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JUNE 2024, VOL. 70, NUMBER 6, 834TH ISSUE

COLUMNS

- 8** **CROSSFIRE**
Letters To The Editor
GUNS Staff
- 16** **SHOTGUNS**
Playing Favorites
Tom Keer
- 18** **MONTANA MUSINGS**
Lead Slingin' Levers
Mike "Duke" Venturino
- 20** **OPTICS**
The Optical Triangle
Wayne van Zwoll
- 22** **RIFLES**
Value Rifles
Dave Anderson
- 24** **HANDLOADING**
44 With Conicals
John Taffin
- 26** **SHOOTER'S RX**
Vern
Will Dabbs, MD
- 54** **KNIVES**
Spyderco Smock
Pat Covert
- 62** **THINK TANK**
A Prince, A Pauper & Luck
Jeff "Tank" Hoover
- 66** **GUNS INSIDER**
Can It!
Brent T. Wheat



22



20



62



16



26

28 SURPLUS & CLASSIC
Walther PPK
Payton Miller

55 QUARTERMASTER

- Book: *When Violence Is The Answer*
- Versacarry Defender Alpha DWB Holster
- Streamlight TLR-6 HL G Pistol Light
- Sawyer Gravity System Water Filter

Brent T. Wheat

56 2A DEFENSE
SAF 50th
Dave Workman

58 NEW PRODUCTS

60 GUN OF THE MONTH

64 ADVERTISER INDEX

65 CUSTOM CORNER

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- 10** **CAMPFIRE TALES**
First Big Bores Part 2
John Taffin
- 14** **AYOOB ON HANDGUNS**
Shooting Smaller Pistols Well
Massad Ayoob
- 30** **.45-70 150TH BIRTHDAY**
Still Going Strong In The 21st Century
Mike "Duke" Venturino
- 32** **SPRINGFIELD TRP**
Rarefied Roots Make A Modern Classic
Roy Huntington
- 38** **KING RAT SLINGSHOT**
Dennis The Menace Would Be Proud
Will Dabbs, MD
- 42** **THE TOILET PLUNGER BOMB**
A Strange Militaria Project
Will Dabbs, MD
- 46** **DIY: RUST BLUEING**
Refinish Your Own Gun At Home!
Frank Jardim



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CROSSFIRE

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DOC MILLER

Your *Insider* story "The Persuader" (April 2024) about Nurse Baker brought back my own fond memories of Dr. Miller. Doc Miller was a retired Navy Captain who always worked the night shift at the hospital located in the medium-sized city from which I retired.

I was a rookie officer when I first met him. I was called to assist another officer with a combative prisoner at the ER. I arrived at the

ER just in time to see them wheeling our prisoner into the trauma room with sliding glass doors to provide "noise discipline" since our drunk prisoner was very

loud. His scalp was split, the result of coming up on the losing end of a bar fight and he needed stitches. Doc Miller was known for not taking crap from anyone, and he didn't appreciate the uncooperative, verbally abusive prisoner.

Into the room came Doc. "We need to hurry up and get this guy out of my ER." He nodded at the security staff, who then held Mr. Wonderful's arms and legs as Doc proceeded to use a staple gun to close the wound ... without any numbing agent.

Ka-chunk! "Yaaaahhh!" yelled our prisoner.

Ka-chunk! "Yaaaahhh!" and now he was shaking like he'd grabbed a downed power line.

Ka-chunk! "Yaaaahhh!" and I think I visibly winced. I almost felt sorry for the guy. Almost.

Doc Miller then said, "Oh, stop. It's not that bad." He then looked up with the slightest bit of a smirk on his face and then he locked eyes onto my nametag.

"Magill. Your dad a Chief?" In that measured, monotone voice of his.

"Yes, sir. Retired HMC." My dad is a retired Chief Hospital Corpsman and had worked for Doc Miller a decade earlier.

"Best Chief I ever had. Tell Chief I said hello."

Ka-chunk! "Yaaaahhhh!"

Until Doc Miller retired, every time I showed up at the ER, he would stop what he was doing and the conversation always started the same way:

"Hello, young man. How's Chief?"

"He's doing well, sir."

"Best Chief I ever had."

Here's to you, Doctor Miller.

Sean Magill

.....

DOWNSIZING

I need some advice/direction/suggestions. I had a cardiac arrest recently (77 y.o.) and am still functioning well. However, I can no longer shoot long guns. I would like to sell most of the collection. These are all work guns; I don't believe there's a collector item in there. Any suggestions on where/who to start with for marketing/selling the firearms.

Name Withheld

Wow! I'm glad you're still with us! It comes down to trust: Who do you trust to value your guns? If you've got an FFL you work with and trust, I'm

continued on page 57

GUNS

MAGAZINE

Your Next Gun Story Begins Here!

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FIRST BIG BORE SIXGUNS — PART 2

SMITH & WESSON CONTINUED

John Taffin

NEW MODEL #3 — In 1956, my neighbor who was in his 30s, I was 17, also loved single-action sixguns with his favorite being a 7 1/2" custom Colt Single Action from the early 1900s. It had been re-barreled and re-cylindereed to .44 Special and fitted with a grip frame from the Colt 1860 Army. I found the old Colt fascinating but what really captured my imagination was not the Colt sixgun but his other single-action, a .44 Russian made



All Smith & Wesson models, whether double-action or single-action, featured a barrel/cylinder that allowed simultaneous ejection of fired cartridges.

by Smith & Wesson. It did not take much examination even for my youthful eyes and fingers to discover what a beautifully crafted sixgun the Smith & Wesson .44 Russian really was.

My friend's .44 Russian was a New Model #3, the third sixgun in the lineup of the .44 Smith & Wesson big-bore top-break single-actions. After seeing this beautiful Smith & Wesson, I began to watch to see if anyone actually carried a Smith & Wesson single action in the movies or on television. I have been watching ever since and they are very few and far between. The first one I noticed being used by Robert Culp as Texas Ranger Hoby Gilman in the TV series *Trackdown*. Culp must have really liked the Smith & Wesson as he also used one in the movie *Hannie Caulder*.

The Smith & Wesson New Model #3 is my favorite of all the Smith & Wesson single-actions. It was a sixgun way ahead of its time. It is so precisely fitted it demands smokeless powder for perfect functioning. However, all of the frames of these guns were built in the black powder era and should only be used with black powder. The machining and tolerances used in their manufacture were so precise they are easily

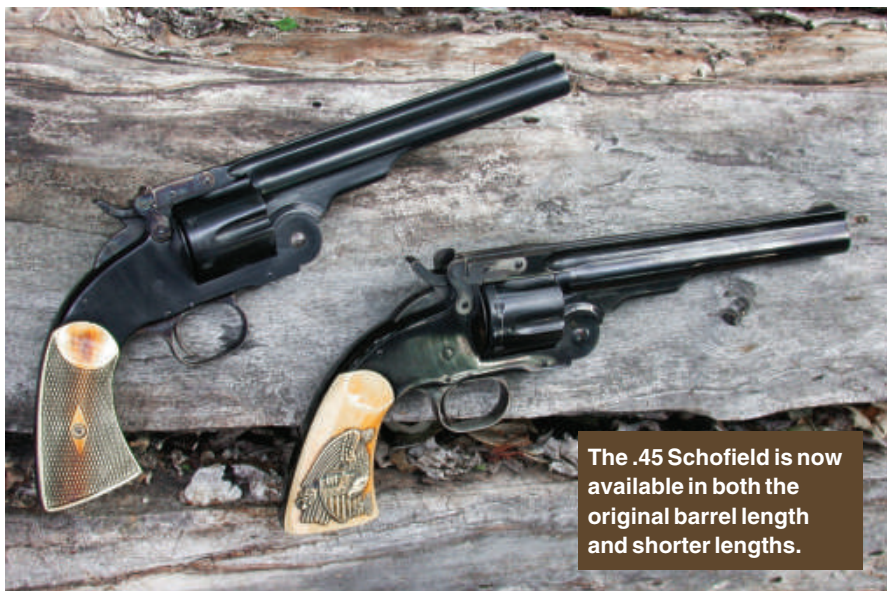


Robert Culp as Hoby Gilman in *Trackdown* favored the Smith & Wesson single action.

fouled and work very sluggishly after very few rounds of black powder loads. The only answer is to keep them clean.

THE .45 SCHOFIELD — Col. Schofield, later Major Schofield, redesigned the latch on the Smith & Wesson, placing it on the frame. Now one only had to press with the thumb of the shooting hand to unlatch the barrel, which could then be pressed against the leg or any other stationary object and pushed open. The cartridges were still ejected simultaneously and once the cylinder was loaded, the barrel could be moved up and latched into place. The operation was now simplified so it was time to change the cartridge and that's when trouble began.

The .45 Colt used a cartridge case, which was 1.28" in length; this was too long for use in the shorter cylinder of the Smith & Wesson American/Russian. The obvious solution would be to lengthen the frame and cylinder of the Smith & Wesson. Instead, the cartridge case was shortened to 1.10" in length and the .45 Smith & Wesson, also known as the .45 Schofield, arrived. One doesn't



The .45 Schofield is now available in both the original barrel length and shorter lengths.



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have to be too smart to see a problem on the horizon. The military, which had already purchased 23,000 Colt Single Actions, now ordered 3,000 Schofield Models in 1875 followed by 5,000 more shortly thereafter, along with a large supply of the new .45 cartridge. It didn't take long for units to be supplied with .45 Schofield sixguns and .45 Colt ammunition that would not fit and Colt Single Action Armies with .45 Schofield ammunition that would work. It didn't take long for the military to give up on the Schofield and stick with the .45 Colt.

Production of Smith & Wesson big-bore single-action revolvers lasted from 1870 to 1912 with four basic models: The American (1870-1874), Russian (1873-1878), Schofield (1875-1877) and New Model Three (1878-1912). The Americans were made in .44 S&W American, a few in .44 Rimfire, and of course the Russian contract guns in .44 Russian; the Schofields only in .45 S&W; and



Original S&W Double-Action and Single Action .44s.

the Russians only in .44 Russian, except for a few chambered in .44 Rimfire. For the most part the New Model #3s were .44 Russians with a few scattered among 16 other calibers from .32 S&W up to .455 Mark II.

After nearly a century without big-bore Smith & Wesson single-actions, we now have access to all four iterations of the Smith & Wesson Model #3 sixguns including many that never really existed originally. **GUNS**

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SHOOT SMALLER HANDGUNS BETTER SHOOTIN' STRAIGHT WITH YOUR .38

Massad Ayoob
Photos: Gail Pepin

Someone carrying concealed has to balance power and “shootability” with discreet and comfortable concealment. When the latter considerations override the former — something every individual has to decide for themselves — compromises have to be made. Carry a full-size “fighting pistol”? I’m with you, but you’re going to have to pay more attention to “dressing around the gun,” while the size and weight of the sidearm may create comfort issues.

The good news is you’ll have more rounds at your immediate disposal, perhaps more powerful rounds at that, and a gun, which conventional wisdom tells us, you should be able to shoot faster and straighter should the need arise.

HIDE OUT

Are you in an open carry state where there is no legal problem if your concealed carry handgun reveals itself? Cool. But, are you in an NPE (Non-Permissive Environment) where there is no legal blowback but it’s an occupational or social kiss of death if you are discovered to be armed? Ummm ... something smaller is going to save you a lot of grief. And, if you carry a second gun for backup, wouldn’t it be a good idea for it to be really unobtrusive?

It’s in vogue in some circles to carry an ultra-light .22: a Ruger LCR or S&W Model 43C revolver, or a tiny Ruger LCP .22 auto. Those itty-bitty bullets can certainly kill but they have a really poor likelihood of stopping a threat unless you can put one into the central nervous system — which requires great accuracy under stress — which is exactly what small

handguns are *not* famous for. Larger calibers will, of course, kick harder in smaller, lighter handguns than in bigger, heavier ones. So ... let’s talk about how to compensate.

GRASP

The harder you hold the gun, the more you can stabilize it against the force you’re applying against the trigger. Whatever the caliber, this will be particularly true of the smaller guns. Forget the old “40% pressure with the firing hand, 60% strength applied with the support hand.” Whenever I hear that, I also hear, “The 1980s called and they want their shooting technique back.” You’re applying up to 12 or more pounds of trigger pressure on a double-action revolver possibly weighing less than a pound or five or more pounds on a tiny auto in roughly the same weight range. To stabilize the gun against a fast, hard trigger pull requires a max-force grip. Get your body weight forward into the handgun and you’re on your way to recoil control

With a short butt, you may have only two fingers wrapped around the front of the grip frame, and on the really tiny ones, not even this. Don’t leave the pinky finger hanging in space. Whether you have a one- or two-handed grip, tuck that last finger tight under the gun butt! Fingers are sympathetic and the grasping digits won’t hit full power until they’re all grasping together. You’ll have 90% or better of the control you’d have had with the little finger on the grip instead of under it.

TRIGGER CONTROL

Harder gun to shoot, fewer rounds in the smaller gun to make up for a bad shot with a “Mulligan,” nature may be telling us to slow down a little bit, aim, and get the center hits to stop the fight. Forty-some years ago, I interviewed a tough NYPD cop who had won a gun battle with a thug who was



Subtleties of the J-Frame grasp: If the thumb blocks trigger finger as on this 442 Airweight .38 (above), adjust placement as shown on Model 38 Airweight below.



With tiny guns like Ruger LCP .22, a two-handed crush grip is beneficial for stability.



Pinky finger tucked under gun butt and thumb curled down (so long as it doesn't block trigger finger) gives max strength and stability. Pistol is a 9mm Kahr PM9.

shooting at him with a .45 1911. I asked him if he had felt a bit undergunned, and his answer was memorable: "My man, shootin' straight with my thirty-eight beat him givin' me jive with his forty-five."

We're not talking "slow fire sniping" here, but more like slowing down by about 20%. If you think about it, with one second to solve the problem, this is only about a fifth of a second difference. However, it can be the difference between a fight-stopping hit and a time-wasting miss when there's no time to waste at all. Jim Semone, an Ohio cop who had to shoot more than a dozen criminals in the line of duty, advised me to "Suck it up, take an extra second to aim, and put the bullet where it has to go."

He won his most famous gun-fight with a center heart shot from a 2" barrel S&W .38 after having been

severely wounded by a .357 Magnum round by his ambusher. My mentor Bill Jordan, who used to be field editor for this magazine, is credited with the advice, "Speed's fine ... accuracy's final."

