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EDITION

PRECISION ARMS WORKSHOP

AND THE AMERICAN GUNSMITH ARCHIVE

A TECHNICAL JOURNAL OF CRAFT, REPAIR & RESTORATION

04

ARCHIVE ISSUE NUMBER

INSIDE THE ARCHIVE

TAURUS 605 POLY PROTECTOR

GUN PLAY • BOND ARMS DERRINGERS • F-CLASS BIPOD BUILD • STIPPLING STEEL

ORIGINAL METHODS. MODERN ACCESS.

ARCHIVE EDITION 232

DIGITAL ARCHIVE EDITION

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METALWORKING

Gun Play

BY AMERICAN GUNSMITH EDITORS APRIL 2023

ORIGINAL PP. 2

One of my fellow marksmanship team members commenting on problems with military small arms training stated a large part of the issue is, “Soldiers are never allowed to play with guns.” “Play” in this context means opportunities for self-directed learning, not mere fooling around, what Herbert Mc Bride called “working out your own salvation.” One of the unspoken mistakes of gun control schemes is that such policies can cause the very problem they’re allegedly supposed to mitigate.

What people don’t know about firearms can hurt them. Data from the Centers for Disease Control and Prevention illustrates America statistically does not have a serious problem with guns on a per-capita basis, yet the issues to do occur can be aggravated by prohibition. Consider how the repressive gun laws of cities such as Chicago, Washington, and New York drive responsible gun use underground.

A shop owner who operates a bodega on the Lower East Side of New York City may keep a pistol hidden under the counter in case of a robbery but won’t take it to a range for practice due to being too poor and politically unconnected to obtain a required permit. Even if the storekeeper managed to get said license, taking the kids to a range to learn responsible firearm use is disallowed due to them not being old enough to apply for the same permit.

Gun Play An airgun is safe enough to shoot inside an apartment, yet New York City makes it illegal for supervised minors to touch one. The city thus closes off one

more avenue for children to be taught proper firearm use. One school in Wyoming offered an elective shooting course with air rifles in the gym and despite the generally positive response, the activity drew more than a few comments about school shootings. Better those kids remain uneducated, I guess.

Research suggests that the loss of these opportunities makes a difference. One study of 675 ninth and 10th graders in Rochester, New York found children who were taught about guns by their families were at no greater risk of becoming involved in crime, gangs, or drugs than children with no exposure to guns. But the children who were taught about guns by their peers were considerably more likely to be involved in various kinds of misbehavior, including gun crime.

A study in Australia yielded similar results: youngsters taught about guns by responsible authority figures did not commit gun crimes, even if they broke the law in other ways. Repressive gun laws are not merely ineffective, they actually foster misuse of firearms, including gun violence. By making firearm ownership illegal, or possible only for wealthy people with the clout to move through numerous bureaucratic obstacles, anti-gun laws render legitimate gun owners invisible.

Children are left with criminals and violent television characters as their only models of gun use. In cities where no child may shoot a BB gun with his parent, kids learn about firearms on the street if they learn about them at all.

PISTOLS

Taurus 605 Poly Protector

Working the Taurus 605 “Protector Poly” revolver.

BY MARK R. HOLLENSEN APRIL 2023

ORIGINAL PP. 3-8

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I gave the following article quite a bit of thought before writing it, but after getting a number of these in the shop completely disassembled and in baggies, I felt it might be a good idea to cover it. This revolver seems to be somewhat popular, mostly as a reasonably priced revolver chambered in 357 Magnum, and is well suited for self-defense. This revolver is unlike others in how it was manufactured, however.

It does have both single and double-action capabilities and a hammer that can be cocked which appeals to many revolver lovers. As far as durability, I cannot say as I have not seen any of the testing results or data that covers the strength or longevity of it after prolonged use. The revolver is described as a Taurus Model 605 Protector Poly model, and “Protector Poly” is etched on the top of the barrel shroud.

This particular model is not the same as the Taurus Model 605 revolver, so any instruction about how to disassemble that one won’t work with the Poly. It is a fiveshot revolver with a polymer frame and grip assembly that is actually a two-piece

unit. Unlike most revolvers that have aside plate, this one has two halves that must be separated to access the internal working parts.

This assembly is awkward and cumbersome to work with—although if you were assembling these all day long at a factory you would have shortcuts and tooling available to quickly speed up the entire process. However, most of us don’t get a steady diet of these coming into our shops so we’ll have to muddle through the process. As I mentioned, I have had a number of these appear in the shop; all were in for reassembly, or so they said.

I am not exactly sure why the owners of these revolvers feel the need or desire to disassemble them completely as none of the ones that came into my shop were dirty or dirty to the point that a full disassembly for deep cleaning was necessary. At this point, I can only assume that in these days of manufacturers making firearms that are more user friendly, easier to break down for routine cleaning, or made so that homeowners can buy after- This is in the early stage.

Note the two paper clip wires protruding from the grip area that were used to capture the hammer spring assembly and trigger return spring assembly before reassembly. Once the frame halves are reassembled and back in place, pull the two wires out while cocking the hammer and pulling the trigger rearwards to free the ends of the wires.

I suspect you will see these enter your shop but not in this form as owners tend to “see what is inside” and then what is inside eventually ends up on your bench in a plastic baggie along with missing parts. market parts and products for them and then “build” their own personal firearm, that the owners of these revolvers felt it was a good idea to take them all apart and see what was inside.

And, with any other firearm that gets taken apart by “my brother-in-law who couldn’t get it back together” all three had parts missing even though each customer swore and assured me that every part was in the baggie and accounted for. I guess they were standing

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Far When separating the two halves of the frame, this spring can become lost and has been known to jump out so go slow and watch for this spring in particular. The photo also shows a good view of the trigger return spring, pin, and swivel and where that assembly will go during reassembly. One of the two paper clip wires is holding the assembly together until full reassembly of the two halves. over their in-law when he took it apart and that is how they know all of the parts were there.

So far, and based on my experience with these revolvers, I suspect you will never get one in your shop with all of the parts accounted for, as some parts like to jump out from this particular revolver during disassembly and reassembly. Hey, it happens. The first one I took in for reassembly had two missing parts: the cylinder stop spring (8.10)

and cylinder stop plunger (8.9). So, I called Taurus to order in the parts needed, but ran into a snag. You see, Taurus will not sell them to gunsmiths (they say).

They claim that no matter what, the firearm has to go back to Taurus for service or repair. And not only that, Assembling this as a unit prior to installation will keep more hair on your head. In fact, it seems like it is the only way to reassemble this unit. The wires are fed down through the inside of the grip along the mainspring support. either. You also have to pay them, in advance, \$15 for a non-refundable inspection fee and \$35 to reassemble/repair it.

So you must pay them \$50 total, in advance, when shipping it back to them. This, to me, was out of the ordinary for Taurus and their touted lifetime warranty, as up till now, they had always had a really good product warran-

ty and repair service program. So, since I couldn't order in the parts needed (they would not sell them to me), the customer didn't have much choice but to go along with what we were being asked to do. I shipped the partially disassembled revolver back to Taurus and paid the \$50 fee up front.

Almost a year later and I still didn't have any timeline as to when the revolver will be, or even can be, repaired. Needless to say my customer isn't happy (this revolver is his only personal protection firearm) and I'm not so happy about this either. In the past, I really touted the products and services that Taurus had to offer.

Since that time, I have had a few more of these revolvers come in for reassembly and I let the customer know up front that they may never see it again if they are shipped to Taurus for repairs, reassembly, or

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Far The plunger has a coil spring behind it and presses against the bottom leg of the hand, effectively serving as the hand spring assembly. Keep a thumb or finger over the plunger during reassembly into the frame as a small slip will send the plunger into the “parts-never-to-be-found-again-land”. And if you lose apart, well, you are now stuck since you cannot order a replacement. Use the cylinder stop to compress the plunger and spring while inserting the cylinder stop screw back into the frame. parts.

