ejector levers (2) were replaced with new levers (1) made of Starrett oil-hardening steel. The floor plate is opened for adjustment of the new ejector levers. The toe of the ejector lever is marked number 1; number 2 is the bottom of the step block. Figure 3 shows the new and old ejector levers. The new ones are made with Starrett oil-hardening steel. First they have to be made with excess material in the toe area, because the toes have to be precisely shaped.

They have to be large enough to effectively transfer the strike of the hammer extension to the ejector arms, and they have to be small enough to move freely under those extensions during closing of the barrels. This shaping can only be done by gradual adjustment to the lever, with fitting tested on the receiver. Taking into account that the actual engagement of the levers with the hammer extensions is taking place inside the action, observation is somewhat problematic.

The solution is to take the floor plate off the action and observe the fit of the parts through the bottom of the action (see Figure 4.) As I mentioned before, the critically im-

portant part of this fix is to properly harden the ejector levers. The goal should be to reach a hardness that will be sufficient for withstanding stress and wear, but avoid brittleness. I chose to temper the levers to the hardness of a good V-spring.

The reason is that every strike bends the lever around its hinge, as shown in Fig- This photo shows the position of the ejector rod between the forend hook and the ejector lever. usually even shorter than on guns without ejectors. It's easy to understand why. The ejector arms should have enough travel for acceleration of an empty shell to make it fly away. If the extractor advanced the ejector arms much further, they would not have enough of this travel.

Almost all side-by-side guns use the forend extractor hook (see Figure 1) for moving the ejector during opening of the barrels. On this particular gun, one more part was needed to transfer this move from the extractor hook to the ejector arms. It is the small rod (1) shown in Figure 5. Since the rod was missing, I had to make one, keeping in mind

that it must be prevented from sliding in place when the gun is without the forend, to provide for an easy forend reinstallation.

For this reason, I milled out two slots; one for the forend hook and one for the upper parts of the ejector levers as shown in Figure 5. The front slot allows direct pushing of the ejector arms instead of pushing the ejector levers, which is more efficient from a mechanical standpoint. The repair of the Greener's ejector was not difficult, but required careful attention during the shaping and heat treatment of the ejector levers.

There is no need for resynchronization after this fix, as other ejector types would require. That's because synchronization is provided once and forever during manufacturing by the positioning step on the step block. ure 2. As a result, the area of the lever around the hinge hole is the most vulnerable to cracking. So what about the extractors? They should move the shells on each opening of the gun, no matter if it is fired or not.

Normally, the shells would be moved out of the chambers just a bit, enough to handle them. On guns with ejectors, this move is I

MAINTENANCE & REPAIR

Thoughts on Working The Walther P1/P38

Many of our modern semi-automatic pistols have features first seen on these older Walthers. Understanding them will help to put you ahead of the handguns learning curve.

BY ROBERT K. CAMPBELL SEPTEMBER 2005

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Recently, a once uncommon handgun has begun showing up at shooting ranges and on work benches in the U. S. The Walther P38 was introduced in 1938 to replace the aging and complicated P08 Luger. The P38 features a doubleaction first-shot trigger and a decocker/safety that was sensational in its day. There was simply nothing like it at the time. A hard look at the P38 reveals that quite a few modern handguns are very similar in operation to the P38.

Soon after the 1948 military trials in which the P38 was pitted against our own M1911, Smith & Wesson introduced a single-column-magazine, double-action first-shot pistol of its own, the S&W Model 39. The Beretta Model 92 maintains the Walther's oscillating-wedge lockup, first seen on the Mauser 1896, as well as an external drawbar. And while not identical, the rear sight and firing-pin lock on the Ruger P-Series are similar to that used on the P38.

Overall, the P38 is one of the most influential pistols in design history. While others may simply shrug, the trained gunsmith realizes that the current U. S. service pistol is essentially a highly developed P38. The P1 is simply a post-war P38 with slight changes, including a "Duraluminum" frame. The P1 has been manufactured much more recently; my personal example is a 1979 production variant. These pistols have been imported in considerable number by Century International Arms.