Let us not kid ourselves: We need trigger time for any kind of shooting skill, and a gun that's harder to shoot demands more trigger time. Get out there and shoot the damn thing! The very fact that we might be carrying a little gun means that we've already realized we might need it to keep our loved ones safe, and/or to come back to them whole!

Only you can truly assess your lifestyle needs and "threat profile," then make the decision of what to carry. It's just as true, only *you* can become as skilled with it as humanly possible for the day you need a firearm for its intended purpose.

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PLAYING FAVORITES

YOUR BFF SHOTGUN

Tom Keer

I met my friend Kevin at the skeet range and when I pulled out my Parker VH 28, he asked, “Do you ever shoot anything else?” Hmmm, I thought, a good question. My gun cabinet back home has as much diversity as a writer’s budget will allow, but with the exception of hunting sea ducks, I grab the Parker every time. She comes out ahead of the other semis, O/Us, and pumps I own, mostly because she fits me like a glove and I shoot her well.

Kevin laughed and pulled his Ithaca Model 37 from the case.

“I see you brought your Ithaca,” I said.

“Wouldn’t leave home without it,” he said.

“Do you ever shoot anything else?” I laughed.

“Well played,” he laughed, “well played.”

WHY NOT?

When it comes to shotguns, many of us play favorites for good reason. We spend good chunks of time, effort and money searching for a Holy Grail in gun shops, gun shows, auctions or online. When we finally find our sweetheart, it’s tough to shoot anything else. Here are some of my friends’ favorites.

Lion Country, Penn. — When Pastor Bob Ford isn’t preaching the Gospel, teaching Sunday school, or visiting shut-ins, he’s chasing rabbits with his pack of beagles. He’s a writer, too, the author of a dozen books

and columns on beagles, field trialing and rabbits. When Pastor Bob heads for the woods he usually grabs his 16-gauge Fox Sterlingworth. “I bought that Fox for a song because there was a hairline crack in the pistol grip,” he said. “By the end of the first season that crack got worse so I took it to a local gunsmith. He said I needed a new stock, but my pastor’s salary wasn’t going to cover that expense. I was bummed as that Fox quickly became my favorite gun.”

Ford placed the Fox in the back of his cabinet. He went on to shoot a number of other shotguns he owned, but the experience just wasn’t the same. Then a miracle happened when Ford’s nephew retired from the United States Army as a Lieutenant Colonel. “My nephew was looking for a part-time job and went to gunsmith school,” Ford said. “Wouldn’t you know that one of his school projects was to build a stock for an old firearm? He offered to build me a new stock for the cost of the wood, so now I’m back to using my favorite shotgun. I must confess the stock is no longer perfect. I’ve added a few scratches and dings of my own.”

Deltona, Fla. — Jim Turlington, a well-known sporting artist in Central Florida, always hunts squirrels with his .410 J.C. Higgins Model 1011 single-shot hammer gun. “Whenever I walk out the door to hunt squirrels, I reach for that shotgun,” he said. “My father bought it from Sears, Roebuck and Company when I was old enough to start hunting. Savage Arms made the private label shotgun in the late 1940s. Because of its age, most people believe it’s an heirloom and I should leave it at home.

“I never do, because I shot my first quail, wood duck and rabbit with that shotgun. It carries a lot of fond memories from my childhood. The full choke lets me reach squirrels high in the trees. Sure it gets wet and muddy, but I just give it a thorough cleaning when



Pastor Bob Ford fell in love with his 16-gauge Fox Sterlingworth the first time he shot it. Photo: Bob Ford



Whenever Jim Turlington pulls out his J.C. Higgins .410, he thinks of his dad and the wonderful times they had hunting together. Photo: Jim Turlington. Don Mallicoat didn't leave his baby in the corner and once he loaded low compressions shells, the Russell Arms Company hammergun rarely left his side. Photo: Don Mallicoat



I return home. No new gun could possibly make me think of the fun times I've had learning to hunt or of hunting with my dad."

Ashville, NC — Don Mallicoat isn't opposed to hanging fine firearms on a wall, but sooner or later he takes them down and puts them to use. "When I owned my gun shop, I bought a nice little shotgun from an older gentleman," Mallicoat said. "It was a Belgian trade gun made in Liege for the Russell Arms Company. The side-by-side shotgun was old enough to have two external hammers, and the twist barrels were made from Damascus steel. But the action was tight, the hammers were intact, and the bores and barrels were perfect. It was such an interesting piece I purchased the shotgun and hung it on the shop wall for several years. But one day I handloaded a box of low compression shells and took it to the skeet range. Now it goes everywhere with me, for it is nimble, fits well, and handles like a dream. I use it regularly when hunting grouse, woodcock and dove."

Columbia, SC — When it comes to shotgunning, Brian Raley always reaches for his Ithaca Flues 20 gauge. "The 26" barrels balance perfectly in

my hand and I like the double triggers for barrel selection," he said. "The fixed chokes are Improved Cylinder/Modified, and I can change effective distances by loading different shells. For dove I'll use a standard 7/8-oz. load and for wild quail I'll use a 3/4 oz. in the right barrel and a 7/8 oz. for the left. The spread is more open on the first shot and reaches out a bit further on the second shot.

"I like the Ithaca for two reasons. First, it's always a pleasure to hold a well-crafted firearm with a high-quality walnut stock, well-constructed design, and precise fit and finish. But the second is tradition. Older firearms connect me to their previous owners and to the times they spent hunting game with family and friends. That's a tough connection to beat, which is why my son and grandson are going to inherit my entire firearm collection."

The one great thing about shotguns is there are a lot of different makes and models from which to choose. There's a lot of competition to be the one known as "the one that we always shoot." And the path to finding *the* one? You know the answer: It's a heck of a lot of fun.

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THE ORIGINAL WINCHESTER 1894

THE LEAD-SLINGING ORIGINAL

Mike “Duke” Venturino
Photos: Yvonne Venturino

To generations of American shooters and hunters, the Winchester Model 1894 rifles and carbines and the .30-30 cartridge are nigh-on synonyms. That said, a lesser known fact is that first two cartridges for which the new Browning-designed Winchester lever gun was chambered were .32-40 and .38-55. Instead of the new-fangled jacketed bullets and smokeless powders of the revolutionary .30-30, the M1894s introductory rounds carried lead bullets and black powder.

REASONS

How exactly did that come about? In 1894 metallurgists had not perfected the new “nickel-steel” barrels needed because the friction caused by driving metal jacketed bullets down soft steel barrels would quickly wear them out. However, those metallurgists weren’t too far behind and the new barrels did arrive on the scene by 1895.

Fortunately, the new Model 1894 Winchester wasn’t handicapped by having the .32-40 and .38-55 as its introductory chamberings as neither cartridge was a new development. Winchester had seen fit to offer both rounds

in the 80-odd calibers available in Model 1885 Single-Shot, aka “High Wall.” Marlin beat Winchester by years with a “small receiver” Model 1881 lever-gun chambered only for the two cartridges in question. Marlin-owned Ballard single-shot rifles also used the pair as chambering options.

Looking back on the above paragraph, what I’m trying to get across in a rather long-winded way is that .32-40 and .38-55 rifles were well-established as excellent antelope and deer cartridges. The latter round was even touted as fine for black bears. In fact I can say I’ve used both cartridges on deer and antelope here in Montana.

A reprint of an 1899 Winchester catalog shows the .32-40 loaded with 40 grains of black powder with 165-grain lead bullets and .38-55 with 255-grain lead bullets with only 48 grains of black powder. One has to wonder why the amount of black powder in the latter round didn’t match the “55” in its cartridge name. Incidentally, Winchester’s “lead” bullets for these two cartridges



Duke’s favorite .32-40 handload with RCBS #32-170FN cast bullet is at left. The JW commemorative ammunition is shown at right with bullet pulled.

were actually an alloy of one part tin to 40 parts pure lead.

ANY WAY YOU WANT IT

Back to the Model 1894 — as listed in the above-mentioned 1899 Winchester catalog in rifle form, the model 1894 came standard with a 26”-round barrel for \$18. Octagon barrels cost \$1.50 more. Saddle-ring carbines had a 20” lightweight round barrel and cost \$17. Stocks

were plain oil-finished walnut. It’s worth mentioning in those days Winchester Repeating Arms welcomed custom orders. The 1894 could be had with half octagon/half round barrels, extra-short or extra-long barrels, pistol grip stocks, set triggers, engraving and a myriad of other options.

Along the way I’ve owned standard rifle and carbine Model 1894s for .32-40 and .38-55 but in my permanent collection, I kept the rifle version for .38-55 and the saddle ring carbine version for .32-40. Worth noting is when I first bought a Model 1894 .32-40, the cartridge had been discontinued!

However, in the early 1980s, Winchester did bring out some commemorative .32-40 factory loads as a salute to John Wayne. They had

Duke’s two Model 1894 Winchester lead-bullet shooters. Top is .32-40 saddle ring carbine; bottom is .38-55 rifle.



165-grain jacketed bullets in nickel-plated cases. I bought five 20-round boxes of the JW stuff, pulled the jacketed bullets and used the nickel-plated cases for handloading hundreds of rounds over a period of years. By the time the JW nickeled cases began suffering cracked case mouths, Winchester had ran a supply of regular brass .32-40 cartridge cases. I invested in a couple hundred rounds.

STILL EXTANT

The .38-55 was a different story. Winchester still produces a 255-grain factory load and again I pulled factory jacketed bullets to use the cases for handloading. Black Hills also offers lead bullet .38-55 factory loads in their Cowboy line of ammunition.

Personally I prefer lead-alloy bullets for these two cartridges. RCBS offers a mold number 32-170FN that drops 0.323" bullets of 1-20 tin to lead alloy. They are a gas check design, which I favor for smokeless propellants. Loaded over 15 grains of Accurate 5744 powder, they work perfectly in my .32-40 saddle ring carbine.

RCBS also formerly cataloged a mold number #38-255FN designed for gas checks. It dropped bullets of 1-20 alloy at about 0.379". Someone talked RCBS into reducing the mold design to #37-255FN with its bullets dropping at about 0.375", making them useless for vintage Winchester .38-55 barrels. All of Winchester's .38 caliber rifles except the .38-40 used a nominal barrel groove diameter of 0.379". Modern .38-55 barrels are usually 0.375" across their rifling grooves. The RCBS discontinued mold number can easily be duplicated by custom mold makers.

I load my .38-55 cartridges with 19 grains of Accurate 5744. Both my favored .32-40 and .38-55 handloads clock in the 1,300 to 1,350 fps range.

I've owned the Model 1894s for all five of its original cartridges (.25-35, .32-40 .30-30, .32 Special, and .38-55). It's perhaps a window into my soul, the only two that stuck were chambered for .32-40 and .38-55. Duke doesn't need those new-fangled jacketed bullets for his Winchester lever guns!

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THE OPTICAL TRIANGLE — EYE RELIEF, FIELD OF VIEW AND MAGNIFICATION

Wayne van Zwoll

It's not as inscrutable as the Bermuda Triangle. Shooters who ignore it won't disappear. But the three legs of the optical triangle do affect what you see through lenses and how fast you can put that view to use. Favor one leg, and the others may deny you a view — or bang you on the brow to get your attention.

EYE RELIEF

Eye relief is the distance between the rear (ocular) glass of an optical instrument and your eye. It is a specification for optics because it's built into them. Rifle scopes made for receiver mounting have 3" to 4" of ER. You may have heard someone whimper: "Too little eye relief," as he presses washcloth to brow to stanch the hemorrhage. Whatever the intended implication, the scope bears no blame; his eye was simply too near the sight when he fired. Either he installed the scope too far aft in the rings or didn't hold the rifle firmly and rock with it during recoil.

The arc of scar tissue above my right eye is a souvenir from many scopes. None had insufficient ER. Many were on rifles I was asked to fire a few times for reviews. They had been snugged in place by people with shorter arms than mine, people who don't crawl a stock or routinely fire prone, people who never fire uphill at game, people who insist a scope is best positioned so the rings bisect the free tube either side of the turret, no matter how far the ocular bell protrudes over the stock's comb.

These days, I take the time to move these scopes forward or, for brief bench sessions, add length to the stock with a section of 2x4 swathed in a towel. Modern variable scopes with long eyepieces annoy me because many preclude placing the scope far enough forward. An

extension ring is a useful option, if not cosmetic nirvana.

Handgunners require scopes with long ER because the pistol or revolver is held at arm's length. A long-eye-relief scope for this purpose has a very small field of view. Top-ejecting lever rifles, scout rifles and some take-down models require intermediate-eye-relief scopes that mount on the barrel forward of the receiver.

Generous latitude in ER is a good thing because, whatever the specified measure, you'll want to see a rim-to-rim field if your eye isn't exactly that distance from the lens. ER is more

critical in scopes of high magnification. Also, it typically shrinks slightly as you dial up the magnification in variable scopes. This is an undesirable trait, so some variables are claimed by their makers to show no change in ER. On the other hand, most shrinkage is barely noticeable. For example, in my Leupold 3-9x scopes with 1" and 30mm tubes, 40mm and 50mm objective (front) lenses, ER at 3x is 4.17"; at 9x it's 3.66".

Binoculars and spotting scopes have just a few millimeters of ER, as these optics don't pop you on the noggin while you're peering through them.



Powerful loads beg at least 3" of eye relief. Shooters get it placing scopes well forward in rings (above)! Adequate eye relief helps prevent flinching, encourages both-eyes-open aim and can speed cycling (below).



FIELD OF VIEW

Field of view (FOV) is typically listed as an angle or, for binoculars and spotting scopes, as width in feet at 1,000 yards or meters at 1,000 meters. For rifle scopes, FOV usually appears as feet at 100 yards or meters at 100 meters. Contrary to popular myth, FOV has essentially nothing to do with objective lens diameter. Nor does it depend on tube diameters of rifle scopes.

Researching for my *Gun Digest Book of Sporting Optics*, I spoke with Bill Cross, whose career as an optical engineer yielded many fine products at Bushnell. "Physics forces trade-offs," he said. "After we designed wide FOV into our 2-6x handgun scope, we found ER shrank to 12" at the top power. No handgunner I know has arms that short! So we sacrificed some field to get 20" of ER." He told me he thought a wide FOV was over-rated in a sight.