This is mostly due to Taurus Customer Service letting me know that they will not sell me or other gunsmiths the parts, that their firearms must go back to the factory for repairs and reassembly, and that parts are now a whole other issue for Taurus. You see, they can’t (or just don’t) order in parts specifically. I was told by Taurus Customer Service that they simply cannot order parts one at a time and for any specific firearm.

I was told that they wait on their factory in Brazil to ship parts to the United States whenever or whatever they have at that time, and then whenever they decide to ship them to the Taurus USA. This is the main reason that the revolver sent to Taurus a year ago is not done yet: Taurus USA is still waiting for parts to just show up in the mail from Brazil since they cannot order them individually. I doubt I could stay in business this way.

As I mentioned at the beginning of this article, I had mixed emotions about writing this article, but I felt it was important for our gunsmithing brethren out there to know what they may run into if/ when one of these come in. More importantly, I felt it important to have a disassembly and reassembly document to go by when one of these show up in their shops in a baggie and fully disassembled.

Accordingly, I decided to write this as a disassembly/reassembly document in case you need to do both, so let’s get on with what we do for a living. The attached schematic and parts naming nomenclature came directly from the Taurus 605 Poly Owner’s Manual for reference. Disassembly We’ll begin by opening up the cylinder and checking to make sure that the revolver isn’t loaded by inspecting all chambers.

Once that is done, remove the (5) grip, or rubber stock they call it, by backing out and removing the single (5.2) rubber grip screw. Once out, you can pull the stock/grip downward and off from the (9.1) mainspring support. Now, remove the cylinder and yoke assembly (2) by backing out and removing the (2.13) cylinder retaining bushing.

You will find while unscrewing it that the screw head will not protrude past the end of the yoke, so you will need a magnet to extract this screw/bushing after the threads have released and while moving the cylin-

der yoke up and down to loosen it in the hole. Once out, the cylinder assembly can be pulled out from the left side of the frame and set aside.

I did not cover disassembly or reassembly of the cylinder unit as this is seldom found disassembled (in my case) and the accompanying schematic and parts list will actually help with that if so needed. Cock the hammer (3.1) and insert a small wire (I used a straightened paper clip) into the hole at the bottom of the mainspring center pin (3.8.1) and then lower the hammer as this will capture the hammer spring onto mainspring center pin and free up the hammer.

To remove the hammer, unscrew the (3.1.0) hammer pivot nut from the left side of the frame or grip (4), and then push the hammer pivot (3.9) out from left to right and lift the hammer straight up and out from the grip/frame. The schematic also shows the detailed parts of the hammer assembly (3) if needed. The use of along bent straight paper clip is important as you will find that when removing the grip (4) the wire will need to be threaded through the grip while separating the two halves.

Remove the (8.2) thumb piece screw and (8.1) thumb piece. You will notice that the front leading edge of the thumb piece has a lug on it and that fits into the slot cut in the frame just behind the recoil

TAURUS 605 POLY PROTECTOR CONTINUED

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shield during reassembly. Remove the two grip/frame screws (4.2 and 4.3) labeled as the 4.2 Grip Screw Upper and 4.3 Grip Screw Lower. Here you will need a security hex screwdriver bit to access the screw heads on the right side of the grip/ frame. Hold the revolver with the left side down while unscrewing and catch the two nuts (4.1) as they fall out. Then push out the two grip/ frame screws from left to right and set aside. At this point, nothing will or should fall out from the action.

You can now place the revolver inside of a large plastic (clear) baggie if you are concerned about parts flying out. The only one I found to jump out is the (8.7) bolt coil spring. Begin by working the grip/frame (4) downward and rearward to begin separating the grip from the (1) frame. Once the grip is moved rearward and down exposing the bolt coil spring (8.7), you can remove this small, yet long coil spring and set it aside.

Continue separating the two halves, and you'll find that you will have to pull the trigger fully rearward to work the grip over the trigger and free it from the frame. The grip doesn't retain any parts inside so everything else will be connected to the frame assembly at this point. You will have to slide the grip off and over the first paper clip wire used to capture the hammer spring assembly. You can remove the frame and grip from the plastic bag now if you used one.

You will see that the trigger return spring (6.5.2) and the trigger spring center pin (6.5.1) will come out easily, so set these two aside. When reassembled, these two parts are part of the trigger return assembly and are retained in the frame by a trigger spring swivel (6.5.3).

When you reassemble this assembly, place the spring over the trigger spring center pin and then use the trigger spring swivel to compress the spring until the hole in the rear of the trigger spring center pin is exposed,

then place another straightened paper clip into this hole to capture the assembly and hook it back onto the mainspring support (9.1). Make sure the trigger spring center pin is straight and not bent when reinstalling. You can push the trigger (6.1) forward now to remove the transfer bar (8.5).

Lift the transfer bar off of the left side of the trigger and work it out from and through the bottom of the frame. This also allows removal of the bolt (8.6) and bolt spring (8.7) although the bolt spring should already be out and was set aside during separation of the two halves procedures. The Far The plunger presses against the bottom hand leg or protruding pin when properly Far A dab of grease on the spring helps hold it in place during reassembly.

Wait until both halves are nearly back together before inserting this spring so it doesn't get lost. installed. The sights are pretty good for this revolver and are easy to pick up when sighting.

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1 Frame 1.1 Rear Sight 1.2 Yoke Screw Cap 1.3 Rear Sight Spring 1.4 Rear Sight Adj. Screw 2 Cylinder 5r 2.1 Cyl. Retaining Bushing 2.2 Cyl. Distance Bushing 2.3 Extractor 2.4 Center Pin 2.5 Center Pin Spring 2.6 Extractor Rod Collar 2.7 Extractor Spring Ring 2.8 Yoke 2.9 Yoke Locking Bolt 2.11 Yoke Housing 2.11 Yoke Pin Spring 2.12 Extractor Center Pin hand (6.4) will still be attached to the trigger (6.1) and is under spring tension by the hand spring pin (6.2) and hand spring (6.3).

Remove the trigger screw (8.11) from the right side of the frame and keep your 4.2 Grip Screw-Upper 4.3 Grip Screw-Lower 5 Rubber Stock 5.1 Grip Madallion 5.2 Rubber Grip Screw 6 Trigger Assembly 6.1 Trigger 6.2 Hand Spring Pin 6.3 Hand Spring 6.4 Hand 6.5 Trigger Spring Assy. 6.5.1 Trigger Spring Pin 6.5.2 Trigger Pin 6.5.3 Trigger Spring Swivel 7 Front Sight Assembly 7.1 Front Sight 7.2 Front Sight Insert 7.3 Front Sight Pin 2.13 Cylinder Yoke Axis 2.14 Yoke Plunger Spring 2.15 Yoke Plunger Guide 3 Hammer Ass'y 3.1 Hammer 3.2 Key Lock 3.3 Sear 3.4 Key Lock Ball 3.5 Sear Spring 3.6 Key Lock Spring 3.7 Key Lock Pin 3.8 Main Spring Assembly 3.8.1 Main Spring Center Pin

3.8.2 Main Spring 3.9 Hammer Pivot 3.1 Hammer Pivot Nut 4 Grip 4.1 Grip Screw Nut thumb over the back of the trigger to capture the hand spring pin and hand spring while pulling the trigger and hand assembly down and out from the frame.

Reinstall in reverse.