They give the sport shooter a chance to own a Walther P38 variant at a reasonable price. Most are in good condition, but some are older than others and will have problems on firing. The most common problem is weak springs. Nine-millimeter service ammunition is plenty hot, and the dual springs contained in the slide rails can wear. The loaded-chamber indicator pin can also give problems on occasion.

On the whole, these are good reliable handguns'm y example has never stuttered'but there is always room for improvement. Among the best features of the P38 is the straight-line feed. The bullet practically jumps from the magazine to the chamber, rather than bouncing off the feed ramp. As a result, the pistol feeds modern hollowpoint ammo flawlessly. In my experience, the Walther is a bit more difficult to reassemble than some manuals suggest.

The P1 pistols are of tight tolerances, which is good for accuracy, but they are often difficult to get back together in comparison to well-worn wartime pistols. The following report focuses on replacing the springs with WC Wolff units and also covers common problems. The Quite a few modern pistols owe much to the P38 design.

THOUGHTS ON WORKING THE WALTHER P1/P38 CONTINUED

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need to replace the firing pin, for example, is relatively routine. Disassembly and Inspection When looking at the P38, there are several areas of concern. The first is the locking block or “loading block” as it is often called. This wedge design can become worn. The Beretta 92 uses the same design; however, the P38type design was updated to a block with rounded edges in modern Beretta 92 production in order to reduce the chances of cracking of the loading block.

Be certain the loading block and pin are actually in place before firing the handgun. The Walther can be fired without the block in place, just as many pistols can be fired without the recoil spring in place. This would not result in a separation of the slide or frame, but could result in major damage. Another area of concern is the locking stem that locks the firing pin when the P38 is decocked. When the P38 is decocked, the hammer falls on the firing pin.

This is safe because the firing pin is locked in place to the rear, and the design is an inertia type. There have been reports of discharges during decocking and I have examined one Walther P38 in new condition with a missing pin. The missing pin was certainly due to an error in reassembly, but this is a problem that the gunsmith should keep an eye out for. I think that when working with a P38 or P1 most of us will be surprised at how “modern” the pistol really is.

Tactically, other than the magazine capacity, there is nothing the Beretta 92 can do that the P38 cannot. And the P38 has one significant advantage; its safety lever is longer and easier to manipulate than the Beretta. The P38 has among the very few such levers that

is genuinely easy to operate quickly. This cannot be said of the slide-mounted safety of most other modern double-action semiautos. Disassembly of the P38 is relatively simple. First, when working with any handgun, be certain the pistol is unloaded.

Place the pistol on “safe,” clear the chamber, and lock the slide to the rear. Remove the magazine and set it aside. The takedown lever is located at the front of the slide; rotate it down and fully forward. Hold the slide carefully, remembering it is under spring pressure, and move the slide lock downward to unlock and release the slide. Next, remove the barrel. The slide must be turned upside-down. The button that protrudes from the loading block should be pushed forward.

Now, you can move the barrel toward the end of the short slide. We’re getting ahead of the game, but let’s discuss reassembly after inspection or any work is performed. First, when the barrel is returned to the slide, the loading block is raised a bit to fit into the slide. Also, when the slide is fitted to the frame, the ejector, found just to the right of the slide, must be depressed from the upward position to allow the slide to turn onto the frame. Familiarize yourself with these parts upon disassembly.

To inspect the firing pin and the indicator pin, the cover on the top of the slide must be removed. This is a true dust cover that is fairly simple to remove.

I should mention that the only P38 I have seen damaged and it worked fine after reassembly was a wartime version that had this cover separate from the gun and sail

over the shooter’s head. (He was using extra-hot handloads that developed excessive pressure and momentum.) To remove the cover, be careful that you don’t allow the rear sight to fallout of its notch and become lost. Move the screwdriver blade up from the bottom of the slide and contact the dust cover from beneath.