MAGNIFICATION

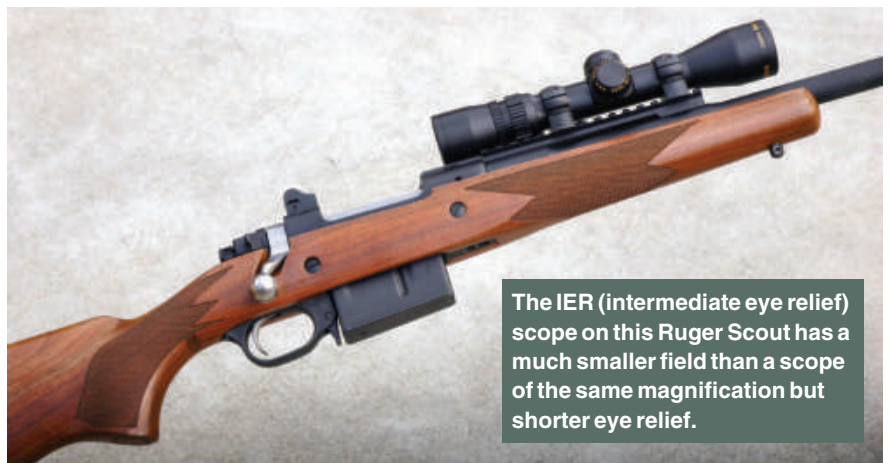
Magnification helps you spot or identify distant objects and sift details in thickets to find hiding game. It enables you to aim precisely, quartering a bullseye. You can nudge the crosswire incrementally to allow for bullet drop or into the wind to counter drift. But like fast cars and supermodels, magnification is not all virtue. It reduces the size of the field you see, as it appears to draw you nearer to what's in it. As FOV shrinks, you see less and less around its center. Some of what you miss can be important.

Secondly, magnification requires that you temporarily re-wire connections between eye and brain. When a feature small to the naked eye becomes suddenly bigger, you must place it into context. Until you do that, the feature is something else. Look at a speck under a microscope, and you no longer see a speck, but a coffee ground, a small insect or a grain of volcanic ash.

Partly for this reason, I prefer a binocular with modest magnification — 7x or 8x. A 3x or 4x rifle scope has all the power I want for hunting game bigger than coyotes. Low magnification requires less of my brain as little



Early rifles, mounts and scopes didn't allow shooters much eye relief! But then again, this .218 Bee has little recoil.



The IER (intermediate eye relief) scope on this Ruger Scout has a much smaller field than a scope of the same magnification but shorter eye relief.

objects become big and new detail appears in the FOV. While high-power lenses reveal more detail, they delay interpretation. Peering at a hair under a microscope, you'll wonder briefly how that timber could fit on a slide.

Magnification also gobbles incidental light. Reflection and refraction from and within a lens snare some of that light, as much as 4% on each uncoated surface in a series of lenses inside an optic. Coating lenses with magnesium fluoride, a process credited to Zeiss during the 1930s, reduces that loss. Modern multi-coatings pare it further.

Viewing and aiming can become more difficult as you add magnification. It makes a binocular field jump about and the reticle in your rifle scope hard to control. Magnification doesn't introduce those gyrations; it just makes them more visible. With a 20x scope in

rimfire competition, standing offhand with no support gave me fits. Despite the mitigating influence of a shooting jacket and a heavy rifle, the crosswire was never still. Tiring muscles imparted more violence to the sight picture. Finally, in despair, I'd horse the trigger as the reticle swept by the 10-ring. Uncontrolled weeping ensued.

In a 4x scope, the target image is smaller; but the speed and amplitude of reticle movement are much reduced. You squeeze the trigger blissfully unaware of all but your rifle's most violent tremors. A better shot results.

The best balance of eye relief, field of view and magnification depends on an optic's purpose, and on how you use that glass. Bear in mind manufacturers can't divine what will best serve you. Spreadsheets show only what's most profitable.

GUNS

'VALUE' RIFLES

WHO IS BUYING ALL THE NEW GUNS?

Dave Anderson

One of the most obvious trends in sporting rifles over the past several decades has been the appearance of moderately priced “value” models, generally made with computerized machine tooling, minimal handwork and synthetic stocks. The concept isn't new; there have been earlier examples of value rifles such as the Remington 721/722 models and the Savage 340 series circa 1950.

What is different today is the proliferation of such models and the way they dominate the market. To give just a few examples, we have the Remington 783, Savage Axis, Stevens 334, Mossberg Patriot, Browning AB3, Winchester XPR and the Ruger American. It got me wondering — who is buying these rifles?

“JUST” ENTRY-LEVEL

Conventional wisdom is these value models are primarily entry-level rifles, purchased by young or casual once-a-year hunters who can't or don't want to spend more money than necessary. Meanwhile, the more serious or discriminating (okay, older) hunters want more costly models such as the Ruger 77/Hawkeye, Remington 700, Winchester 70, Browning X-Bolt, Kimber, Sako, Weatherby Mark V. You'll notice I haven't included the Tikka T3/T3X, Weatherby Vanguard or Howa rifles in either group. That's because they



Dave believes the Weatherby Vanguard is one of the most outstanding rifles currently available and quite a few younger shooters he knows agree.

have neatly positioned themselves in the middle and have done very well as a result.

Conventional wisdom may be right, in fact I hope it is. Anything that encourages new rifle shooters and hunters is to be applauded. It must not be the only factor, as there just can't be enough young or new shooters to support all these value rifle sales. A lot of us “seasoned” shooters have to be buying them as well. Just from personal observation, I really don't see young shooters buying value rifles. I don't know, maybe they have more money than my generation did at the same age. The younger hunters of my acquaintance buy mainly Tikka T3 and Weatherby Vanguard rifles, sometimes Winchester 70, Sako and Kimber.

I suspect it is the seasoned shooter who is the major buyer of value rifles. We buy them as gifts to get new shooters involved, or to use as “truck guns” to keep our precious walnut/blue steel models from dust and rust. From personal experience, I believe there is another factor in value rifle sales — the many new cartridges introduced in recent years.

There was a time, believe it or not, when gun and ammunition makers not only resisted adding new cartridges, they would have happily discontinued many of those already in existence. Rifle sales were brisk in the post-war economic boom. In the early post-WWII era, only a few new cartridges appeared, and when they did they were intended to fill perceived gaps. For a



Ruger American Predator model in 6mm Creedmoor. Dave was intrigued with the cartridge and found this accurate rifle an excellent vehicle for trying it out without spending a fortune.



Dave says, "Based on what I see at the range, the first rifle young shooters buy is a Ruger 10/22 followed by some sort of AR. Maybe it is only us seasoned shooters buying bolt actions?"

decade or so after the war, manufacturers sold every gun they could make.

TIME CHANGE

But it didn't last. Firearms manufacturers have some special challenges. Rifles don't wear out very quickly. If they are going to be safe and reliable they have to be at least fairly well made, and they last several lifetimes. A gun owner in the 1950s who had a .22, a "deer rifle," and a shotgun was well equipped and not in the market for more guns. Once you have one bolt-action .30-'06 hunting rifle, you don't need another. There just weren't enough new shooters to sustain the market.

The success of the .222 Rem. cartridge (1950) had a profound effect on rifle enthusiasts and even more on rifle makers. Gunmakers found they didn't necessarily have to find new buyers; current rifle owners were a prime market for more rifle sales. They just needed to keep rifle enthusiasts coming back for more. New cartridges kept these shooters interested. Where riflemen had been content with one centerfire rifle, now they were prepared to buy two, or five, 10...

These modern value-priced rifles let us experiment with new cartridges without spending a fortune. Ruger American rifles (including the new Generation II) are available for many of the newer cartridges including .22 ARC, 6mm ARC, 6mm Creedmoor, 6.5mm

Grendel, 6.5mm Creedmoor, 6.5mm PRC, 7mm PRC, .300 Blackout, .350 Legend, .400 Legend, .450 Bushmaster.

BRINGING IT HOME

I much prefer the Ruger 77/Hawkeye rifles over the American. I think they are smoother and more reliable, more aesthetically pleasing, and I like the integral scope bases. I'm not crazy about detachable synthetic magazines. As a tough, durable, reliable hunting rifle, it's hard to beat the Ruger Hawkeye. But the Hawkeye currently has a suggested retail price of around \$1,400. The American has a suggested retail of \$600 to \$750 depending on version. The American may not be quite as pretty but it surely is accurate. Which is why, when this old timer wanted to try out the 6mm Creedmoor and .350 Legend cartridges, I bought Ruger American rifles.

Or consider two Winchester rifles, both chambered for the newer 6.8 Western cartridge. Suggested retail of the prestigious Model 70 is about \$1,300, with prices varying somewhat depending on version. The Winchester XPR suggested retail is about half as much, running from \$600 to \$650, again depending on which version.

I'm glad makers have found a way to provide great value for the money. But they dang sure better not stop making my beloved Ruger 77s and Winchester 70s!

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BLACK POWDER .44S WITH CONICAL BULLETS LONG NOSE CAN CAUSE TROUBLE

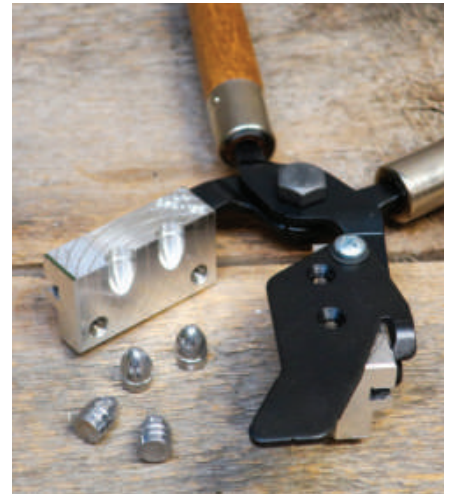
John Taffin

By 1850, Colt had the .44 Dragoon, the .31 Pocket Pistols and the 1851 Navy .36. The Dragoons were too large and heavy for most to consider carrying on the belt and the pocket pistols were just that — for concealed use. The 1851 Navy was just about perfect for belt carry with only one drawback: Power-wise it was about equivalent to today's .380 ACP. If the Dragoons were too heavy and if the Navy was underpowered, would it be possible to combine the two in a new sixgun?

The engineers at Colt took a good look at the 1851 Navy and discovered the cylinder was too small for six .44

chambers. The solution was quite ingenious. Using the basic 1851 Navy frame, they increased the diameter of the front part of the cylinder and cut a step in the water table of the frame to compensate for this.

So basically the sixgun that emerged, the 1860 Army .44, is simply a converted 1851 Navy. It is always easy to recognize Colt .44s whether they be originals or replica 1860s, or fantasy replicas consisting of the 1851 Navy in .44. The giveaway is the two-diameter cylinder and the step in the water table. With the conversion of the 1851 Navy .36 to the 1860 Army .44, Colt also changed the configuration of the barrel and loading lever, going to a more streamlined round barrel



Eras Gone supplies double cavity Lee molds for historically authentic .44 bullets.

and rack-and-pinion loading lever. The added benefit was it was a lot cheaper to make a round barrel than to copy the octagon barrel of the 1851 Navy.

The original 1860 Army .44s had a loading port that easily accepted conical bullets. This is simply not the case with today's Colt replicas. When it comes to using conical bullets in the 1860 Army, we soon find once again the reality of the statement "all sixguns are a law unto themselves" with each having a distinct personality.

I have a pair of 2nd Generation Colt Black Powder Arms Model 1860 .44s, which were produced under the auspices of Colt, first using Uberti parts beginning in 1971 and then two years later the production and parts procurement was turned over to Iver Johnson. Colt set the specifications in a 120-page booklet and also inspected these sixguns. They are finely fitted and finished with very smooth actions. They are a cut above the normal Italian-made replicas.

I approached this pair to check out the use of two conical bullets, namely the historically correct Johnston & Dow and also the round-nosed Lee conical bullet. Both bullets could be easily loaded through the port in the 1860 Army McCulloch Model, a blued sixgun with a full fluted cylinder.

However, when I checked the same two bullets in the 1860 Army Stainless Steel version, neither one could be loaded through the loading port.



Bullets (above) for the Model 1860 Army .44 include 200- and 220-grain round-nosed Lee bullets, and Eras Gone Johnston & Dow and Kerr bullets. Colt Black Powder Arms 2nd Generation McCulloch 1860 and stainless steel 1860 (below) with Johnston & Dow cast bullets.

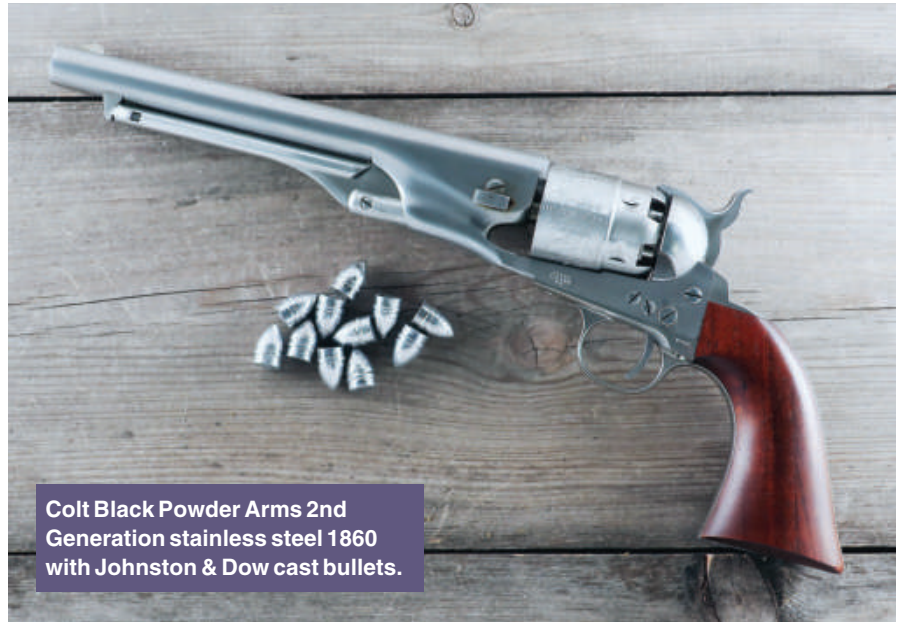


For this model there are two options, namely loading the cylinder off the gun or opening up the loading port with a Dremel tool. Since this particular model is stainless steel, the port could be beveled and re-bluing would not be necessary.

Eras Gone Bullet Molds specializes in period-authentic conical bullets. For the .44 percussion sixguns, they offer the above-mentioned Johnston & Dow as well as the British-designed .44 Kerr bullet. Both of these have a base that is slightly smaller than the rest of the bullet to allow the insertion into the front of the cylinder. They also offer a Dragoon .44 weighing around 260 grains when cast of pure lead. It works fine in the Walker and Dragoon models but also takes up a lot of cylinder space, precluding its use for the 1860 Army .44 unless one is satisfied with very low muzzle velocities.