Taurus 605 Poly Protector (Specifications subject to change without notice) 8.1 Thumb Piece 8.2 Thumb Piece Screw 8.3 Firing Pin Spring 8.4 Firing Pin 8.5 Transfer Bar 8.6 Bolt 8.7 Bolt Spring 8.8 Cylinder Stop 8.9 Cylinder Stop Plunger 8.1 Cylinder Stop Spring 8.11 Trigger Screw 8.12 Cylinder Stop Screw 8.13 Firing Pin Bushing 8.14 Firing Pin 9 Hammer Support 9.1 Main Spring Support 9.2 Hammer Pivot Bushing Finally, remove the cylinder stop (8.8) cylinder stop plunger (8.9) and cylinder stop spring (8.10) by first unscrewing the cylinder stop screw (8.12).

Use your thumb to apply forward pressure on the cylinder stop while pulling the cylinder stop screw out as that will keep the cylinder stop spring and plunger from jumping out. To reinstall, insert the cylinder stop spring into the frame, then the plunger and hold forward pressure on the

cylinder stop while inserting the cylinder stop screw into the frame. This completes disassembly of the revolver. Reassembly Tips Reassemble the cylinder stop assembly and trigger/hand assembly back into the frame first.

Next, place the transfer bar back onto the trigger while holding the trigger fully forward and work the top of the transfer bar into the frame opening. Once in place, move the trigger rearward and this will keep the transfer bar in place in the frame. Move the transfer bar fully rearward so that you can insert the bolt (8.6) into the frame housing. Do NOT insert the bolt coil spring (8.7) yet.

Note, you will find that the schematic has labeled the bolt coil spring (8.7) with the same part number as the cylinder stop (8.7) but the cylinder stop should be (8.8). With the bolt in place and the transfer bar back up in the frame covering it, hook the trigger return spring assembly (the bushing, 6.5.3) back onto the mainspring support (9.1). Straighten the two paper clip wires holding the trigger return spring assembly and hammer spring assembly together and feed them into the grip (4) while working

TAURUS 605 POLY PROTECTOR CONTINUED

ORIGINAL PAGE 8

the grip (4) back onto the frame (1). Don't force it on as it will eventually find the correct path and will slide onto and over the mainspring support (9.1). Just make sure that the trigger is rearward and gets fed back into the trigger guard cut out for it in the grip, and work the grip upwards close to the frame. Once close, put a dab of grease on the bolt coil spring (8.7) and place it in the groove for it on the bolt. The accompanying photo shows this relationship.

This spring simply gets pressed into place while working the grip back onto the frame as there is no hole or other catch for it other than a flat inside of the grip on the left side. Watch inside the grip/hammer opening while pressing the two halves back together to make sure that the spring doesn't get caught in the frame during reassembly. Also watch the trigger return spring assembly as it needs to align with the rear of the trigger as much as possible while pressing the two halves back together.

Once everything is aligned and correct, press the two halves together and insert the two grip screws (4.2 upper and 4.3 lower) and install the grip screw nuts (4.1) and tighten up. Check now to make sure that the cylinder stop (8.8) moves under spring pressure up and down and that the trigger return spring assembly (pin) is resting in the detent for it at the back of the trigger.

If needed, you can use a small pin punch to move the end of the trigger return spring pin into the groove for it in the back of the trigger. If all good thus far, insert the hammer (3.1) down into the frame and align the hole in the hammer with the frame holes and then insert the hammer pivot (3.9) securing the hammer to the frame. Install the hammer pivot screw (3.10) on the left side of the frame and tighten.

Cock the hammer rearward and pull out the paper clip wire that was used to contain the hammer spring assembly. Then release

the hammer fully forward. You can now grab the other paper clip wire and pull it out from the frame as this will release the tension on the trigger return spring assembly. It helps to pull the trigger fully rearward when removing this paper clip wire.

At this point, the hammer should cock and stay cocked in single action, the trigger will release the hammer when pulled, and the double action will work as it should. If it doesn't, you'll need to go back in and correct that issue following the steps above. If working properly, go ahead and install the thumb piece (8.1) with the thumb piece screw (8.2) and tighten.

Now install the cylinder assembly by inserting the yoke into the frame slot for it and insert the yoke axis screw (2.13) in from the front of the frame and tighten. Close the cylinder and perform safety and function testing to make sure it is operating properly for both single and double action. If so, you can install the grip or stock (5) and then secure it with the rubber grip screw (5.2). This completes the reassembly.

Important note: If after reassembling the revolver the hammer will not lock fully rearward in single action or when pulling the trigger in double action the revolver will not fully operate (feels like the hammer or trigger is getting stuck) this will be due to the hammer spring strut, called the main spring center pin (3.8.1), being not far enough up into the hammer recess, allowing the main spring center pin to come into hard contact with the trigger spring swivel (6.5.3).

If this happens, cock the hammer rearward enough to insert the wire in the strut hole to relieve tension on the main spring center pin and spring assembly, move the hammer spring center pin upward all the way, and then cock the hammer and remove the wire. Basically it is possible to install the main spring center pin assembly too low into the back of the hammer and this causes the all stop of the hammer and trigger about half way back when testing.

My goal with this article was to provide you with a disassembly and reassembly firing order so that you won't have to send the disassembled revolver back to Taurus to reassemble. I also wanted to point out that if the revolver on your bench is missing apart, any part, you won't be able to purchase it from Taurus as they require the guns to be shipped back to them for repairs/reassembly for the \$50 fee.

And if it is missing apart, it could take years for it to finally show up in the mail at Taurus USA since they cannot specifically order individual parts from the Brazil factory. I also know this to be true as I have two part orders still open at Taurus USA since 2018 and those parts are still not in, nor are there any timelines available for them to arrive and then ship to me. It should be noted that Taurus USA Customer Support representatives are very friendly and they try to be helpful.

In the case of the revolver that has been with them for a year now, they offered the customer a chance to purchase another firearm at a reduced price rather than wait on the gun. However, the customer declined this offer as he didn't want to purchase another firearm, had already paid the \$50 fee for the one that is still not repaired, and was concerned that if the new firearm had an issue he would have to pay another \$50 fee and be back in the same position of waiting for a repair with absolutely no end in sight.

Just be aware of this as it is very frustrating. I know of many shops that are no longer accepting any Taurus products in for repairs now due to these very reasons. I, on the other hand, will at least try to get them repaired first before informing the customer of the issue of sending a firearm to Taurus USA for repair or reassembly. Hopefully this information will help you with your next repair. AG

FROM THE ARCHIVE

Bond Arms Derringers

An overview of functioning and a sight regulation how-to of Bond Arms derringers.

BY ROBERT K. CAMPBELL APRIL 2023

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Not long ago, a friend walked into the study with a Bond Arms derringer broke open and unloaded. WR is quite a fellow and I have learned quite a bit from him during the past fifty years or so. He has developed some arthritis in his hands. As he often reminds me, he lets me do things because of this slight impediment, otherwise he would do the work his damn self. He is a serious handgunner and does things the right way, old school, and handloads his own ammunition.

He has no use for small bores and tends to master a handgun for its own sake rather than any practical value. He had taken a liking to a derringer from Bond Arms, which is well made, reliable, and often serves as a back up arm in the back pocket. WR liked to keep his in a pocket when hiking with his granddaughter.

Since his Bond Arms is chambered in 45 ACP he did a little work to come up with a suitable defense load, settling on the 45 ACP Black Hills Honey Badger cartridge which seems suited to the derringer's short barrel. He also owns a six-inch 45 Colt bar-

rel and his 255 grain 750 feet per second handload for it gives good accuracy. WR had fired the Bond Arms derringer enough to come to the same conclusion I had: that little gun is far more accurate than I would have thought.