The firingpin indicator pin is pressed to the rear with the screwdriver tip. With the indicator pin pressed to the rear, you can now push upward and remove the dust cover from the slide. The firing-pin lock spring and the lock itself can now be seen. Depending upon the action you are performing, you can leave the rear sight in place or remove it. When the rear sight is removed, the firing-pin lock is exposed. The lock and spring are simply lifted out of the top of the slide.

The firing-pin retainer is then pried out gently and the firing pin can be removed. The safety must be in the off or “fire” position to remove the firing pin. The firing pin is removed from the rear of the slide, but the firing-pin spring is in the top of the slide. Be careful with the firing-pin spring; a replacement is not offered by WC Wolff. The firing-pin spring doesn’t seem to give much trouble, however.

With the firing-pin lock spring and lock removed, as well as the indicator pin and spring and the firing pin, you can move to the safety catch. The catch is moved to the spot between fire and safe for removal. The force needed is between sliding and prying, with the emphasis on prying with a screwdriver, but it is not difficult. I always check this part for burrs and

THOUGHTS ON WORKING THE WALTHER P1/P38 CONTINUED

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While disassembly is straightforward, care should be taken not to bend or warp the bar. eccentric wear. For smoother operation, the safety can be carefully stoned at this juncture, taking care to smooth the part and not remove metal. I've gotten good results from stoning the Walther PPK's safety. In the case of the P38, the larger pistol has larger parts and more leverage, and is usually not as stiff as the smaller pistol. To disassemble the trigger or firing mechanism, pressure on the hammer must be relieved.

The grips are first removed. The removal of the hammer spring can be a little tricky. Press the magazine catch against the edge of a solid bench. The pivot pin of the magazine catch should move clear of the frame. You can then ease off pressure and remove the magazine release and the hammer spring. Working with the action is fairly simple as far as the replacement of the springs goes, but I usually

find few surfaces that will benefit from a ston- This is the proper position for reassembly. ing.

To take the action down, first detach the rear of the trigger drawbar spring from the stud in the frame. Then, remove the rear of the spring from the stud that protrudes slightly from the frame. Next the trigger spring is addressed. The trigger spring rides on the trigger-bar pivot by its rear loop; take the trigger spring loose from the bar pivot and pull the trigger drawbar out to the right at the forwardmost part of the bar. The rear of the drawbar is formed into a small hook that notches into the sear.

Pull it away from the sear and the drawbar can be removed from the frame. The sear and slide latch share a spring. The spring catches into a groove in the top of the sear, and is secured by a stud on the frame. Pull the spring to the rear and it will come off the depression

in the slide stop that anchors it to the stop. The slide lock is now free to be removed from the frame. The slide lock traps the trigger in the frame; with the slide lock removed the trigger can now be lifted from the frame.

Be careful to keep the trigger, trigger spring, and trigger-spring bushing together. The trigger-spring bushing can be pressed out to free the trigger spring. At the very rear of the frame is the hammer pivot, a stud in the frame at the approximate place the web of the hand rides on firing. Press this pivot out from right to left with an appropriate punch. Pressure needed is small, though it won't come out if pressure is present from the hammer spring. The hammer is now free to be removed from the top of the frame.

The firingpin lock lever and hammer dropping lever can be removed if you wish, but this step is not necessary for simple

THOUGHTS ON WORKING THE WALTHER P1/P38 CONTINUED

ORIGINAL PAGE 21

spring replacement and polish work. The sear is removed by aligning the sear with the witness hole in the frame. As for polishing the trigger and hammer, the design does not lend itself well to such work. By polishing the hammer, the trigger can be made somewhat smoother, but these pistols are noted for a heavy double-action trigger, and I've found little can be done to address that issue. The singleaction press is usually good, in the 6pound range, but the design does not respond well to polishing.

A wellworn safety lever can be polished to attain better action, and parts showing eccentric wear can be stoned, but otherwise there is little to be gained by action polishing. Although the P38 is quite reliable in all respects, replacing the springs is nevertheless worthwhile. The recoil springs are unusual in that they are dual units riding in the frame instead of under the slide. The springs are easily removed.