One-hundred and fifty years ago, the service load for the 1860 Army was 25.0 grains of black powder. We don't know just what that particular black powder entails, however, I decided to go with this load for use with the above-mentioned conical bullets. Lately I have been using plastic vials to pre-measure my charges and when ready to shoot, I just pick the appropriate vial to dispense the powder.

I use 1.5 mL vials, available for under \$20 for 500 on Amazon. The maximum capacity of these are



Colt Black Powder Arms 2nd Generation stainless steel 1860 with Johnston & Dow cast bullets.

under 30 grains by volume. For larger charges I go with 2.0 mL plastic vials with a screw-on cap. For this extra capacity the cost is about four times the 1.5 mL vials.

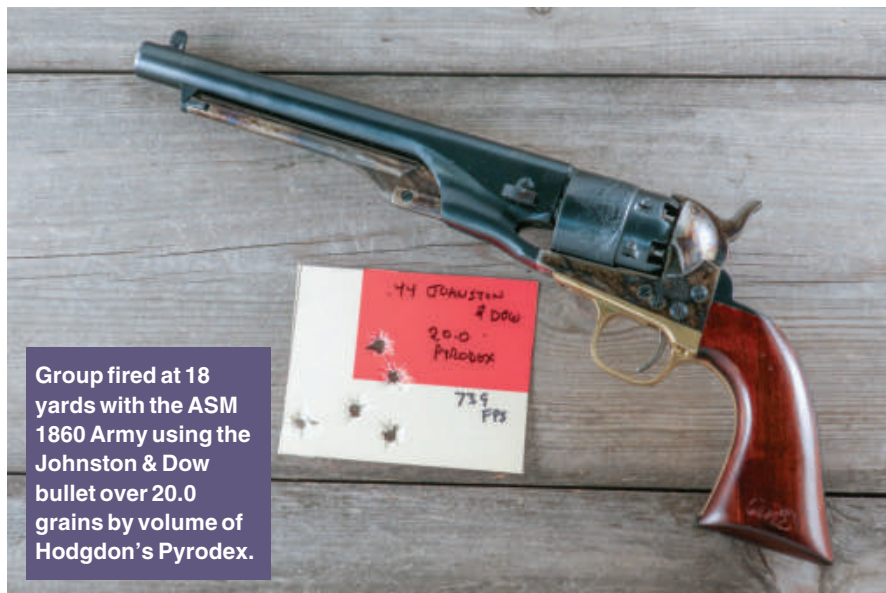
My black powder of choice includes Goex, Swiss, Wano and Elephant Brand FFFg granulations and loaded in the above-mentioned 25.0 grains by volume. Switching to black powder substitutes — which are much easier to obtain — my powders of choice are Hodgdon's Pyrodex and 777, as well as Cleanshot, all in FFFg. The two substitute black powders from Hodgdon are the easiest to obtain and I can order these and have them delivered to and

picked up at my local Cabela's with no hazmat fee. They are also slightly cleaner burning and easier to clean up after than black powder.

My standard test charge of all powders mentioned is 20.0 grains by volume, resulting in muzzle velocities of 725 to 750 fps. My test vehicles were three ASM (*Armi San Marco*) Model 1860 Army replicas. The chamber mouth on these is 0.448" and I ran into problems when trying to use 0.451" and 0.454" Johnston & Dow or British Kerr bullets. Seating was difficult with some and impossible with others. I found out why with use of plug gauges. The chambers are not uniform in diameter but rather taper to 0.439" at the back portion. The Johnston & Dow bullet has a base that is smaller in diameter than the Kerr bullet, so it is usually easier to seat.

During the Civil War Colt made millions of paper cartridges using conical bullets for the Union troops. The cylinders of the original 1860s had to be cut to allow easy use of conical bullets, or troopers would find themselves with a gun jam in the heat of battle. Apparently current replicas are basically cut for the use of round balls. If I find other .44 replicas have the same taper, I will take the easier route and use the .44 conical bullets in the Dragoons, the cylinders of which are much more receptive.

GUNS



Group fired at 18 yards with the ASM 1860 Army using the Johnston & Dow bullet over 20.0 grains by volume of Hodgdon's Pyrodex.

VERN

A REMARKABLE FRIENDSHIP

Will Dabbs, MD

What is it about the gun world that foments such extraordinary friendships? Two total strangers can meet over a vintage Luger and cherish each other's company until one finally breathes his last. I have several buddies of this caliber. One of these dear friends told me about Vern.

HITLER'S PISSOIR

Vern was drafted toward the end of World War II and sent to Berlin where he pulled occupation duty while assigned to the 78th Infantry Division. Vern proudly related he had urinated on the wall of Hitler's office.

An inveterate gun nerd, Vern wandered war-torn Europe looking for unusual weapons. He once pried the hinges off of a locked door to access a crate of unfired StG-44 rifles. He stashed one in a nearby boiler room for retrieval later. When he finally got back to the rifle, he found that somebody had locked the muzzle between two pipes and mangled the barrel.

Vern had always wanted an MG-34 with the armored panzer barrel jacket. He once came across a knocked-out PzKpfz IV tank sporting just such a weapon. However, landing the old machinegun didn't seem worth crawling inside with what remained of the tank crew. He said they looked like hot dogs.

Like most of his generation, Vern came back home ready to make the world a better place. These old guys had seen so much suffering, all they wanted to do was build stuff. Vern ultimately became an accomplished electrician and home contractor. Throughout it all he dabbled in firearms.

Vern never described himself as a gunsmith. He was just a guy who worked on guns. His body of institutional knowledge, however, was profound. He was a regular at Knob Creek and sold gun parts on the side.

SOMETIMES LITTLE THINGS CAN BECOME BIG THINGS

My buddy was just a teenager when he and a friend were prowling about for gun swag. They had no money, but



It was a common interest in M1 rifles that first spawned a lifelong friendship.

they could still dream. On this day they were poking around for Garand clips for guns they could not yet afford. With this as an impetus the two clueless teenage gun nerds drove out into the country and knocked on Vern's door at lunchtime on a weekday.

Vern's wife answered the door and explained Vern was home on his lunch break. If the two youngsters wanted to wait, they could do so in the front yard. Once Vern was done with lunch, he took time out of his professional day to chat about old military rifles. He showed off one of his M1s and explained the wonders of the Civilian Marksmanship Program before sending the two kids on their way. This encounter sparked a most remarkable friendship.

Vern no doubt had other things he needed to do that day. He enjoyed an extensive collection of registered machineguns, and these two kids were just punks with enthusiasm and no resources. However, this man's patience and attention precipitated something truly wonderful.

A FRIENDSHIP BLOSSOMS

After a stint in the Air Force, my buddy returned home to a career in law enforcement. Now single with a little time and a few more resources, he sought out Vern once again. The two men spent untold hours laughing together and parsing history of old machineguns. They did The Creek jointly on several occasions. Vern and his wife all but adopted the young man, sharing meals and celebrating major life events.

Vern had an extensive collection of vintage NFA weapons.





Vern's vintage P-08 Luger and K-43 rifle ended up in Will's friend's personal collection, cherished mementos of a priceless friendship.

Eventually Vern suggested my buddy ought to consider the BATF. His specific admonition was, "Why don't you go to work for ATF? I'm tired of dealing with people who don't know anything about guns." This suggestion sparked a successful career that ultimately led to an immensely satisfying friendship for me.

Over the course of time, age took its toll. Diabetes, arthritis, heart disease and kidney failure make for some sinister synergy. One day out of the blue Vern called my buddy, and

they talked for more than an hour about nothing in particular. Vern closed the conversation with the observation my pal had been a great friend and he had always enjoyed the time they had spent together. Shortly thereafter, Vern was gone.

Vern refused a funeral. He also did not attend anyone else's. Vern said people should be remembered as they were in life, not as some dark final image of death.

As my buddy told me about Vern, he related this, "Writing this has taken me from laughter to free-flowing tears. The only regret I have is that our paths did not intersect more seriously sooner in life. I had 10 years of cherished friendship with an incredibly intelligent, kind, and humble man who took every opportunity to enlighten and entertain me for whatever reason. How can one be anything but grateful for something like that?"

GUNS

BLACK POWDER AND THE .44 COLT
 How Colt's pioneering endeavors were so successful he was invited to the factory and before he died he set the course for the Colt Company.
 Top: Bob Hooper, Gunner #236... **READ MORE**

THE .454 CASULL
 The .45 Colt is a big game cartridge. It has everything as far as fit, form, and function, including excellent looks and performance.
 Top: Bruce Cox, Tribune Photo... **READ MORE**

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GUN SECURITY & MICRO

WALTHER PPK

ONCE 'THE' CLASSIC POCKET AUTO



The PPK is plenty pointable and controllable even with the hotter .32 ACP loads.

Payton Miller

Television and movies have done more than their share of popularizing specific handgun models.

In the 1950s and 1960s, Colt's Single Action Army owed a considerable debt for its rebirth in popularity to a gallery of small-screen Western heroes, stretching from *Gunsmoke*'s Matt Dillon, to *Maverick*'s eponymous poker-playing brothers, on through members of *Bonanza*'s Cartwright clan.

On the big screen, *Dirty Harry*'s Inspector Callahan gave a tremendous boost to the sales figures of Smith & Wesson's Model 29 .44 Magnum. And, towering above them all a whole bunch of James Bond films starting with 1962's *Dr. No* popularized the German-made Walther PPK.

POCKET ROCKET

Of all the blowback "pocket autos" of pre-WWII vintage, foreign or domestic, none of them — the Mauser HSc, Remington Model 51, Colt Model 1903, Ortgies — have the panache, high profile or sheer longevity of the PPK.

In essence, the original PPK is a shortened version of the longer Walther PP, and was called the *Polizei Pistole Kriminal* (Police Pistol

Criminal). PPK specs include a 3.3" barrel length, 6" overall length and a 21-oz. weight unloaded. It was introduced in 1929 and chambered in .22 Long Rifle, .25, .32 and .380 ACP. By most standards, it definitely fits the definition of "pocket pistol."

We decided to reacquaint ourselves with this classic and it wasn't a tough call. Everyone involved went through their formative years watching Bond movies as well as reading Ian Fleming's 14-odd novels.

We were fortunate enough to have a pair of PPKs. Both were

"007 original" in .32 ACP, known overseas by its metric designation of 7.65mm. It's worth recalling there was a time when, particularly in Europe, it was considered a perfectly acceptable law-enforcement cartridge.

Our particular guns were in great shape but admittedly elderly specimens got in well under the wire prior to the 1968 Gun Control Act, which put the brakes on the importation of the PPK. The void, however, was filled in 1979 when Interarms produced the blued and stainless PPK and PPK/s domestically under license.

When quality problems ensued, Interarms contracted with Manhurin in France for the PPK/s only. This task was taken over by Smith & Wesson from 2002 to 2013 and thereafter by Walther Arms of Fort Smith, Ark.

The single-action trigger pull on our "shooter designated" gun was 4 lbs. and exhibited a bit of spongy take-up. The double-action pull? Well, it's best reserved for serious short-range emergencies as it's pretty rough at over 10 lbs. and presents a considerable impediment to anyone optimistic enough to attempt



Two premier German .32 autos: The PPK (top) and the Mauser HSc. The PPK wins the longevity contest as the HSc ceased production in 1977.

precision shooting in the DA mode. On the bright side, the hammer drop/safety is fairly accessible.

RANGE TIME

We used three different .32 ACP loads: the Buffalo Bore 75-grain Hard Cast +P and 60-grain TAC +P as well as some more conventional Mag Tech 71-grain FMJ. The Buffalo Bore HC clocked an impressive 1,090 fps, while the company's 60-grain offering came in at 1,065.

The stouter HC loading approached the .380 ACP but with a bit less snap and gave us the best 50-foot groups of the day. These little heavyweights also shot closest to point of aim. As far as the standard-pressure Mag Tech goes, the average was a more sedate 866 fps, although accuracy was more than acceptable.

Although the power difference between the .32 and .380 ACP favors the .380 — no surprise here! — those souped-up Buffalo Bore loads narrow the gap considerably and would be the preferred choice if your PPK happens to be in .32 ACP. However, .32 specimens like ours are a bit tough to come by. The .380 models have gained ascendancy as any examination of the new or used market will attest.

Before the advent of extended beavertails and Commander-style hammers, the term "hammer bite" got tossed around pretty regularly but the problem with the original PPK is actually better described as "slide slice." Meaning you should use care in positioning your strong hand to spare the tender webbing between your thumb and forefinger.

It's worth noting later and slightly heavier U.S. specimens of the stainless PPK/s feature an extended beavertail to deal with this problem. Oddly enough, some of the Fort Smith Walthers in .22 LR lack the extended beavertail, although they feature a slightly longer grip, giving shooters a bit more real estate in which to position their strong hand.

Well?

So, the \$64 question — Is the PPK an over-romanticized anachronism today?



At 50 feet, the PPK performed very well with the amped-up Buffalo Bore 75-grain HC +P (above). The .32 ACP loads used in the PPK included (below, left to right): Mag Tech 71-grain FMJ, Buffalo Bore's 60-grain TAC +P and 75-grain Hard Cast +P.



I don't think it'll ever capture the hearts and minds of shooters as it did once. Traditional DA/SA pocket autos have, for better or worse, given way to striker-fired compacts chambered in 9mm Parabellum, which feature an undeniably enhanced weight-to-power ratio.

But anything as well-made as the PPK, with a heritage — both cinematic and "real world" — like it has, is going to enrapture shooters. And, at least as far as Ian Fleming's novels go, the PPK remains as much a part of the Bond mystique as Moreland cigarettes, vodka martinis and Bentley sedans.

GUNS

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The Fabulous **.45-70**

Golden Classic Enjoying A Rebirth

**Mike “Duke” Venturino
Photos: Yvonne Venturino**

The year 2024 is the 150th anniversary since the advent of the .45-70 — and if there was ever a cartridge or rifle to fire it that deserved to last a century-and-a-half, this is it!

The U.S. Government introduced its brand new “.45 Government” cartridge in 1873 with a loading using 70 grains of black powder under a 405-grain lead round nose bullet. Soon the general moniker became .45-70, which has stuck unto this day. It should be noted, however, the U.S. Army had two other basic loadings: 55 grains of powder with the same 405-grain bullet intended for the 7-lb. carbines of cavalymen. Then, in the early 1880s, another 70-grain loading was introduced with a 500-grain bullet.