Aiming at a man-sized silhouette at 15 yards, he and I could aim for the Xring and fire two shots, consistently putting a hole three inches above and three inches below the point of aim. WR thought he would like to have the sights properly regulated, setting his derringer so at least one of the barrels hit to the point of aim. I groaned and asked him if he genuinely thought it was worth the effort and he looked as if I had suggested sitting an election out or turned down deer meat. Fair enough! So I began to study.

Study is always good before you take up a file and dig into a project. Lets look at some of the information I have found on the Bond Arms derringers. When cocking the hammer back you will see a separate piece of metal on the left hand side which is the hammer head. There is a cam that moves

the hammer head up and down each time the hammer is cocked. When you cock the hammer back, if the hammer head stays up this means that the top barrel will fire next.

If the hammer head drops this means the bottom barrel will fire next. The bottom barrel is lined up with the sights and the top barrel may tend to shoot slightly high. To compensate for the top barrel shooting high, aim slightly lower until you find the right position. You can pre-select the chamber you wish to fire by doing the following. First, swing the barrel away from the frame to the unload position and then unload the derringer.

Push the safety to the "on fire" position, depress the trigger, and push the hammer forward onto the firing pins. Look at the breech face where the firing pin protrudes and see which firing pin is visible. If you see the top firing pin, you will know that the next time the hammer is cocked the bottom chamber will fire. Most of the skilled shooters that use Bond Arms derringers set the Far

BOND ARMS DERRINGERS CONTINUED

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pistol to shoot the bottom chamber first. By selecting the bottom chamber first, the pistol recoils straight back with practically no muzzle flip allowing a faster recovery time for the second shot. Okay, having gotten those facts down pat and taking the project to heart, we've learned how to fire the bottom barrel first every time. The problem was the bottom barrel as currently set up in this derringer hit three inches low at 15 yards.

This is very taxing on the shooter to aim accurately at this range and a stunt for me and harder for WR than he admits. At seven yards the variation is less, or course. I experimented a bit and carefully filed the front sight. The Bond Arms is stainless steel so this action did not require refinishing; file a

little The 45 Colt barrel is in place and the 45 ACP barrel is below the derringer. and then polish the sight is all that was needed.

I was surprised that the amount of metal needed to sight the lower barrel's point of impact at seven yards was simply a sliver. Be warned, go slow on this as a very little will go along way! So, I had the lower barrel sighted in with both the 2.5 inch 45 ACP barrel and the six-inch 45 Colt. Of course this threw the upper barrel's point of impact even higher but it is now a very predictable 3.5 inches high at seven yards. I experimented even more.

Using the 45 Colt barrel I used WR's hand-load of a 750 fps, .454 caliber 250 grain bullet from Matt's Bullets (Matts- Bullets.com, I

also used a supply of Blazer 200 grain JHP loads using the 200 grain Gold Dot bullet in the derringer's Far Range time is the most extensive part of the procedure. top chamber. While WR initially balked at using two loads, in the end I found that with the lighter bullet in the top barrel the difference in point of aim and impact at seven yards was only 2.25 inches.

That is as close as possible and I think it worked out well, if the result was worth the effort. WR claims he cannot remember Kentucky windage and holdover as well as he once did. Some of the work was with the notebook and pen but it was confirmed on the firing range. There are other concerns with the Bond Arms Derringer. As an example, the crossbolt safety may break

BOND ARMS DERRINGERS CONTINUED

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in dry fire with an unloaded chamber. Advise the customer not to dry fire with the safety on but use snap caps to cushion hammer fall. This isn't difficult, and I have seen Bond Arms derringers that have been dry fired with little apparent wear on the safety arm. Just the same, the manufacturer knows their guns so When pulling the Bond Arms trigger, pulling on the lower tip of the trigger results in a better trigger action.

A 1911 hammer spring cut down about 15 per cent in length works well as a replacement hammer spring but caution is advised to maintain reliability. Bond Arms derringers feature a true rebounding hammer and is safe to carry or store loaded. The crossbolt is referred to as an emergency measure. The question of barrel interchangeability has come up since Bond Arms introduced their new line of Rowdy derringers.

All barrels fit different models save for a It seems never to work loose during firing. follow their recommendations. line of California-only derringers with the California-legal guns not accepting .45/.410 barrels is the significant difference. The work with the Bond Arms derringer was interesting and made for good education in sight regulation. As for WR, I am still waiting for my check from him. AG

GRINDING

F-Class Bipod Build

Here's how I fabricated a bipod to improve long range accuracy in F-Class competition.

BY GLEN CALVERT APRIL 2023

ORIGINAL PP. 12-16

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Ve I been using a basic, run of the mill, bipod for many years. It has spring loaded legs that are adjustable for height along with rubber feet. It works okay on the bench or prone if the ground is level but it does not have an adjustment for cant and the legs aren't the most stable design. I wanted something that was more solid with greater height adjustment capability to use for long range shooting. I started researching bipods and found there are several types that vary in design and price.

Some are very pricey. Many raised the height of the bipod by moving the legs inward, narrowing the stance of the legs. These did not appeal to me; I liked the designs where the width of the legs stayed constant and the height was adjusted by extending the legs vertically. The more complex designs were intended for F-Class competition. I shot in F-Class a few times many years ago but did not have the rifle or experience to do so seriously.

After reviewing 75" aluminum plate used for the center sections of the bipod, the various models, I decided to design and build my own bipod based on the features in

some of the bipods that are available commercially. The design allows the rifle to be adjusted for cant and has a fine adjustment for elevation.

F-Class, sometimes referred to as "belly benchrest", originated in the 1990s and is named after Canadian shooter George Farquharson (the "F" in F-Class) who promoted a prone shooting match that almost everyone could handle regardless of physical capability. Using a front and rear rest to support the rifle instead of a tight sling made it less demanding physically as well. F-Class also allows magnifying optics to help aging eyes.

The NRA defines F-Class as "a modification of High Power prone shooting, not as a form of bench rest and should not be construed as such". So maybe don't refer to it as "belly benchrest" at a match. F-Class has two divisions, F-Open and F-TR (Target Rifle). F-Open is the most popular mainly because of the latitude in cartridges permissible, only limited to a maximum caliber of .35. The max weight of the rifle including scope and bipod is 10 kilograms/22 pounds.

An adjustable front rest (like that used in Benchrest competition) is permitted along with a rear bag. "Rail guns" and similar mechanical means to return to the precise point of aim are not permitted. The F-TR division is limited to just two cartridges, being unmodified 223 Remington and unmodified 308 Winchester much like Palma competition. The maximum rifle weight for F-TR is 8.25 kg/18 lbs. including the weight of the scope and bipod.

In F-TR only a bipod is allowed on the front and it must be attached to the rifle. A rear bag is permitted. NRA F-Class rules are included in the High Power Rule Book (Section 22) available for free download at Rulebooks.NRA.org. F-Class competition distances can range from 300 to 1000 yards but are most typically 800 to 1000 yards. The actual diameter of the target rings vary with distance as follows. The X-ring is 0.5 MOA diameter, the 10 ring is 1.0 MOA, the 9 ring is 2 MOA, etc.

AT 1000 YARDS THE XRING IS ONLY 5" IN DIAMETER,

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the 10 ring is 10", the 9 ring is 20", etc. The ring diameters are spelled out in the NRA rules. The F-Class competition initially started with the standard mid-range (MR) and long range (LR) targets with 1 MOA X-rings, 2 MOA 10-rings, however, these proved to be too easy for skilled marksmen and the ring diameters were reduced by half. These targets are referred to as MR- FC and LR-FC. Courses of fire are typically 10 to 20 rounds at each of three distances.