Again, using the Chapman tool kit with a small tip, I insert the blade six coils or so from the front of the recoil-spring guide. Compress the recoil-spring guide as much as possible and then remove it. The process is repeated for each side. The springs I use are WC Wolff, Service Pak 1 for the P38, which contains two recoil springs, a hammer spring, extractor spring, auto-firing-pin spring, retainer-latch plunger spring, and a cartridge-indicator spring. A firingpin spring is not available.

The stock number is 69491. Spring kit #69492 adds a 5-percent extra-power magazine spring. Reassembly Tips When reassembling the P1, I've experienced some difficulty in replacing the top cover, despite following the manual's instructions. After a few unsuccessful tries at depressing the loaded-chamber indicator pin while clamping the cover down, I had an idea. I have several STI Pro dummy rounds.

These are plastic, but appear to be nickel plated, and the bullet head is bright orange. (I suppose a spent case would work, but be very very careful and use only a spent case.) With the dummy round inserted in the chamber and the barrel pressed to the rear, the loaded-chamber indicator is pressed and the cover can be snapped on easily. A straightened paper clip works well to depress the spring plunger, allowing the safety lever to be replaced more easily.

The hammer must be lowered when the frame is returned, and remember to depress the ejector that is on the right side of the frame to allow the slide to return. I don't mind admitting it took awhile for me to become familiar with the P1/P38, and even now this is far from my favorite handgun to work on. But the P1 is a pleasant recreational plinker with many good traits, and many owners will want to replace aging springs with WC Wolff premium springs.

I have done this with so many handguns with such good results, it is SOP around my bench. I

MEASUREMENT & INSPECTION

Reader Forum

BY AMERICAN GUNSMITH EDITORS SEPTEMBER 2005

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Parts for 16-Gauge Stevens I am trying to locate information and parts for a J. Stevens Arms Company 16-gauge break-barrel shotgun. I have no idea what the model number is; it has been removed. The barrel has been shortened to an illegal length. I'm looking for new barrel, forearm, and stock to bring the shotgun back from the dead. You can see from the attached photos that the gun is in dire need of repair. I have done much searching and have not been able to come up with anything.

I would appreciate any help I can get in locating parts to get the gun back in working order again. Thank you. We can't get very far in looking for parts without a model number. We suggest you send photos of the gun to the NRA Museum (Waples Mill Rd., Fairfax, VA 22030)for help in identification. Once that information is in hand, call Brownells and ask for a free copy of their parts source list for obsolete/out-of-production firearms. Then start making phone calls.

A replacement barrel is something that will likely have to be manufactured. By the time you get finished with the project, the cost will probably far exceed that of anew shotgun that could safely swallow and discharge modern loads. Winchester Sight Removal

How does the rear sight come off of a Winchester Model .255? Thanks. According to what we see on schematics and parts drawings, the rear sight on the M255 drifts out unless the gun has been retrofitted with the rear sight from an M270.

These had a retaining screw that must be removed before drifting the sight from the barrel dovetail. Two Questions On the first question, I'm pretty sure I know what is wrong. The gun is an S&W Model 19-3. It's an original service-issued U. S. Marshall's service revolver that has seen a lot of service and was actually lost in a groundhog hole for several months. I have virtually rebuilt the entire gun for the owner, a retired deputy U. S. Marshall, however, it periodically experiences light hits on the primers.

I am positive the mainspring needs replacing, but I also think that there is an end-shake problem that needs addressing. I'm basing the end-shake diagnosis on two things'a slight movement of the cylinder after lockup and difficulty opening the cylinder (unless I physically hold the cylinder rearward and then push the thumbpiece forward). The next problem I have yet to see, but the owner tells me that his Marlin Old Model 60 is constantly breaking firing pins.

This is the first time I've ever heard of a rimfire breaking firing pins repeatedly. Any ideas? We think you're right about the end-shake and suggest you try and correct it with end-shake bearings (Brownells). We hope that's all you'll need to do, but the hard opening might be due to a bent crane or yoke. On the Model 60, does the customer do much dry firing? Is there a burr at the chamber entrance? Is the opening for the firing pin in the boltface clear?