GI ISSUE

The introductory firearms for the army’s new round were both a rifle and a carbine. Rifles had a 32-5/8" barrel length and 22" for carbines. Although the government named these new firearms the Model 1873, the world generally knows them now as the “trapdoor” due to the unique upward-swinging breechblock. Some modern shooters disparage trapdoors as “trashdoors” but the truth is they were well-made firearms for their era. The U.S. Army kept their

trapdoors until well into the 1890s with some units fighting with them in the Spanish-American War of 1898.

As with all cartridges adopted by the U.S. Army, the .45 Gov’t soon became the darling of civilian rifle manufacturers. Winchester, Sharps, Remington, Ballard, Marlin and other companies soon offered .45 Government-chambered rifles although they sometimes created their own names for the round. For instance, the Sharps Rifle Company listed it as “.45-2-1/10", using its case length to sort it from their other .45 caliber rounds.

Those original .45-70 rifles died out in the early 20th century but were resurrected beginning about 1970. I joined the .45-70 revival in 1972. Fresh out of college and getting decent paychecks for the first time, I splurged by buying a Harrington & Richardson trapdoor carbine patterned after the government’s Model of 1873. Also purchased the same day was a Marlin Model 1895. Ruger also got involved in the .45-70 rush with their single-shot No. 1 and No. 3 being offered.

Soon Lyman’s reloading manuals started having three sections for .45-70 reloading. One was for weak actions, i.e. the 1800s single shots and their new replicas, another for Marlin’s new 1895 and Winchester’s original Model 1886 lever gun, and then a third for Ruger’s .45-70 single shots.

Even at the age of 23, I was smart enough to stick to light loads for my H&R Carbine but got a bit reckless with the Marlin. I didn’t hurt it but managed to draw blood from myself with heavy loads — the first and only time I’ve bled from shooting a rifle.

An original Model 1873 trapdoor carbine came my way in 1975 and I still have it. In fact, in 2016 a California film crew asked me to demonstrate it on location near the Little Bighorn Battlefield here in Montana. I proved to them the old carbine could still hit man-sized targets at over 300 yards with black powder ammunition. Unfortunately, not one second of my day-long shooting made the final cut of their documentary!

My enthusiasm for the .45-70 went into a hiatus for a few years while I learned about modern hunting and varmint rifles after becoming a Montana resident. Then, it reignited big-time upon discovering a new company named Shiloh



was recreating the Model 1874 single-shot Sharps rifle. Although I gave much time to their other chamberings, in the long run .45-70 won out again. Of the more than 36 .45-70 rifles I've owned since 1972, 20 of them were the Shiloh Model 1874. My all-time favorite is the one I won for being high-Shiloh shooter at the 2006 NRA BPCR Silhouette National Championships.

FACTORY LOADS

When I started shooting .45-70s in 1972, the only factory ammunition available was by Winchester and Remington. Their loads were identical, with 405-grain jacketed soft point bullets moving at about 1,300 fps muzzle velocity. Upon buying my two .45-70s that year, I also bought five boxes of Remington factory loads essentially for the brass.

Thereafter, very few factory loads have been fired through my .45-70s with the exception of when writing articles. With the .45-70 revival and the advent of strong rifles, both companies mentioned above started offering 300-grain bullet loads moving out at about 1,800 fps. Federal got into the game with such a 300-grain loading. Black Hills Ammunition saw a market in the other direction and came out with a 405-grain lead bullet load at approximately 1,250 fps.

Along with more powerful factory loads, bullet manufacturers also introduced more modern .45-70 bullets in weights of 300, 350 and 400 grains. Of course the .45 caliber 500-grain bullets already on the market for .458 Winchester could be safely fired in modern .45-70s but no one should expect them to expand at the 1,200-1300 fps they would be traveling with safe powder charges. Until becoming a "gun riter, I had never fired a jacketed bullet in any .45-70, preferring to pour my own.

The first rifles created for the newly introduced .45 Gov't (.45-70) was the Model 1873, with carbine version (top) and infantry rifle (bottom). The original .45 Gov't loading contained 405-grain bullets (inset) in copper cases such as shown in the middle. Flanking it at left is a .50-70 load; at right is a .30-40 Krag.



Duke and Yvonne shown with a bison cow taken in Nebraska with a Shiloh .45-70. The shot distance was lasered as 261 yards — with a 150-year old cartridge. Not bad!

My idea was since the round started with lead alloy bullets (the U.S. Government arsenal loaded the .45-70 using swaged bullets of 1:11 tin/lead alloy), Lyman still offered several .45-70 bullet molds at the time. I picked No. 457124, a round nose rated as 385 grains when using a rather hard formula of No. 2 alloy. My bullets of wheel weight alloy dropped from 390 to 400 grains. Back in those days, Lyman listed factory duplication loads in their manuals and mine dating from 1966 said 38.5 grains of IMR3031 with 405-grain jacketed soft points. The same load stuck when I transferred to the original Model 1873 carbine.

WATERSHED MOMENT

Then in 1985 something momentous happened, at least in my life.

They held an experimental shooting event at the Whittington Center near Raton, NM. It involved shooting at metallic silhouettes at 200, 300, 385 and 500 meters. The kicker was only exposed-hammer, single-shot rifles made prior to 1896 or their modern replicas could be used *and* only rounds loaded with black powder (or Pyrodex) and lead-alloy bullets were legal. Even gas check bullets were banned.

The silhouettes were same as used in high power silhouette competition and those modern shooters could use scopes. Only iron sights were allowed in this new game! (A scoped division was added early in the 21st century because many avid shooters were aging.) I took to NRA Black Powder Cartridge Rifle (BPCR) Silhouette like a duck to water.

To make a long story short, I have now fired in hundreds of BPCR Silhouette events ranging all over the western half of this country. Until the national championships were cancelled in 2020 due to COVID 19, I had fired in all since the first official one in 1987. Although I experimented with the .40-65 and .45-90, the great bulk of my BPCR shooting was with the .45-70 and most certainly my highest scores were with rifles so chambered.

I have loaded and fired tens of thousands of black powder-charged .45-70 rounds, ending up favoring a load of 64 grains of Swiss 1-½ Fg black powder under 560-grain bullets from a custom Steve Brooks mold. After considerable experimentation involving tons of lead alloy and hundreds of pounds of black powder, I have my favorite — the Shiloh Sharps Model 1874 .45-70 giving 5- and 10-shot groups of at least 1-½ minutes of angle at 200 and 300 yards. Other competitors say they can beat that and I don't doubt them because they also can beat me at BPCR silhouette events.

So to end this I say, "Many thanks to you U.S. Army ordnance officers who worked so diligently in the early 1870s to develop such a fine cartridge for us today."

GUNS



The Springfield TRP Series builds on the DNA of the FBI's Hostage Rescue Team pistols built by the Springfield Custom Shop.

SPRINGFIELD ARMORY TACTICAL RESPONSE PISTOL

Superior Bloodlines Make For A New Classic

Roy Huntington

Photos: Rob Jones/
The Imagsmith LLC

Everything seems to have a shelf life and passes through phases of changes and improvements, and good guns are no exception. As a matter of fact, good guns are just that for those very reasons — they are constantly honed, focused and pushed forward as technology and demands change.

IN THE BEGINNING ...

In 1998, the FBI reached out to Springfield to develop a specialized 1911-style pistol to equip the Hostage Rescue Team (HRT). Being the shooters those guys tend to be, they demanded excellent accuracy, 100% reliability and the ability to digest tens of thousands of training rounds.

The gun meeting those specs was eventually built in the Springfield Armory Custom Shop, and went on to spend many years in HRT holsters. Knowing a good thing when they saw it, Springfield developed a model that we mere mortals called the “Professional” — an appropriate moniker if ever I saw one. LE agencies being what they are, many tend to follow the FBI’s bandwagon so Springfield’s Professional model also soon rested in SWAT holsters of all types around the country.

Springfield guns have always been famous for their fit, finish, engineering excellence and reliable accuracy. The Professional took it several steps higher, assuring buyers they’d be getting what were essentially handmade, custom pistols with enhanced fit, custom barrel work, action-tuning and a more formal slide-to-frame fit than production guns. This alone is amazing to me, since “stock” SA 1911s are fit beautifully as delivered, so to ramp that game up is intriguing, to say the least.

As time passed and those “enhancement” ideas took hold, SA eventually developed a lineup of 1911-based autos called the “Tactical Response Pistol,” which is where the magical “TRP” name comes from. These were — and are — guns you take out of the box, clean, lube, test fire and then go to work with them. They’re rugged, accurate, reliable and have been proven to be recognized as one of the best of the breed when it comes to first-line fighting 1911 pistols. It’s easy to see why, as each generation built on the



last, compiling a long list of what works in the real world then applying it.

2001 — A SPRINGFIELD ODYSSEY

The TRP has been making waves since 2001 but sensing market needs, SA decided to spice things up and restore the lineup, offering six new models at our press time. But I suspect there might be more by the time you read this.

My “4-Pack” has two 4.25” models (call them “Commander-sized”) and two 5” models. These will be available in .45 ACP initially but I predict you’ll see them in 9mm soon. You can get them in black, or Coyote Brown (Cerakote). I’m partial to the brown, I confess. All models can be had with or without a light rail. Frankly, this is a fighting pistol and getting one without a light rail just doesn’t make sense to me. But if you’re a weekend warrior at your local gun club matches, then a standard model would be fine.



GUNS[®]

MAGAZINE



SPRINGFIELD ARMORY TACTICAL RESPONSE PISTOL

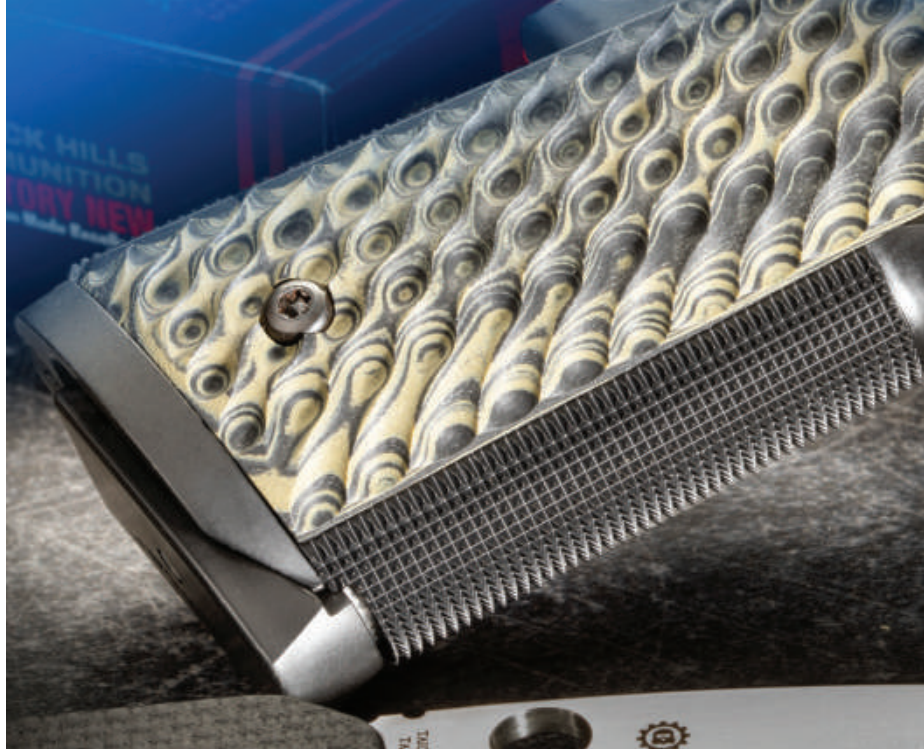
SPRINGFIELD TRP GEAR LIST

Ammo: Black Hills 230-gr. JHP

Knife: Spyderco Smock

Duty Gear: All Safariland

CCW Holster: Comp Tac International



The rear sight (above, left) features enough of a ledge to operate the slide in an emergency but without the snagability of “suppressor-height” sights, while the ambi safety meets the “Three Bears Test” — Juuuust right! The grip (above, right) features 20-lpi checkering fore-and-aft to maintain a firm grip, while some of the pistols offer a rounded butt to help to keep your concealed firearm concealed!

I also particularly like the 4.25" Concealed Contour model with a round-butt option and built on a lightweight forged aluminum frame. Speaking of which, the slides and frames on all the models (steel or aluminum) began life as a forging so it's tough as hell and machines beautifully. It really shows in the fit of these remarkable guns.

The idea behind all this is summed up by Steve Kramer, VP of Marketing for SA: “The TRP has long been one of the most respected 1911 pistols not only in the Springfield line but also in the broader 1911 community. With these new TRP variants, Springfield Armory is taking a proven classic into the 21st century.”

Couldn't have said it better myself! While many pine for the old days of “old world craftsmanship” and such, taking advantage of light-year advances in engineering, materials and machining technology is where the game is at and SA knows that.

Do keep in mind these guns all receive personal attention at every level. Once the slide and frame are mated, all succeeding parts are kept with the gun as the final platform is created. It's the old “sum of the parts” equation. The attention shows in the lack of sharp edges, flawless fit of the barrel, hood, lugs, bushing and more. If you don an Opti-Visor and look at these guns, you won't see any tool marks — period.

ASPECTS AND PARTICULARS

The entire lineup is a series '70s-style operating system. There are no optic cuts by the way, and I consider it just fine. If you want an optic, buy another model, sorry. Only, not sorry.

The 5" guns have standard, classic, un-ramped barrels showing all the polish and fit you'd expect on a gun like

the TRP. The 4.25" guns showcase ramped barrels, also with polished ramps and other such niceties.

I tested the trigger on all four of my test guns and found them to all be very consistent in the 4.5- to 5-lb. weight. I don't think going any lighter is appropriate on a defense pistol, but that's just me. Interestingly enough, I found the two shorter guns to have a tiny bit of creep prior to breaking, while both 5" guns were very nice, with classic breaks when the wall was met. However, I suspect the two short guns will smooth out with use, as things like that tend to do on new, tightly fit guns. Oh, the triggers are lightweight and pierced to help with sear bounce and other mysterious things, plus it looks nice.

All four guns parade 20-LPI checkering on front straps and the hammer spring housing. There's also a simply perfect slide-top serration running back-to-front to keep heat-blur down I suppose, but in my book it also looks very smart and is beautifully done. Touches like this help to set things apart.

Grips are G-10 Hydra-Grips from VZ and show off the eye-catching color and texture VZ is justly famous for. They also feel great in the hand with just enough “catch” to stay put but not enough to wear blisters over a three-day class. You know what I mean.