Bolt guns are used almost entirely but a few shooters use semi-autos. Bipod Build I decided that I wanted my bipod to attach to a section of Picatinny rail on the forend of the rifle as opposed to a sling swivel stud. I had a spare set of 1" diameter scope rings with quick release levers and thought that one would provide a simple means of installing the bipod on the rifle. The scope ring would

provide a pivot point for the bipod to allow the rifle to be canted to level it on uneven ground.

The quick attach lever solidly attaches the bipod to the bottom rail and allows it to be installed and removed easily. A short tube with a 1" outside diameter and 0.75" inside diameter is clamped in the scope ring and a 0.745" diameter rod fits snugly inside the tube. The rod is attached to the upper section of the bipod with a bolt that extends through it. A threaded knob and washer were installed at the rear of the rod and when tightened it prevents the tube from turning on the rod.

The rifle cant is adjusted with this feature. The aluminum rod had a nominal OD of 0.75" and a slight amount of material was removed to get it to fit inside the tube. It was tapped for the bolt that goes through it and was tightened against the upper section. During final assembly, a small amount of

Lubriplate grease was added to prevent galling. The upper section of the bipod has two steel rods that slide vertically in the lower section that's attached to the legs.

The steel rods maintain alignment of the two sections. The rods were made from 5/16" diameter shoulder bolts; the shank of each bolt is 2" long and has a ground surface. The actual diameter of the ground surface is 0.308". I cut the socket head off and cut a slot for a screwdriver blade. The bolts have a 1/4-20 thread on the other end and I tapped the holes in the bottom of the upper section for these threads. The upper and lower sections started as a 0.75" thick aluminum plate that was 6" wide and 4" tall.

The plate was cut across the width to give two sections that were each 2" Far Lower section with the elevation screw, sleeve, washer, and retaining screw installed.

F-CLASS BIPOD BUILD CONTINUED

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The 0.125" thick front section is not installed. The hole in the right end for the stud that retains the vertical leg was drilled and tapped in the part before it was bonded in place. tall. Before I cut the plate in half, I marked the locations for the guide rods and used a number 7 bit to drill the holes through the bottom section into the upper section so that the holes in the upper section could be tapped for the modified shoulder bolts. This ensured that the holes in both sections would be aligned.

After cutting the sections apart, I enlarged the holes in the lower section with a 19/64" drill and then honed them with a dowel and sandpaper until the guide rods would just slip into the holes. The alignment and hole diameters worked out well and provided a close tolerance fit so that the upper section did not wobble when elevated. The lower section contains a 5/16-18 thread bolt locat-

ed on the vertical center line that is used to raise the upper section and gives a 1" range of elevation adjustment.

I was concerned that threads tapped in the aluminum might wear with time, so I installed an internally threaded steel coupling with epoxy to prevent that problem. I cut a groove near the end of the bolt for a retaining ring that was captured by a steel sleeve that I installed in the upper section. For assembly, the bolt was installed into the lower section and through the upper section sleeve and the retaining ring installed on the bolt.

The end of the bolt, sleeve, and the retaining ring were slid into the upper section and the sleeve was retained by two small screws. All of this was needed to keep the upper and lower sections together, otherwise the top section would pull away from the lower section and leave the bottom section with the

legs on the ground when the rifle was picked up. Unfortunately, I could not cut the groove to the precise width needed for the retaining ring because of the bolt threads.

During a function check, the retaining ring deformed and pulled off the bolt. I got another bolt and drilled and tapped the end for a 6-32 screw and used it to retain a small washer that was slightly smaller than the OD of the sleeve. This proved to be a more robust design. A plastic knob was installed on the head of the bolt.

I decided to use 0.125x2x12" aluminum plate for the front and back of the horizontal leg and sandwich 0.5" thick rectangular bar stock between those plates to give a total thickness of 0.75" as opposed to hogging out a solid piece of 0.75" plate to reduce the cost and time in making the parts. I milled out most of the center of the 0.125"

F-CLASS BIPOD BUILD CONTINUED

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The new assembly weighs 0.80 pounds, while the initial design weighs 1.29. thick pieces and then cut out the remaining section with a hacksaw; otherwise, the part would have deformed due to the clamping force of the vise. Having a separate piece on the end of the horizontal leg made it easy to drill and tap the hole for the stud that retained the vertical leg. I bonded the pieces together with epoxy. The vertical leg is 1" channel, 6.5" long, with 0.125" wall thickness which gives an internal width of 0.75".

The rectangular bar stock had a nominal thickness of 0.50" and was 0.500" thick. The 0.125" plate actual thickness was 0.132". I milled the bar stock to 0.460" thickness so

the total assembled width was 0.724" so it would fit inside the vertical leg with enough clearance to slide freely. The vertical leg is slotted on the outside and has an adjustment range of 4".

The horizontal leg has a 1/4"-20 threaded stud that extends through the slot of the vertical leg and a threaded knob is tightened on the stud to lock the vertical leg into position. I made the foot on the vertical leg from 0.5x1.0" bar stock and attached it to the vertical leg with a 1/4-20 socket head bolt. After completing one leg assembly, I weighed it and found it was 1.29 lbs. Two leg assemblies would total too heavy. Back to the drawing board.

I made anew leg assembly using 0.375x2x12" plate for the horizontal leg and 0.625" square channel with 0.125" wall thickness for the vertical leg. I milled out two sections in the horizontal leg but left a rib in the middle for support so the piece wouldn't deflect during machining while clamped in the vise. I milled a Legs are attached to the lower section with three 1/4-20 bolts on each leg. The vertical legs may appear to be tilted slightly due to distortion in the photo.

The vertical legs may appear to be tilted slightly.

F-CLASS BIPOD BUILD CONTINUED

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few thousandths off the thickness of the horizontal leg so the vertical leg could slide smoothly. The vertical leg is slotted on the rear as the retaining stud is threaded into the rear face of the horizontal leg. Using the same foot design, the new overall assembly weighed 0.80 lb., which was much better and it looked more appropriately sized. The vertical legs are 7.5" long and have 5" of height adjustment compare to 4" on the initial design.

The horizontal legs are bolted to the lower center section and are tilted downward 100. This required machining the end of the legs and the center rib at 100 as well to be vertical. The overall width of the bipod is 23.5". The fully assembled bipod weighs 3.30 lbs. The target was 3.0 lbs. so I got close. The to-

tal cost The plate is from SWAG Offroad (SWAGoffroad.com) and accommodates several brands of band saws.

This saw uses 0.5" wide blades that are 0.025" thick. of material was \$100, including the aluminum pieces, bolts, knobs and other hardware. It does not include the cost of the aluminum for the initial leg design. To reduce the time and effort in cutting the various pieces, I purchased a portable band saw and a mounting plate that holds the band saw in a vertical position. The plate, from SWAG Offroad (SWAGoffroad.com), was clamped in my bench vise and has a foot switch to operate the saw.

The saw uses 0.5" wide, 0.025" thick blades and makes straight, smooth cuts. This setup is very solid and works well. The plate accommodates several makes and models of saws. Total cost for both was \$250 and was well worth it. At the Range I installed the bipod on my .308 rifle and set up prone on the 300 yard range. The vertical legs were adjusted to get the scope on the target and the cant and fine elevation were adjusted to get the rifle level and the reticle centered on the bullseye.

The bipod was very stable and the feet made it easy to get horizontally aligned with the target. The scope ring kept the bipod securely attached to the rifle. This was an interesting project that provided hours of fun using the various tools required to do the work. AG

METALWORKING

Stippling Steel

Getting a grip! Here's how to apply stippling to steel-frame pistols.