The Model 60 has been around so long we doubt there has been an epidemic of broken pins or we'd have heard of it previously. If the just-mentioned possibilities don't seem to be the cause, before installing anew firing pin, harden it with Kase Nit. And that's only after making sure it's a factory replacement and not one from an aftermarket source that might use cheap metal to save a few pennies. Mauser 96? I just acquired a Mauser 96 straightpull rifle.

I'm looking for a schematic, breakdown instructions, and a source of parts. Someone tried to open the bolt by lifting up instead of pulling back, so the bolt is about 60 degrees off. Thanks. We believe what you have is a M95 Steyr-Mannlicher, not a Mauser. The

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NRA Museum tells us some of them were stamped "M96." We have no schematic or takedown data, but a sectional drawing can be found by directing your search engine to "Steyr- Mannlicher rifles." Then call Brownells to get a free copy of their parts source list for obsolete/out-of-production firearms. From there on, it's phone calls and more phone calls. Remington M11 Restoration I've been asked to restore a Remington Model 11 Sportsman in 16 gauge. The buttstock is broken into two pieces.

In checking the usual antique parts suppliers I've been able to find a 12gauge replacement stock, but nothing in 16. The gun is in good working condition and, for nostalgic reasons, the owner wants to hunt with it. Any suggestions would be appreciated. The receivers of the 12- and 16-gauge Model 11 Sportsman shotguns are the same size. Therefore, the 12-gauge stock you have located should fit your customer's gun. If any fitting at all is required, it should be minimal.

Browning 1900 Barrel Change I need to change a barrel on a Browning 1900 and was wondering how to go about doing it. Thanks in advance. The first thing you have to do is locate a replacement barrel in good condition. Otherwise, you'll have to have one made—an expensive proposition. Either way, the old barrel is screwed in and a schematic of the pistol shows no retaining pin. You'll need a receiver wrench with blank jaws you can conform to fit the receiver and a barrel vise. Both items are available from Brownells.

Before cranking on the gun, remove the grips and soak it in solvent oil for a couple of days. Dry it, secure the barrel in the

vise, and tighten the wrench on the receiver. The barrel should loosen counterclockwise. When installing the replacement, use "go" and "no-go" gauges in the proper caliber. When the breechbolt closes on the go gauge, the headspace is okay. If it closes on a no-go gauge, the headspace is excessive.

You can correct the condition in this case, if it exists, by adjusting the barrel-seating depth and then rechecking with the gauges. Once the headspace is acceptable, use the self-wicking type of Loktite to secure the barrel in place. Taurus PT111 Questions I would like info on the Taurus PT111. I heard the frame is prone to cracking. If it is, what's the correct method of repair or prevention? Also, what's the best way to lighten and smooth up the trigger pull? Could you e-mail a parts breakdown?

Thanks in advance for any help you can provide. In the February 2001 issue, we covered the PT111 in as much detail as possible. The article contains a schematic and parts list. (Reprints are available by calling AGA Customer Service: In its present configuration, the pistol employs an aluminum-alloy frame and a titanium slide. We've heard of no cracking occurring when factory ammo is the gun's steady diet, but no one can guarantee against cracks appearing with the repeated use of hot handloads.

The pistol is DA-only and striker fired when the trigger bar is disengaged from the striker by pulling the trigger. No sear or hammer is present and the frame can't be fully disassembled for reasons explained in the article. About all you can do is make certain there are no burrs on the trigger bar, polish the striker, and polish the striker tunnel in the slide. Remington

742A Malfunction The 742 I'm working on today has me flustered to the max. I've completely cleaned it, including using the appropriate drills to clean out the barrel orifice and nozzle, and it still will not complete the cocking of the hammer to fire the second round.

It shoots the first round, ejects the empty, closes on the next round, but will not fire it because the hammer is not cocked. What am I missing? Is there a book I need to get about troubleshooting this rifle? Is it possible that the magazine could be the problem? I've tried factory Winchester rounds and some surplus government ammo with the same results. The spent cases look quite normal. I've also read the Brownells Encyclopedia about the 740.