Sights are the popular three-dot tritium, with the rear being big, bold and high enough to catch on your belt or something if you need to run the slide. Speaking of slide-running, they all have forward serrations many use for press-checking. I've never really needed those but many like the idea and if you do, here you go.

There are nicely designed two-piece mag wells on all but the Concealed Contour model, making mag



Roy was able to turn the barrel bushings quite easily by hand yet the barrels lock-up rock-solid (above, right) — and you certainly can't complain about the level of accuracy!

swaps fast and slick. Safeties are big but not too big, and ambi too. The hammers are skeletonized and look pretty cool to boot. There's no hand-web-biting either as the beavertails offer solace to such events. The two 5" guns come equipped with full-length recoil guide rods, while the 4.25" versions are classic set-ups.

Intriguingly, I was able to turn the barrel bushings quite easily by hand yet the barrels lock-up rock-solidly. Mags are eight rounds but the Contour model has standard-looking 7-round mags. The 8-round ones fit nicely though and didn't stick out appreciably further. Each gun comes with a nylon case and three mags. Seems they've thought of most everything.

Don't forget, for you California outcasts, there are two 5" models, which are allowed into your state, black, railed and un-railed models and a stainless un-railed model. Better than nothing, eh?

ACCURATE AND RELIABLE

I took most of one day and carefully shot my way through all four pistols. I used seven different loads, running each over a chrono and targeted them all too. I found the difference in velocities between the 5" guns and the 4.25" guns to be meaningless. Some were faster in the 5" while some were faster in the short guns, so don't waste any time worrying about such things.

I found the tan, 5" railed model to be the "most" accurate, but all were within a half-inch of each other at 25 yards and it depended on the ammo involved, too. Some liked one, while another liked a different load. I'd experiment yourself as your results will indeed vary, as they say.

They all ran just fine but I did take the liberty of giving them a light clean and good lube prior to shooting. I also used high-quality factory-loaded ammo to give things a fair chance to work. And work, they did. Total rounds expended was in the 500 range, so call it

about 125 rounds per gun. But there were no bobbles at all, which didn't surprise me either. Keeping a firm firing grip and using good ammo always pays bonuses.

How accurate were they, you wonder? How about a 7/8" group at 25 yards from a rest with Speer Gold Dot with the 5" railed model? Gold Dot is, dare I say it, a gold standard when it comes to reliability and accuracy so the only surprise there was just how much the gun liked that load. It was no fluke either as they all hovered in that magical 1" range with Gold Dot. Simply marvelous and amazing ... and satisfying. These guns make you feel like you know how to shoot.

The 4.25" versions hovered in the 1.25" to 1.5" range but I suspect it was simply the shorter sight radius being the culprit, along with my aged eyes. I'm waiting on a Ransom Rest so will revisit things later, I assure you.

Just for fun, I put 25 rounds through the tan, 5" railed gun at 25 yards and the result was a ragged group just under 1.5". I don't care who you are, that's pretty darn cool. These guns shoot like lasers, run like a Boston Marathon winner and don't have to hide from anything when it comes to fit, finish and performance. For \$1,999 — or a bit less depending on the model — you get to benefit from close to 30 years spent perfecting the lineup you see here. Buy one, check it, load it and enjoy it — period.

As Mike Humphries of Springfield told me: "Made here in the United States at our state-of-the-art manufacturing facility in Geneseo, Ill., all six of the new TRP pistols offer shooters a near custom-grade pistol — at a production pistol price."

Mike summed it up neatly, if you ask me.

GUNS

Springfield-Armory.com



THE BARNETT **King Rat Havoc Slingshot**

A Timeless Tool For Work & Play

Will Dabbs, MD

The humble slingshot is the ideal packable tool for survival and subsistence. It doesn't require expensive ammunition and can, in a pinch, even shoot rocks. Power comes from your arm and the good ones will fold up to about nothing.

Nobody makes a slingshot like Barnett and their King Rat Havoc model transports the classic millennia-old slingshot into the Information Age. Sleek, powerful, cool, and just oozing with tech, the King Rat Havoc is both fun to shoot and nasty downrange. A little time in the backyard behind one of these puppies will remind you what dragged you into this curious hobby in the first place.

The concept of personal survival in a world gone mad sells a lot of top-quality magazines. Geeks like me settle in comfortably behind our word processors before a roaring fire in the fireplace chugging M&Ms and sipping chocolate

milk while waxing poetic about survival situations most dire. Well, here's what that looks like out in the real world...

SLINGSHOTS FOR SURVIVAL, SORT OF ...

Our hero was a guy named Tim. I flew with him when we were both stationed in Alaska. A genuinely great bloke, Tim would regularly shovel snow for the families left behind when their soldiers were on deployment. Before he went to flight school, Tim was an enlisted soldier with an attack helicopter unit stationed in Germany during the Cold War.

If the Cold War ever went hot, our bases would be pulverized in short order. As such, some rocket surgeon had the great idea to preposition crates of cannon ammo and similar ordnance out in the German hinterlands. This they surrounded by concertina wire with but a single access point. Attack aircraft in action could theoretically just scoot over to these ad-hoc rearm points, top off with bullets and rockets, and keep taking the fight to Ivan. The rub was how

The Barnett King Rat Havoc slingshot is lightweight, compact and powerful. It makes a great addition to any survival loadout.



to secure all that ordnance out in the sticks when the world was not technically at war.

The solution was to take two Army Privates with M-16 rifles, give them each 20 rounds of ammo, and leave them there in 8-hour shifts to stand watch. Rain or shine, somebody sat out there guarding that junk. These poor shmucks were also responsible for every single one of those 5.56mm rounds on pain of death. It was ghastly duty to be rightfully dreaded. Be all you can be ...

To make things worse, they had MREs to eat. Though basically tolerable to humans, the GI-issue meals are apparently like crack cocaine for feral pigs. In short order these massive European swine would wander inside the wire looking for scraps and run the two Privates up on top of the ammo crates. If nothing else, it was just embarrassing. This is when Tim had an epiphany.

He called home and had his mom ship him a proper slingshot. The next time he was on rocket duty, Tim carefully sprinkled his MRE bits around as bait. A modest herd of the hideous beasts showed up in short order, led by a behemoth 400-lb. monster boar.

Tim climbed up on the crates and waited until the big gentleman was right underneath him. Placing the slingshot perhaps half an inch above his massive hairy head, Tim drew back his ball bearing as far as he was able and let fly, catching the creature right between the ears.

All four legs went in four different directions. The big pig finally wobbled to his feet with great difficulty and promptly ran afoul of the concertina wire, squealing like, well, an enraged pig. Tim then opened up on his mates.

A grand time was had by all. Unless you were a pig, in which case it all kind of sucked. All the swine survived, but they were harshly reminded of which animal had the biggest brain. The following day every Private in the unit was on the horn asking for slingshots. There was also not nearly so much griping about the duty roster.

TASTES LIKE CHICKEN ...

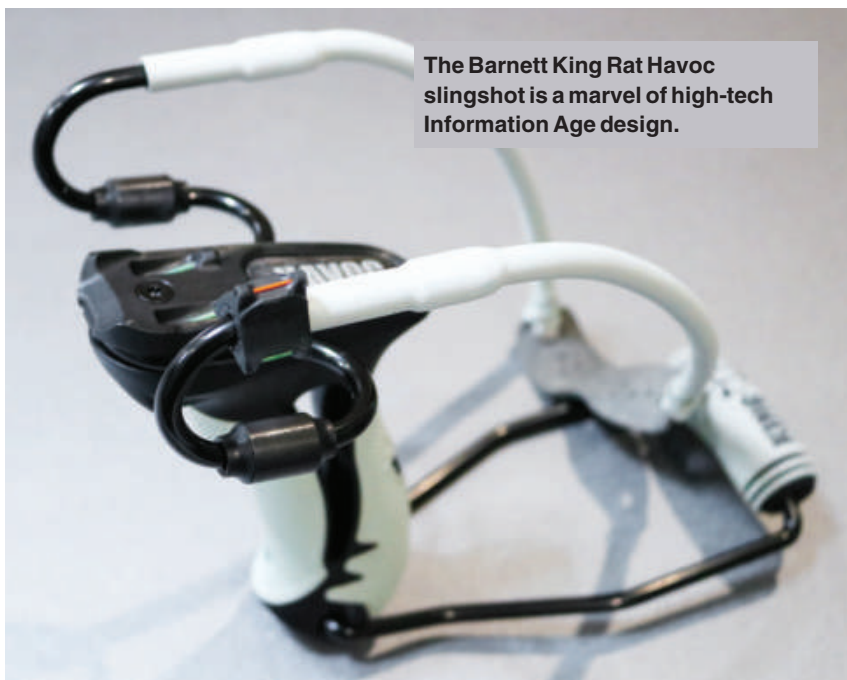
I did a couple of military survival schools back in the day. I graduated from each, fit and lean, ready to sally forth and live off the land. In my prime, I would eat anything once. Some of the protein I procured in the wild like arctic grayling and Alaskan ptarmigan was truly fine eating. Some other stuff, however, not so much.

I was an Army helicopter pilot and whenever we flew off base we each carried a survival ruck onboard the aircraft. These rucksacks included cold weather gear, sleeping bags, and similar stuff to help keep body and soul together should we ever be forced down someplace dreadful. I also kept a folding slingshot in mine.

During one particular month-long field exercise, I was wandering about with my slingshot shooting stuff and happened upon a particularly dimwitted ground squirrel. The entire state of Alaska is covered in a patina of the furry little rascals.

I eased up close and terminated the fellow with a well-placed ball bearing. I then cleaned him with my survival knife and jury-rigged a makeshift spit over the Yukon stove in my ops tent. By now a crowd had gathered.

Once the rangy beast seemed adequately toasted, I carved off a chunk and tossed it back. It did not taste at all like chicken. I would more accurately liken it to roasted rat or perhaps a smoked turd, though I obviously had no ready frame of reference for either comparison. The culinary experience was unequivocally horrible. Zero stars. Would not recommend. It was then I fully realized the true extent of my epically poor judgment.



The Barnett King Rat Havoc slingshot is a marvel of high-tech Information Age design.

I was going to be out in the woods for quite some while yet, and roasted ground squirrel leaves a mean aftertaste. I ate cocoa beverage powder dry and swished out my pie hole with reconstituted MRE orange drink. Nothing really helped. Suffice to say, it took a minute to get that greasy nasty taste out of my mouth.

Nobody else was stupid enough to follow my lead, and I still had to hump the carcass way outside the company area lest we all be molested in our sleep by inquisitive grizzly bears. All in all, it was a cheap lesson, I suppose. However, it also makes a lovely segue into a discussion of the coolest slingshot in the entire world.

THE RAT RACE

Barnett made their name in crossbows. In fact, the words “Barnett Crossbows” just naturally go together much as might Post-It Note, Polaroid Camera, Scotch Tape, and Corrupt Politician. However, Barnett makes lots of other cool stuff as well.

Barnett offers a wide selection of both compound and recurve bows as well as some shockingly advanced slingshots. To a guy inured to the costs of high-end firearms, their products are also very reasonably priced. A top-end compound crossbow will set you back about \$700. A really nice mid-range unit is maybe half that. By contrast, the King Rat Havoc slingshot is \$25. This wouldn't buy you a decent box of ammo in many places.

Legit, have you shopped for groceries lately? \$25 won't get you bupkis these days. The Barnett King Rat Havoc slingshot is arguably the best-spent \$25 in the entire world.

The Havoc is awash with cool bells and whistles. There is a folding brace with a skeletonized diamond-knurled grip and soft foam wrist pad. Built-in vibration dampeners add smoothness and consistency. Magnum power bands maximize performance, while the brushed leather pouch sports a centering hole for consistency shot-to-shot. The gray and black color scheme also looks cool. I should be above such vapid stuff, but, lamentably, it appears I am not.

There are actually two different sighting systems. A built-in fiber optic rig is an integral part of the grip. There is also a rotating sight affixed to one limb of the device.



Barnett sells .38-caliber steel ball bearings that perfectly complement their extensive line of slingshots.



The Barnett King Rat Havoc slingshot weighs about nothing and folds up into a small handy package.

This clever widget includes three different fiber optic aiming points calibrated for three different ranges. Once you take its measure, the Havoc shoots plenty straight.

PRACTICAL TACTICAL

Barnett will sell you 200 rounds of slingshot ammo for \$15. My powder scale tells me each steel ball bearing weighs 54.5 grains. My average for a five-shot string was about 175 feet per second. This gives you a whopping four foot-pounds of energy. By way of comparison, a low-end .22 Short is about 10 times that. However, as any proper ballisticsian will tell you, the numbers only tell part of the story.

This is not the tool you want if you are trying to bag a record Kodiak brown bear. However, if you just want to put the thump on a ground squirrel, ptarmigan, or bunny at close range, the King Rat Havoc is a fine choice. It would honestly give any sensible human being pause as well should you be pressed into using it for defensive purposes.

I found that I could loft my ball bearings out to about 100 meters. Personally my maximum effective range was about 20 meters. However, my steel shot buried itself so deep into my archery target I couldn't get it out without tearing the thing up.

Beautifully executed, monotonously effective for its intended purpose, and an undeniable bargain, the Barnett King Rat Havoc slingshot is a critical part of any proper survival loadout.

GUNS

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PYROTECHNIC

PLUNGER PROJECT

BUILDING A 'BOMB' FROM STAIR RAILING

Will Dabbs, MD

Did you know a deftly wielded Projector, Infantry, Anti-Tank (PIAT) bomb — a not-well-regarded British anti-tank weapon — actually saved the D-Day invasion?

The British 6th Airborne Division and other units landed in Normandy behind the beachhead early in the morning of June 6, 1944 to capture area bridges

in order to stall German reinforcements. Everything went relatively well until the brits heard the clank of tanks approaching.

Taking his PIAT gun and two remaining rounds of ammo, SGT Thomas “Wagger” Thornton blew up the lead Panzer in a choke point and prevented the follow-on armor from reaching the bridges so tenuously held by the lightly armed paratroopers. SGT Thornton’s fortitude and coolness under fire effectively stopped the



The end result is the perfect complement to Will's vintage PIAT launcher. Being made of wood and toilet parts, it's about as inert as you can get.

German armored counterattack from reaching the invasion beaches. It is not hyperbole to say this one shot by this one man from this one gun potentially saved the D-Day invasion.