BY MIKE CRAMER APRIL 2023

ORIGINAL PP. 17-18

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Stippling refers to an art form that uses single points or dots to create an image rather than drawing a continuous line. A stippled drawing takes extreme patience and precision to produce and can have hundreds of thousands of individual dots. Translated to the firearms world, the use of soldering irons to melt the plastic in order to add texture to a handgun is also called stippling.

From basic grip panels of dots, stippling in the firearms world has evolved into its own world in and of itself, with true craftsman turning Glock or similar plastic-frame pistols into functional works of art. But what about steel-frame pistols? A soldering iron will barely scratch metal and surely does not get

hot enough to melt steel. Checkering has long been away to add grip texture to metal-frame pistols, is an art form in its own right, and certainly looks classy when done properly.

However, checkering is very tedious and requires specialized tooling and jigs unless you are surgically precise. In the words of Jedi Master Yoda, "There is another." Enter the Foredom H.15 Hammer Handpiece (Foredom.net/product/h-15-handpiece-hammer). Instead of rotational action traditionally found on rotary tools, this handpiece transitions the rotational force into a reciprocating action, rather like a miniature jackhammer.

Combined with a carbide tip, this makes for the perfect tool to make thousands of tiny pin-prick marks in steel. Foredom's directions say to limit speed to no more than 5,000 RPM, which is more than fast enough to quickly add texture. To stipple a pistol, strip it down to the bare frame and use a marker. Here are the author's Sig P365 and P320 XCompact with two styles of stippling, or scribe to draw where you want to add texture in a similar fashion to how one would stipple a plastic-frame pistol.

At this point, you may also want to put 15 Hammer Handpiece, which is essentially a handheld jackhammer.

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The serial number of this Hi-Power is on the front strap, so I left a straight-line box to not obscure it. The magazine well bevel is also shown. Far the pistol down and practice stippling on a piece of steel pipe or scrap steel before jackhammering your customer's prized pistol. Regardless of your initial scrap steel victim, start in the middle of your desired stippling area to get a feel for how the tool works. It will sound like a tattoo gun, as it sort of works the same way, but without the ink.

Vary the downward pressure into the workpiece and speed on the foot pedal. Keep the tip moving in small circles and overlap the same area several times. The harder you press, the deeper the stylus strikes, which results in a "grippier" texture. Since we are dealing with metal frame pistols, sharp metal bits would not be optimum under a sharp recoil action. We are more aiming for a surface that is reasonably rough, about a 220 grit or so sandpaper feel.

Eventually, all the smaller areas will join to form one swath of textured area. Change the direction and technique frequently to avoid patterns in your texture, unless a defined pattern is your end goal. To achieve a uniform look, hold the pistol at varying angles and use different techniques and patterns to link small sections together, and then overlap sections with each other to blend. Also, by this time, you should have a good enough feel for the technique to work on your borders. How they look is up to you.

I typically choose to make one solid line of stipple and smoothness. You may opt instead to carve a channel with around file or to shade the stippling from dense to sparse. Take some artistic license with your design. My example Hi-Power shown here has the serial number on the front strap, so I left a straight-line box to not obscure it. Once I was satisfied with the texture and overall feel of the stipple job, I rubbed some 320 sandpaper over the area to remove a few sharp spots.

This may or may not be necessary for your project. Finishing was completed by sandblasting and painting with KG Gun Kote (KGcoatings.com, in OD Green. Bear in mind that if a spray-on paint is used it's important to vary the application angle on the stippled portion of each grip panel to ensure full paint coverage of the micro-texture. The Hi-Power illustrated also wears G10 scales which combined with stippling feels great in the hand.

The extended beavertail addition also adds a great deal of comfort and style while also helping to prevent a painful slide bite. Combined with a flared magwell and some additional file work, this allows the pistol to melt into the shooter's hand for an improved fit and better shooting. These additional modifications merit their own article, however. Stippling is a great service any gunsmith can add to their shop's offerings.

The cost to get started is reasonable and the results can be both functional and attractive. AG Far

FROM THE ARCHIVE

Generational Changes and Firearms

The future of firearms in America after the Baby Boomer generation has left us.

BY BRIAN R. SMITH APRIL 2023

ORIGINAL PP. 19-22



Above: The number of people interested in classic collectible Winchesters, Remingtons, Marlins, and other wood and metal hunting guns is dropping. The younger firearms enthusiast is interested in black rifles, black handguns, and military surplus weapons.

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Left: Boomers heavily influenced the firearms industry from the late 1960s to the present. But as Boomers fire their last shot, things are changing—such as gun shows. There appears to be no one under 50 in this photo of a typical “fire hall” gun show.

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The times, they area-changin', and the average American firearms enthusiast is changing radically with them. Let's look at how Baby Boomer generation shaped the firearms interests and market of the past 40-some years, and how as we Boomers exit the scene the next generations of firearms enthusiasts will influence what the market is and how radically different it will be. I attended a somewhat local semi-annual “fire hall” gun show in early Spring 2022, a habit of the past 30 years.

This one has a reputation as an “old time” gun show; more of a gun, gun parts, and ammo bargain hunt than a show hall housing portable commercial gun shop operations for the weekend. In fact, it has been along-time joke of sorts that “someone had to die so that someone else could get a table.” Normally, between the social hall and the equipment garage, there were no spare tables to be had. If someone canceled due to an emergency, someone else on the wait list took their tables for that particular show.

The younger firearms enthusiast is interested in black rifles, black handguns, and military surplus weapons. This last show it was all too clear that old adage was not a joke. There were 11 open tables or spots that were usually occupied by tables. This was unheard of at this show up until Covid-19 hit. The first show held at this venue since the pandemic was in the fall of 2021, and at 0800 on Saturday there were 17 tables empty due to cancellations.

Many of the old time vendors didn't want to take a risk with the crowds in the two buildings with limited ventilation. By 0930 at last October's show, many of the empties were filled by nearby vendors spreading out or by folks on the waiting list that were able to get there quickly. They probably had the vehicle packed, just in case, or got a call from the organizer on Friday night. It was much the same this past show, except seven tables. But as Boomers fire their last shot, things are changing—such as gun shows.

There appears to be no one under 50 in this photo of a typical “fire hall” gun show. weren't set up to start with; it was an extra-wide aisle for a change. There's a sea change taking place in the American firearms scene, and when it's done what's left won't be recognizable to anyone born before 1965. To understand what's happening, we have to review how we got where we are.

Morris Massey, retired professor at the University of Colorado at Boulder developed his famous theory that helps us understand who we are, who we've become, and the differences between generations. The theory is summed up in the improbable statement, “You are where you were when.” The “when” is about the time we reach early teen years, age 13 to 15. Until then, the world is all about ourselves. But something happens at that stage of our lives; we see ourselves as part of the bigger world. We socialize and we often

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Above: Boomers also defined the car collecting market. For decades the definitive classic car was the '57 Chevy Bel Air. Today, even the classic car market is undergoing a transformation. Right: A 2000 Honda Civic five-speed is an example of the redefinition of the classic car; it recently sold for \$50,000 to a buyer under 40.

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Above: Boomers also defined the car collecting market. For decades the definitive classic car was the '57 Chevy Bel Air. Today, even the classic car market is undergoing a transformation. Right: A 2000 Honda Civic five-speed is an example of the redefinition of the classic car; it recently sold for \$50,000 to a buyer under 40.

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Left: Boomers and their parents influenced television of the 1950s and 1960s, and the most prevalent genre was the Western. Shows like Gunsmoke in turn influenced Boomers' interests in firearms, and those Boomers grew up to start Cowboy Action Shooting associations and their competitions.