I thought maybe it was not closing on the new round due to the extractor, but when it does not fire on the second round, you can pull back on the operating handle and the round comes back with the bolt and the rim seems to be under the extractor where it belongs. A few suggestions from a Remington Field Service manual seem to be in order. The action is probably binding. This can be caused by a misaligned ejection-port cover. If so, replace the cover.

Or perhaps the action-bar spring is jamming the action-bar sleeve, and you'll have to replace the spring. The operating-handle pin maybe promoting magazine binding. The pin has to be assembled flush with the bottom surface of the bolt carrier. Also related to magazine binding is the action bar. It has to be closely fit to

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(continued from previous page) the receiver wall. In addition, you might have to install a lower number factory magazine latch so the mag rides lower in the rifle. The ejector may not be totally innocent and could be binding the breech bolt. In this case, replace the ejector and clean out the ejector hole. Now for the bad news: If the bolt is jamming in its receiver rails, you have a real problem. The receiver has to be replaced as it would have to be if the barrel and bolt carrier were out of alignment.

Winchester M74 Assembly I need help on reassembly of the Winchester Model 74 .22 LR semi-auto. I have the NRA article on disassembly and reassembly; but like most of these articles, it merely says "reassemble in reverse." This does not always suffice especially when the gun comes in in a sack. My question is: Does the bolt spring rod go into the bolt or the bolt stop? Also, how does one hold the two springs while trying to guide everything into its proper recess?

According to instructions that appear in the NRA Guide to Firearms Assembly, you install the plunger in the bolt stop with the slide spring in the access hole end of the plunger. Before installing the bolt-stop plunger pin, insert a drift in the plunger-access hole and compress the spring enough to clear the pin. The two springs you mention are housed in the rear of the bolt assembly. That's what you hold onto while joining it to the front bolt assembly (operating slide).

Trigger Spring Replacement I need to replace the trigger spring in my BT99 shotgun (old-style beavertail). Do you have an article that explains the disassembly/reassembly procedure for replacing the spring in the above shotgun? Position the trigger spring in its hole in the tang plate. Position the trigger after inspecting it for any damage, and then install the trigger pin. Marlin Model 39A Parts I have an old-style Marlin Model 39A that has a three-piece carrier-rocker assembly.

I need a carrier rocker for this assembly. I have had no luck finding one. Can I use newer parts to replace the old assembly? Have you done an article on this subject? Thanks. What you have in your shop is a Model 39A with a carrier, carrier rocker, and carrier spring. The carrier design in these rifles is considerably different than that of the later models, the newer having no cutout in the carrier itself. Therefore, a new-model carrier would have to be machined extensively to replace the one in your rifle.

Receiver modifications also loom. We suggest you contact Pennsylvania Gun Parts for the old-style parts. Rossi 851 Stainless Queries Someone brought me a Rossi Model 851 Stainless, 4-inch barrel, with one problem and one very important question. In the Blue Book, Edition 24, it states that this model is capable of withstanding 38+P. My question is: What about +P in the Mod 851 Stainless? I think I know the

answer. The 851 was imported beginning 2001, and the 851 Stainless was imported in 1985-98.

I therefore believe it is not a safe bet. The problem I mentioned is that the cylinder has come in contact with something that etched an area, producing a cosmetic eyesore. Is there anything that can be polished that I can use to fill in the spot? Thanks. The rifles and shotguns are brought in by Braztech. The handguns are under the wing of Taurus International and marketed under the Rossi brand. Sources at both those points of contact told us they believe that factory .38+P loads would be okay in the Stainless.

You're welcome and encouraged to call both outfits and confirm what we were told. We can't tell from the photo you attached, but the depth of the etching you mention doesn't appear to be overly deep. That being the case, you can probably polish it out while retaining the contour of the cylinder chamber without weakening its walls. If the etching is too deep for polishing, there is no "cold patch" for stainless steel but there are stainless-steel welding rods that can be employed with either TIG or gas techniques.

The resulting welds could then be polished to contour. If you're not set up for the job, a welding shop might take it on.

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