THE WEAPON

At 34 lbs., the PIAT was a truly monstrous thing. The PIAT was actually a spigot mortar. It used a powerful spring to launch a 2.2-lb. projectile assisted by a propellant charge in the base of the round. The maximum effective range of the gun was listed as 115 yards against point targets and 350 yards against the area sort. Tommies who used the gun in combat claimed it was only really good out to about 50. In combat, one in four rounds failed to detonate. However, for all its faults, the PIAT accounted for more German tanks destroyed during the Normandy invasion than did Allied fighter bombers.

Literally, nobody on the planet needs a PIAT gun. You can't shoot it, and the thing is as heavy as a late-night philosophy discussion in a freshman college dorm at Berkeley. However, after reading Stephen Ambrose's telling of the story in his superb book *Pegasus Bridge*, I



The PIAT was actually a spigot mortar. This spring-driven rod has a firing pin on the end that shoves up into the projectile.

just had to have one. I eventually found a nice example on GunBroker.com.

PIAT guns on this side of the pond are rare, but demilled PIAT ammunition is unobtainium. I poked around for literally decades looking for a PIAT round to go with the cool British anti-tank weapon in my collection, and always came up dry. The British actually call these things PIAT "bombs." Then, while on a long-anticipated vacation to the UK with my wife, I walked into an antiques shop in London and heard angels singing.

There behind the glass counter was a WWII-vintage deactivated PIAT bomb at a decent price. However, the moment the proprietor heard my American accent, he told me to put my credit card away. He explained that it was literally impossible to get deactivated ordnance through customs to the States. I briefly considered trying to sneak it onto the plane home, but my long-suffering bride intervened. Spending the next 20 years in a British prison lacked appeal.

When the exigencies of life and the ignorance of the uninitiated conspire to prevent me from adding a PIAT bomb to my personal militaria collection, I saw no other alternative than to retire to my workshop and craft my own.

TECHNICAL DETAILS

The heart of my homebuilt PIAT bomb is a wooden stair rail baluster from Home Depot. This thing set me back maybe four bucks and was already kind of round. I used a stick of PVC scrap for the body and crafted the fins and stabilizing ring out of scrap roof flashing riveted in place. The fuse started out as a broken toilet bowl plunger.

I have made wooden models in my workshop for decades. They always start out as a diagram downloaded from the Internet. Translating the diagram into a physical object takes a little basic math.

I start by establishing a single cardinal dimension for my final product. In this case, it was the diameter of the warhead. I then carefully measure the same dimension on

my diagram and divide the real number by the diagram number. This gave me a unique ratio I could jot down on my diagram or my workbench. With this as a basis, I can measure anything I want on the diagram, multiply it by this ratio, and determine how big to make the component. Using this same basic idea, I have crafted literally countless boats, ships and airplanes out of white pine lumber. As the geometry of the PIAT bomb is fairly uniform and predictable, this becomes a pretty straightforward chore.



With the top of the round complete, it was time to build the fins. You can roughly cut the sheet metal bits with tin snips.



The warhead for Will's PIAT round began life as a wooden stair baluster (above) from Home Depot. The finished round (below) ready for painting looks undeniably crude.



To craft the warhead I removed the mounting screw from the baluster, chucked it up in the lathe and shaped it by hand. Once the warhead was roughly the right shape, I polished it up on the lathe with sandpaper and set it aside.

I measured out the fuse in the same manner and turned it down from the broken dowel that had previously been the handle to a toilet bowl plunger. This wood was fairly soft and easy to work. Once this was complete, I carefully drilled a hole in the base of the fuse and the top of the warhead. By gluing a small length of dowel in place, I joined these two components, rotating them until the geometry seemed right.

I turned the base of the warhead to be a slip fit for the inside of the PVC pipe and secured it in place with a sheet metal screw. I ground the head of the screw down with a bench grinder so it didn't look so lame. Then it was time for the fins.

Roofing flashing is an underappreciated hobby material. My kids and I built two complete sets of *Lorica Segmentata* or Roman Legionnaire's armor out of the stuff as homeschool projects when they were young. The metal is fairly soft and easy to bend using a vise and hammer but do take care. Those edges can be razor-sharp. You can cut it with tin snips or a cutoff wheel on a table saw after marking the desired shape with a Sharpie.

The original PIAT bombs had four fins. I used three, so it wouldn't get so cluttered. I used a protractor to draw a compass rose of sorts on my workbench, with each leg separated by 120 degrees. Then by carefully setting the PVC pipe in the middle, I could mark off the location where each fin should be. I used a center punch to site the holes for my drill press and secured everything in place with pop rivets.

Don't let the pop rivets intimidate you. A cheap rivet tool costs \$4.99 from Harbor Freight and will last you a lifetime. I sized everything via trial and error. If something doesn't fit, just throw it away and make another. Roofing flashing is just dirt cheap.

RUMINATIONS

I picked a Mk IV HEAT round and painted the bomb accordingly. I first painted the whole thing blue, masking off the stripe, and then painted the whole thing yellow. You then mask off the larger stripe and paint the whole rig olive drab. The spray paint came from Walmart.

My first OD coat went on when it was below freezing outside and subsequently cracked. This disappointed me at first. However, a further coat of OD sealed everything up nicely, and the cracks underneath make the round look old. As such, it is a perfect mate to my vintage PIAT gun. Half an hour touching everything up with water-based acrylic brush paint from Walmart finished out the project.

An afternoon spent in my horribly cluttered workshop conjuring a makeshift PIAT bomb out of literal garbage was inimitably satisfying — and I didn't have to see the inside of a British jail!

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Home Project:

RUST BLUING

THE AMAZING — AND ACHIEVABLE — PROCESS OF REFINISHING YOUR OWN GUN

Frank Jardim

In this age of black modern sporting rifles, bluing as a firearm finish seems to have gone out of style. As guns change, so do gun finishes. Bluing and related browning are traditional processes for protecting and improving the appearance of ferrous metals (those containing iron). With so many guns made of aluminum and polymers, bluing obviously can't be the universal finishing solution for gun manufacturers it once was.


Even if we just considered steel guns or the steel parts of guns, bluing is just one of many finishing options; and the truth is it can't offer the protection level of more technologically advanced finishes. For example, phosphate coating (Parkerization) became widespread on military arms in World War I because of its superior corrosion resistance. The development of incredibly durable epoxy and ceramic paints

combined corrosion protection that didn't need oiling with unprecedented color options. More recent advances like nitride coating offer protection against rust and wear earlier finishes couldn't even approach.

As a protective finish, bluing is now far removed from the apex, but on certain guns (especially vintage guns) and among traditionally minded shooting enthusiasts, it remains highly desirable for its beauty. Perhaps, like me, you have a few old guns around that could stand a quality re-blue. The question to ask yourself is, "Is the gun worth the cost in time and treasure to re-blue?" If you have more time than treasure, rust bluing could be a great option for you.

RUST BLUING REQUIREMENTS

There are several techniques for bluing guns, but this article will focus on rust bluing because it is the most DIY-friendly method. Rust bluing doesn't require



The barreled receiver on the top looked exactly like the one below before 20 minutes of work with a coarse wire wheel removed the red rust, leaving a dark patina.



To avoid rusting the inside of the barrel, it is heavily greased or painted with lacquer to protect the rifling.



A selection of mini-wire wheels and brushes for your rotary tool for the hard-to-reach areas can really speed up the metal prep. All the scale and dirt have got to go.

the metal to be in high polish (anything over 320-grit is counterproductive) and doesn't cost much in materials. My rust bluing kit includes a bottle of Brownells Classic Rust Blue (\$15), a flea market stainless steel hemostat (\$5), 0000 steel wool pack (\$4), a heat source in the form of a secondhand RV two burner electric stove top (\$35), a bathroom (two came with the house when I bought it), a tiny jar to transfer bluing solution into for use so the big bottle isn't contaminated, a rubber bungee and wire coat hanger to suspend the parts from, clean cotton patches (a lifetime supply made from my torn-up old pajamas), a few parts-cleaning brushes with fine stainless steel bristles (\$5), a few pairs of nigh-indestructible purple nitrile rubber gloves, Dawn dishwashing liquid, a clean toothbrush, a jar of lacquer thinner, a roll of paper towels, gallons of the right water (more details later), and finally, some steel boiling pans of various sizes I found over the years on the roadside.

Of all the above items, the pans might be your big expense if you aren't a long-time packrat. They need to be steel, strong enough to support the weight of enough boiling water to cover the parts, and big enough for you to get your biggest parts in. It's easy enough to find those narrow, rectangular, stainless-steel pans used in the restaurant industry at yard sales, flea markets, or Tom McHale's unlocked garage. They are great for your pistols, rifle bolts, trigger guards and smaller parts. The problem is finding a pan long enough for a barreled long gun receiver. Fortunately, Brownells makes an excellent



Greased wooden or rubber plugs are driven tightly in the breech and muzzle, and stay there through the whole rust-bluing process.

40"x6"x6", 4.5-gallon capacity, 18-gauge welded black-iron bluing tank (\$147) that will last a lifetime. At this price, I doubt it would be worth an amateur's time to try to make one themselves.

If your material costs for rust bluing are under \$200, you are still well below the cost of the typical commercial hot blue job. If you want to rust blue several guns, the investment is well worth it.

RUST BLUING PROCESS

To clarify, rust bluing and hot bluing are not the same as cold bluing. Compared to rust or hot blues, cold blues wear/rub off easily. Cold blues basically just color the



Frank gives the parts two scrub downs with a toothbrush, boiling water and Dawn dishwashing liquid to get all the oil and grease residue out of the nooks and crannies.



The finished rust bluing (above), oiled and allowed to sit for 24 hours to cure the surface. Rich red rust (below) is the result.

surface of the metal to improve its appearance without improving corrosion protection. By contrast, rust or hot bluing is a passivation process for ferrous metals that improves rust protection by an electrochemical conversion process changing the metal surface to a black oxide of iron called magnetite (Fe_3O_4). Because magnetite is less reactive than the base metal, it provides some protection against corrosion.

Rust bluing, sometimes called “slow-rust bluing,” is very labor intensive, which is why it was replaced by hot salt bath bluing (hot bluing) in manufacturing over a century ago. In the rust blue process, a minuscule amount of acid is wiped on the surface to be blued and allowed to dry for a few minutes before the part is set aside to rust. The acid promotes the formation of red rust (Fe_2O_3). As soon as the part is adequately rusted, it must be boiled in water for 20–30 minutes to transform the red rust (red oxide of iron) into black oxide of iron. After the conversion, the part is removed from the boiling water, and dried, and the black oxide residue is carded off the surface with steel wool to reveal the newly blued surface beneath.

The process is repeated again and again (from six to 20 times) until the desired depth of color is achieved or, theoretically, until the surface no longer rusts. When you have the finish where you want it, the bluing is oiled and allowed to set for 24 hours to cure. The resulting finish is as durable as any bluing can be. By its nature, the rust bluing cannot produce a high polish surface finish of the

Clean and hot from the last wash, the parts are ready to have the bluing solution applied. The hemostat holds a folded patch made of soft flannel cotton.





Apply the bluing solution (left) so it just moistens the surface of the metal without flowing or running. Use long strokes with minimal overlap and avoid rubbing excessively in any one spot. The side of this barrel (right) was polished to bare metal to remove an import mark, yet it took the blue as evenly as the patinaed metal.

type you would see on classic Colt or S&W double-action revolvers. Instead, the surface has a subdued, semi-matte quality with colors ranging from bluish-gray to bluish-black. It's an elegant but business-like finish in it for the long haul.

If you lack patience, rust bluing may drive you insane. Even with patience, there are plenty of ways for the process to go sideways, which I'll share with you based on my experience. The good news is I discovered rust bluing doesn't actually require all the tedious metal preparation steps some instructional sources would have you believe.

CLEANLINESS RULES

Two aspects of efficient and successful rust bluing that can't be overemphasized are the need to keep the parts free from contamination and the need for a source of free water suitable for boiling the parts to convert the red iron oxide to black iron oxide.

If you don't get and keep the metal parts clean and free of dirt and oil, you can't rust blue them. Brownells Classic Rust Blue needs a completely clean, oil-free surface to stick properly. Most rust-bluing compounds are like that. Laurel Mountain Forge is an exception in that it can go on over some slight oil residue. After the initial cleaning, good housekeeping and handling procedures can keep the metal clean through the complete, multi-cycle, rust-bluing process.

Every time you have to clean and degrease the parts, you're sinking more time into an already lengthy process, so it pays to prevent the parts from being contaminated. Plan for a clean place to lay your parts when you work on them and between bluing cycles. Because of all the cooking going on, the kitchen is not the best place to rust blue something. There are unnoticed little patches of butter, cooking oil, and other food product residue here and there, just waiting to get on your gloved hands, clothes, and parts if you make the wrong move. To keep the parts clean, I use fresh newspaper, cut-open paper shopping bags, or clean cardboard for a work surface.

The goal is to never let my hands or the parts touch anything that might contaminate them. Oil from your skin will contaminate the surface. Steel wool is also treated with oil, which you must wash off before using it for carding off the black oxide residue after boiling. Remove oil from steel wool and your wire brushes by rinsing them in a cup of solvent like lacquer thinner or simply by washing them with Dawn dishwashing soap in a bowl of very hot water, rinse in boiling water, squeeze them out, and lay them on your clean work surface to dry. If you forget to clean the oil off the steel wool, you WILL realize your mistake. Oil interferes with the rusting action of the acid, which means no bluing action.

Always wear clean nitrile gloves when handling your tools and the parts. I don't mean the gloves need always

The trigger guard, like the barreled receiver, had some deep pitting. All of the active rust and compacted dirt and grease were removed from the metal before rust bluing. The same parts after clean-up on the wire wheel. Frank used small brushes and coarse steel wool to get inside the trigger guard and magazine box.





be new. I generally use one set of gloves again and again, washing my gloved hands thoroughly in hot water and Dawn frequently, drying them on clean paper towels, and taking off the gloves when I'm done, so I don't inadvertently contaminate them.

By the way, my parts cleaning process begins with putting on nitrile gloves and wiping down the metal with a clean paper towel soaked in lacquer thinner to remove the majority of the oil and grease from the surface. I fold the towel to a fresh side when it is soiled and keep wiping and folding until nothing is transferring to the paper towel. At this point, I take the part to the hot water spigot and scrub it to suds twice with Dawn dishwashing liquid and a clean toothbrush, getting in all the nooks and crannies, followed each time with a boiling hot water rinse. To my delight, this simple regimen works great.