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start developing our personal outlook; our philosophy of life. Think about what was going on within your immediate environment and in the world when you were between 13 and 15, and you'll see that there's a good chance that time period will have been significant to you and its effects will have remained a driving force in your life. So it is with each generation and our generation of interest here are the Baby Boomers. Dictionaries define the Baby Boomer generation as consisting of those born between 1946 and 1964.

I'm square in the middle as a 1955 model. The Boomers, for short, were the product of tens of thousands of World War II veterans coming back to the United States and marrying their sweethearts, buying For decades the definitive classic car was the '57 Chevy Bel Air. Today, even the classic car market is undergoing a transformation. houses and vehicles, and starting families, mostly that latter part.

The post-WWII and post-Korean War period, despite the Cold War and its threat of nuclear annihilation, saw the birth of the concept of The American Dream—suburban ranch houses with modern conveniences, laundry and

kitchen appliances that lightened the domestic workload for the homemaker, the development of television and its programming that brought news to the young families and entertained them, and at least one if not two vehicles in the garage or driveway.

The late 1940s through the mid- 1960s saw a period of unprec- Shows like Gunsmoke in turn influenced Boomers' interests in firearms, and those Boomers grew up to start Cowboy Action Shooting associations and their competitions. edented birthrate in the United States. These Boomer kids and their parents heavily influenced American culture in the process. Automobiles grew larger in response to growing families.

There were huge station wagons with or without fake woodgrain trim, large sedans that could seat four kids across in the back seat with room for another in the bench front seat between the parents. GIs became enamored of the Willys MB and Ford GPW jeeps during their service time, and Willys responded with civilian CJ Jeeps, 4WD Jeep trucks, the boxy Jeep Station Wagon, and then in the early 1960s, the "SJ" platform Wagoneer and original Gladiator pickup.

The Wagoneer is credited as being the first modern sport utility vehicle; directly in response to demand by parents of Boomers. Boomers were impressed by parents and grandparents who lived through the Great Depression and reminded Boomers of the hardships they faced, and to be frugal, invest, and wash sheets of tinfoil and save them for later use. Boomers tended to have paper routes, shovel snow, rake leaves, and mow lawns for spending money. We learned to be entrepreneurs and capitalists.

We were taught by fathers, uncles, and grandfathers (and more than a few mothers, too) how to use hand tools and repair our bikes and lawn and garden power tools. My grandfather taught me how to work on automobiles, do house wiring and plumbing, and even rewind small electric motors. We developed practical skills. Post WWII saw the widespread growth of television in American homes, and one of the more popular genres was the western or cowboy drama.

There were dozens; some forgettable one-season-wonders, but many popular multi-season shows including Wagon Train, Rawhide, Bonanza, The Rifleman, The Big Valley, Bat Masterson, Cheyenne,

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Left: Millennials and younger Gen-Z members who are firearms enthusiasts are interested in the types of guns they used in shoot-'em-up video games; first among them being the AR-15 in its many incarnations. Above: Those under 40 also have a keen interest in military surplus rifles and handguns from around the world. The US Rifle, Cal. .30, M1 is a often highly sought-after example.

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Left: Millennials and younger Gen-Z members who are firearms enthusiasts are interested in the types of guns they used in shoot-'em-up video games; first among them being the AR-15 in its many incarnations. Above: Those under 40 also have a keen interest in military surplus rifles and handguns from around the world. The US Rifle, Cal. .30, M1 is a often highly sought-after example.

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The US Rifle, Cal. .30, M1 is a often highly sought-after example. The Cisco Kid, Gunsmoke, Death Valley Days, Have Gun Will Travel, Maverick, and more. These programs were directly responsible for the growth of interest in single action revolvers and lever action rifles among American shooters, and the argument can be made that as we Boomers with an interest in such weapons aged and obtained means, we created the Cowboy Action Shooting sport in its various forms. The Cold War, John F.

Kennedy, and the Vietnam War also shaped and challenged Boomers. One single event exemplifies the profound effect of TV on Boomers, and that was in Dallas on 22 November 1963. We saw it all live, frozen emotionally: the assassination, the funeral, and the collective sadness. Kennedy was idealism personified. He was elected on TV, he lived in the White House on TV, and he died on TV.

I was home sick from school, and plain as day remember my maternal grandmother crying as she sat huddled on the sofa, eyes glued to the Zenith black and white. Through the sixties we saw everything in our living rooms; we saw heroes die; Martin Luther King, Malcolm X, Bobby Kennedy. We saw the riots, we saw the protests. We saw the Vietnam War in our living rooms as we sat around eating dinner, watching the news. But there were accomplishments; Boomers helped put Americans on the moon.

Fun fact: The average age of the men in NASA mission control rooms at Cape Canaveral/Kennedy and Houston was 28 years when Apollo 11 touched down in the Sea of Tranquility. That was the average age; some of those technicians were born in 1946 or just later, and qualify.

Boomers followed in their parents' and grandparents' footsteps and became hunters, shooters, collectors, and gunsmiths—our WWII and Korean War veteran fathers gave us toy guns until we were eight or so, then followed with BB guns, pellet guns, and the inevitable .22 rimfire rifle of some description. Boomers were responsible for mega-sales of scoped boltaction Winchester, Remington, Savage, and other hunting rifles, as well as the sporterization of tens of thousands of military surplus rifles.

We followed our fathers and grandfathers into forest and field. Speaking of military surplus, the interest in such firearms really heated up in the 1950s through 1968 when entrepreneurial individuals started import and distribution businesses specifically handing principally foreign military surplus handguns, rifles, ammunition, and accouterments.

As a grade schooler in the early '60s, I can recall spending hours perusing the ads in the back of my father's monthly issues of Outdoor Life and True ("The Man's Magazine"), scanning the full-page Interarmco ads with pictures of long, sleek Mauser rifles from various European and

South American countries and someplace called "Siam," with Italian Carcanos, British Enfields, and Austrian Mannlichers, too.

The prices ran from just under \$10 for handguns to not more than \$30 for desirable 8mm German GEW and Kar98k Mausers. Those ads disappeared with the passage of the Gun Control Act of 1968, which not only prohibited direct-to-your-home sale of these weapons, but outlawed their importation.

However, when the Firearms Owners Protection Act of 1986 passed, importation of military surplus handguns and rifles was once again legal, and gun shops and gun shows were flooded with \$49.95 Swedish Mausers and \$295 semi-auto AKs.

At the time, I was 31 and had a bit of disposable income and a keen memory of those Interarmco ads, a dangerous combination for a firearms enthusiast... Boomers in their 40s, 50s, and 60s continued to provide demand for surplus firearms, and bought up millions of ex-Soviet Mosin-Nagant 91-30 rifles, M38 carbines, M44 bayoneted carbines, and M1895 Nagant revolvers from the late 90s through the 20-teens.

Boomers also fueled the firearms print market, both magazines and hardcover reference books on guns, hunting, target shooting, and gunsmithing from the mid-60s through the turn of the 21st century. With the millennium

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came the Interwebz, which offered all the information anyone wanted on any particular gun—factual or erroneous, no matter. Boomers helped shape the American Gun Show. From the mid-60s to the early 70s when I was aged 10 to 17, I helped “table sit” for a local gunsmith at an annual gun show at which he would set up. In fact, it was the predecessor of the show I attended mentioned above. I minded his two tables while he circulated, kibitzed, and wheeled and dealt.

Fifty-plus years later, at a particular gun show where I usually set up, I look around at the 20 or so vendors visible and I’m the youngest one save for two at most, and they are late 40s to mid 50s in age. The majority of the vendors have 10+ years on me, and sadly some are no longer returning year-on-year. With many of the gun show exhibitors it’s more a social thing than financial/economic driven.

In away Boomers are directly responsible for re-shaping gun shows and the general firearms enthusiast hobby of today and the near future—because we are either growing old and infirm, or are “leaving the building” altogether. In future, things will be very different as a result. You need three things for a gun show—vendors, product, and attendees. The product is generally available, but changing interests dictate that demand for specific items is starting to drop.

The number of vendors is steadily decreasing, and they are not being replaced by younger vendors in matched quantity. The number of attendees is slightly off as well, if one doesn’t count presidential election years and periods of ammunition scarcity. The same holds for FFL-holding gun shop owners. New stores with young owners are not replacing the established stores that are closing.

The Boomer-aged owners of a nearby decades-old gun shop and military surplus store, a fixture in central Pennsylvania

known for its squeaky wood floors, announced its doors closed for good at the end of June 2022. I have a 30-something FFL acquaintance who is a total exception to the rule of his age group in that he worked in a gun store while in high school, declined going to college, and got the backing to start his own gun store a number of years ago.

He does quite well catering to the interests of the under-40 firearms enthusiast, and he tells me that the overwhelming majority of his customers in that demographic buy black rifles, black handguns, or military surplus firearms. These purchases are mostly based on interests developed over years of playing shootem-up video games in which participants may select the weapons with which they choose to “fight.” You don’t find scoped pre-64 Winchester Model 70s in video game weapon selection drop-down menus.

In the northern Pennsylvania counties surrounding where I live, the number of people who actively hunt has been dropping. On the route I take to work early on Opening Day of whitetail season I would typically count 15 to 20 vehicles parked to the side of a particular 12 mile stretch of PA 120. The past three years, 2019 through 2021, there were four, five, and three vehicles respectively in that same 12 miles.

Friends and acquaintances report that their children and grandchildren of hunting age don’t have an interest. Apparently there’s no cell phone app or PC program for hunting. Remember, the current 25 to 40 age group “are who they were when” having grown up in the 90s and 2000s, with access to PCs early, second or third generation video games, post-“War on Terror” geopolitics, and little interest in hunting animals.

Consequently, the under 40 crowd doesn’t actively seek out four-digit-dollar wood and blued steel hunting rifles used by their

fathers and grandfathers. My 30-something FFL friend tells me that his customers who do buy wood and metal hunting firearms are generally about 50+ years of age.

The youngest of the defined Baby Boomers is now 57, so there are some of the oldest Generation Xmembers who have Boomer traits and interests that have rubbed off on them, however, the older Gen-Xers’ time is soon coming to an end, too. Concern over the socio-political-economic situation in the world and apparent instability has people concerned over personal safety.

Firearms manufacturers and dealers report tens of thousands of first-time gun owners purchasing handguns, shotguns, and semi-automatic rifles for protection and security against anarchist mobs and their “mostly peaceful” protests, who and which local government leaders and law enforcement agencies seem to condone.

The upshot is, quite soon we may see hundreds if not thousands of collections of Winchester Model 70s, 43s, 54s, and Remington 700 ADL and BDL hunting rifles, classic Smith & Wesson and Colt handguns, and high grade shotguns be liquidated within a short period of time. The market will be flooded, and there apparently will be little demand because those under 40 have little or no interest.

The surplus military rifles and handguns in those collections will get snapped up, and even the Colt SP1 ARs, the Springfield M1As, and maybe the preban Polytech AKMs will be in demand. But I envision the supply of collectible Winchesters, Remingtons, Marlin, and even Rugers will far outstrip demand, and what were once four-digit-dollar prices will find the market sorting them out in the three-digit-dollar domain. Imagine 20 years from now not being able to give away a superscarce pre-64 Winchester cham-

HISTORY

Reader Forum

BY AMERICAN GUNSMITH EDITORS APRIL 2023

ORIGINAL PP. 23-24

Stevens Model 94B I am new subscriber and want to thank you for Learn Gunsmithing, The Troubleshooting Method included with my subscription. I need advice on my Stevens Model 94B 20 gauge. As to its history, I bought it from a friend (a meticulous one for sure) but do not know why it has been difficult to cock. In drawing the hammer back, I feel no roughness or sensation in my thumb that would indicate a mechanical misalignment.

I have cleaned and inspected all of the mechanisms to be sure nothing is binding causing the difficulty of pulling the hammer back. Nothing is binding that I can tell and I believe I'm dealing with a very strong mainspring. Even after a thorough cleaning and oiling cocking the hammer is still a major chore. There's an example used in your Troubleshooting guide that the collector market they are not looking for a '32 Packard classic or a '57 Chevy Bel Air and don't want to maintain a collection of older vehicles.

Modern-day collector cars and trucks, including new Camaros, Corvettes, Mustangs, Challengers, Jeeps, and the like are the apparent future of the hobby. As premiums remain stable for the classic car market, valuations are falling for the older traditionally-defined classic car and new valuations and premium rates are being developed for the new collector cars. Back to guns. We also need not look any farther than our own profession for another indication of the future.

In the past five years, exactly one semi-local young man went to gunsmithing school and now works as an in-house gunsmith for a large multilocation "big box" sporting good chain away from here, at the same time working on building his private practice in his basement shop some break open shotguns have a mainspring adjustment feature, however, this Stevens does not.

Without grinding off a bit of the cylinder at the end of the spring for adjustment (I have not reached that point yet) I don't know how else to address this. Do coiled

springs get tougher with age? I thought they never did, but I may be wrong. Is it possible someone in the past may have replaced the mainspring with an incorrect one? I could buy anew one (\$15) and test that question.

I could also take out one coil off the spring, but not too much as the hammer would have no tension in the uncocked stage if the spring was too short. Attached is a photo of the mechanism which might be useful should someone else ask the question of the mechanism of the 94B. during evenings and on weekends. Closer to home in this neck of the woods, the youngest independent gunsmith in four counties is around 50 years old. And for gun shows?

Back to that last show mentioned above, the chief topic among the vendors was the loss of two of their long-standing brethren since the previous show the autumn prior; one just a week ago as I write this to a six-month battle with cancer and the currently unfavorable health outlook of three other vendors who were not present.

If those who are presently in their 70s no longer set up by 2030, there may well be significantly fewer "fire hall" shows to go with the notably smaller number of brick and mortar sole proprietor gun shops. One thing is absolutely true: The future of firearms shooting and collecting in America will be different as we Boomers fire our last cartridge. Vastly different. AG Mark Hollensen (BenchMarkPerformanceServices.com) responds. I think that shotgun was manufactured between 1939 and 1961.

I believe it came with a mainspring plunger assembly that had an all metal rod, spring, and plunger seat. If or when that one went bad, the new mainspring plunger assembly made to replace it came with a plastic or Tenite strut head that fits up against the back of the hammer. Over time, that plastic head deteriorates and breaks down. It could be that is causing your issue at hand. Robert

As it starts coming apart, it becomes much harder to cock the hammer and sometimes it moves around to where the shaft will bend and that makes matters worse. If you had it apart and found the assembly is made of all metal, then check to be sure the rod or shaft is still straight and that it rides in the mainspring plunger seat smoothly. Also check to make sure it was reinstalled correctly and not upside down as that alone can make the hammer much more difficult to cock rearward.

If it has a plastic head on the plunger shaft, check to see if it is coming apart, cracked, broken, bent, or if some of the pieces of plastic are down in the receiver; if so, flush out and install anew assembly. I would not cut coils down on the mainspring as it really needs the full power to detonate primers due to the geometry of how the hammer and hammer strut assembly interoperates with one another. There is nothing wrong with installing anew mainspring plunger assembly with the plastic head either.

They will last a number of years, just not as long as the original metal ones did. RK Campbell responds. Has the 94B always been difficult or has the or post a letter to Falls Church, VA 22041. subscription For questions or mailing problems contact American Gunsmith

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