WATER WORKS

The second mission-critical factor in a successful rust-bluing project is the water. You need a lot of water to boil parts ... and not just any water. Some water contains dissolved salts or other contaminants that, while not harmful to drink, will prevent the conversion from red

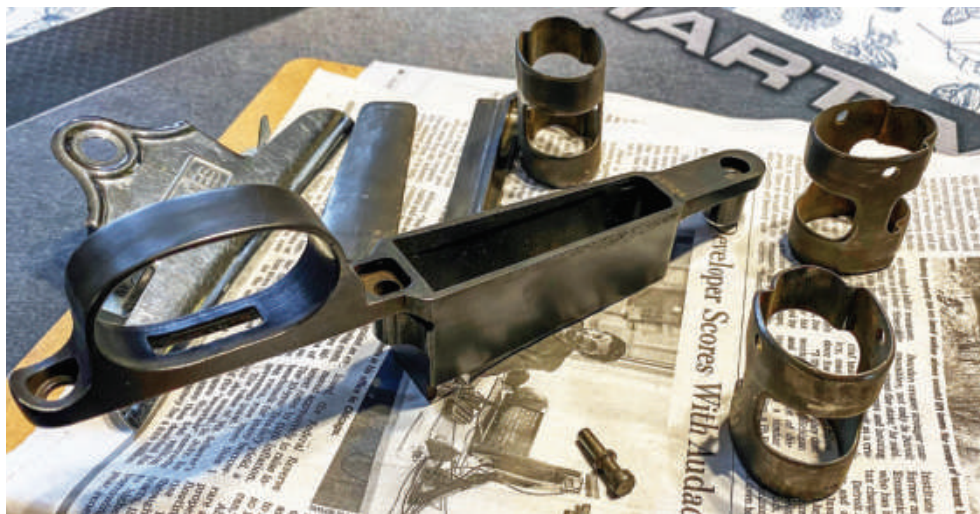
In these photos, you can see the same parts after rusting, after boiling and after carding to reveal the rust bluing below. This was only the second cycle too!

rust to black. For example, while I was doing this rust-bluing project successfully with my home tap water, my wife got a water softener system installed. The new soft water, while a delight on the skin, didn't allow the red rust to convert. I got some untreated (hard) water from my gracious neighbor, who allowed me unfettered access to his garden hose, and once again, the red rust turned black when boiled. In the future, I plan to test my water supply by boiling a small part in it to ensure the rust will convert before I jump off on a full rust-bluing project.

Since rust bluing requires a lot of water, you'll want to get it for free. Buying distilled water by the jug gets expensive quickly. For example, using the Brownells black iron tank to boil a barreled receiver, you'll need four gallons of water for each bluing cycle. If you needed to go through 13 cycles, you would use up 52 gallons of water. At \$1.20 a gallon, this just added \$62 to your project cost. I wouldn't dare reuse the water either. When you boil the parts, bits of rust residue and traces of acid

The velvety red rust turned to velvety black rust (below). Here it's colored whitish-brown due to contamination from the inside of the galvanized boiling pan. Carding off the black residue with fine steel wool (below, right) reveals a beautiful blued finish beneath it. All the residue from conversion has to come off before you can apply the next coat of solution. It's actually quite easy to do by hand.





get in the water. I pour it out when it cools, scrub the inside of the pan clean with a stainless-steel scouring pad (it will have a ring at the surface level), rinse it out with fresh water, and dry it with clean paper towels.

BLUING SOLUTION APPLICATION

With suitable water and clean, dry and preferably still warm parts ready on my clean work surface, I turn my attention to the correct application of the bluing solution. To prevent ruining the whole bottle of bluing solution by contamination, I pour a tiny amount into a small glass jar to work with. It is absurd how little solution is actually needed. I make an applicator by folding up a soft flannel cotton patch into a rectangle the size of my pinky nail and grasp in the jaws of my little 3"-long hemostat. I dip the folded patch in the yellow liquid in my small jar and squeeze it almost dry against the lip of the jar. You don't want the solution to go on wet. Ideally, there is just enough on the patch to moisten the surface of the metal without running.

Work in bright light so you can see what you are doing and have a plan. Apply the solution systematically, in long

strokes with as little overlap as possible and avoid going over the same area twice. I don't know why, but too much rubbing of solution on the metal can precipitate a chemical reaction on the surface that will interfere with the rusting. I've had this happen with Laurel Mountain Forge, where the surface turns coppery.

When properly applied, the bluing solution dries quickly, making it hard to tell where you left off. Being systematic reduces the likelihood that you'll miss a spot. For the first bluing cycle, the standard procedure is to let the first application of solution dry for an hour and then apply a second, even drier coat on top of it. The double coating gives you a second chance to hit any spots you might have missed, so you'll start the first rusting cycle with a good base. I've forgotten to do the second stage application on my first rusting cycle on more than one occasion with no serious problems other than some bare spots that disappeared after a couple of bluing cycles.



Frank uses a solvent-soaked paper towel to wipe off the majority of the oil and grease residue left on the metal surface after cleaning off the rust. Don't rely on solvent alone to get the metal clean enough for bluing.

RUSTING STEP

Once the surface is dry, the rusting process can begin. How much and how fast the rust appears depends on temperature and humidity. The more humid and warm the environment, the faster the rust forms. It can be as little as a few hours or as long as a whole day. The hardness and alloy of the metal also affect how much it rusts. If possible, you should strive for a controlled rusting environment you can easily monitor. Some people build elaborate rusting cabinets.

I use the bathroom, first filling the tub with a few inches of hot water from the spigot and then running the shower until the mirror steams up. I don't want too much steam because it will condense on the cooler metal and form large droplets and sometimes streaks, which dilute the acid's rusting action. (Those defects can be blended away in the next cycle.) I hang the parts from the bathroom shower curtain rod, close the door, and set my alarm to check on them every few hours.



One thing you don't want to do is forget about your parts. Too much rust can lead to pitting of the metal surface, which will tend to give it a very matte look. Ideally, the metal surface will become evenly covered with a thin, delicate-looking layer of tiny red rust dots giving it a velvety look. After a few cycles, you can get a feel for how long the parts need to rust, and you can set your water to boil, so it's ready when they are.

BOILING

After rusting, it's time to transfer the parts to the boiling tank. Twenty to 30 minutes of hard boiling will turn the fuzzy red rust to fuzzy black rust. That's the black oxide we're looking for. Carefully take the parts out to avoid surface contamination. They need to dry quickly when removed from the boiling water to avoid water spots. Usually, the heat from the boil alone is enough to flash dry the metal. Any residual moisture I dry with a clean paper towel.

Card off the black velvet with your cleaned, oil-free steel wool and wire brushes. You can use a wire wheel, but I don't think the increase in carding speed warrants the risk of taking off the blue you just spent hours trying to apply. You have to get off all the black surface residue. I use wire brushes to clean out the tight corners and grooves. Once you card off all the residue, you are left with your rust-blued finish. Repeat the process until you have the depth of color you desire.

PROJECT MAUSER

For this project, I wanted to experiment with a really craptacular looking, 1930s vintage, military Mauser barreled receiver to see how well it would take rust bluing with minimal surface preparation. It was literally covered in red rust from outdoor storage, had deep pitting below the woodline and really couldn't have looked too much more like a piece of scrap metal than it did. Before I could start the bluing, I had to at least remove the red rust. Knowing what I know now, I would have boiled it first.

My first surprise came after using a wire wheel (and some wire brushes for the tight spots inside the action) to knock off the abundant surface rust. As the red rust came off, the metal beneath had a very dark patina that looked a lot like bluing. I thought to myself, "What sorcery is this? Could it be the legacy black iron oxide finish from when the gun was first blued?" If it was, perhaps I could build my rust blue on this old finish.

Many DIY sources, though not Brownells, state all surface rust and old bluing should be removed before attempting a re-blue. Suspecting this was probably not true, I cleaned and degreased the metal and got the rust-bluing process underway. From the start, the results were spectacular. After three cycles on the barreled receiver, I had to question whether I really needed to continue. It looked that good. The old metal finish, whatever it was, didn't appear to interfere with the rust-blue application. Similarly, I tried applying the rust blue solution



Don't let parts touch each other while rusting (above). It can take anywhere from a few hours to a whole day and check often so the rusting doesn't go too far and pit the surface. Convert the red rust to black oxide of iron by boiling the parts for 20-30 minutes (below). After conversion, remove the parts from the boiling tank and dry what water hasn't evaporated.



over parts previously hot-blued as well as cold-blued with the same great result. Like the honey badger of internet fame, "Rust blue don't care."

For the sake of thoroughness, I set 10 rusting cycles as my target. The harder the metal, the smaller and fewer the tiny rust blooms, and the more applications it took to get a dark, even, blue/black finish. The higher the surface polish, the more applications are required for the same depth of color. Old military rifles, in general, use comparatively soft steel by today's standards. In my experiment, they proved well suited to rust bluing. Modern alloys are stronger, harder and more difficult to rust blue in the respect they'll require more applications.

Though it was beyond the scope of this test, I've read some modern alloys can't reach the depth of color achieved on soft steels through rust bluing. This is food for thought if you are thinking about installing a new Lothar-Walther barrel made of 4140 alloy steel on your vintage Mauser receiver. It might be advisable to start bluing the barrel first, see how dark you can get it, and then match the rest of the parts to it. Until then, don't contaminate your parts with oil and keep on rust bluing.

GUNS

EB FUELED SERIES



Ed Brown **Fueled**® M&P®'s feature our exclusive **CUSTOM ACCURACY RAIL** to perfectly mate the slide, frame and barrel surfaces for improved lockup and accuracy

Available in **Polymer** and **Metal** frame options

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edbrown.com





The Spyderco Smock, with its trim profile, is a sleek missile of a folder with Carbon Fiber/G10 lay-up scales and premium Crucible S30V stainless steel. Shown here is custom knifemaker Kevin Smock's modification to the patented Compression lock, converting it from a rear locking-liner to a push-button release located on the top front scale.

SPYDERCO SMOCK SLIM N'TRIM SPYDER!

Pat Covert

Like a fine wine, Spyderco's Smock folder has improved with age. Designed by custom knifemaker Kevin Smock, it's a production send-up of the knifemaker's sleek SK23 model. Interestingly, Kevin applied for licenses for the company's trademarked "Round Hole" thumb opener and their Compression Lock (blade lock) way back in 2015 for use on a knife and incorporated both into the SK23.

The round hole was a no-brainer but he ingeniously converted the Compression lock in a thumb-accessible push button lock on the upper front handle. Spyderco liked it so much, they introduced a production version three years ago and named it after the designer.

Kevin's design is a missile-like 7.92" overall with no big hump in the spine to

accommodate a large Spydie hole. The Smock's 3.0" cutting edge is a modified Wharnecliffe made of upscale Crucible S30V stainless steel and there's a jimped thumb ramp on the backside spine for enhanced grip. The slim handle is 4.53" and sports Carbon Fiber/G10 lay-up scales over stainless liners with a nice index finger groove — once again improving purchase. Three holes lighten handle weight and add a nice styling touch. A tip-up pocket clip graces the base on the back frame slab. Weight is a svelte 3.64 oz.

WHY YOU'LL LIKE IT

Right off the bat, the slim 'n trim Smock is just darned good-looking. It pushes all the right buttons in the eye candy department. Secondly, the Smock owns one of the largest aftermarket bases of any modern tactical



folder I've ever seen — a virtual Valhalla for those who like to upgrade their knife for a classy custom look.

Kevin offers a plethora of mind-blowing aftermarket scales and other companies have followed suit. There are Titanium pocket clips and colorful anodized screw sets as well. While modding can be as expensive as a custom in some cases, you can get exactly what you want.

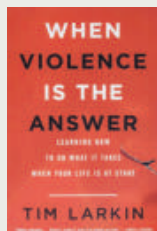
GUNS

MSRP: \$304

Spyderco.com

BOOK: WHEN VIOLENCE IS THE ANSWER

The book *When Violence Is The Answer — Learning How to Do What It Takes When Your Life Is At Stake* by Tim Larkin has been out for several years but just recently crossed my desk. The first sentence of the first page really grabbed me: “Violence is rarely the answer, but when it is, it’s the only answer.”



This isn’t a book about technique, though it contains plenty. Larkin’s goal is to open the reader’s eyes to violence as a means to an end, merely a tool, devoid itself of good or evil. Larkin is trying to help people understand if you’re ever forced to wield violence against an asocial predator, there’s no time for discussion, soul-searching or second-guessing — you’d better be prepared to wield it effectively. Ultimately, this book can help you “get your mind right” about personal safety regardless if you’re an Ultimate Warrior or a cookie-baking grammaw — but especially if you’re a grammaw!

MSRP: \$16.99 on Amazon

VERSACARRY DEFENDER ALPHA OWB HOLSTER

I love the smell of new leather but new water buffalo hide is, shall we say, a little less savory. Fortunately, I’m pretty sure the new Versacarry Defender Alpha holster built from the late, lamented Mr. Buffalo’s skin will probably still be in great shape long after the user and perhaps the gun itself have faded away.



This stout forward-cant outside-the-waistband shuck arrived just in time to tote my Springfield Hellcat Pro with optic. Even though my gun doesn’t sport a thumb safety, I like the little high-rise patch of leather on the inside that keeps the rear of the slide from gouging too much. The leather is backed by a polymer insert to keep it rigid and prevent the holster from collapsing. A multi-point tensioning system keeps the gun as snug as you want. Mild fragrance notes aside, this is a heavy-duty winner!

MSRP: Unavailable at Press Time
Versacarry.com

STREAMLIGHT TLR-6 HL G RECHARGEABLE PISTOL LIGHT

There are plenty of light/laser options for the popular Smith & Wesson Shield Series but Streamlight just upped the ante with the new TLR-6 HL G.



Their previous — and wildly popular — TLR-6 light/laser did well, boasting a red laser and 100-lumen light. Now, the newest version has added a few hot new tricks.

They’ve added a green laser option, which I think is far more visible than red, especially in daylight. The light has been upgraded to a 300-lumen, 4,250-candela beam to really light things up. Even better, they’ve added a set of rechargeable SL-B2 batteries in a cool charging case like my wireless ear buds. With one battery already installed, the package comes with three in total so you’ll never run out of juice.

Install is easy with three screws and battery changes don’t require tools or dismounting. There’s so much to like, my wife’s Shield will soon be sporting one!

MSRP: \$280
Streamlight.com

SAWYER GRAVITY SYSTEM WATER FILTER

It’s funny — I haven’t bought a water filter in over a decade and suddenly I’ve got three new ones sitting around.

The latest, the Sawyer Gravity System, is one of their Mini filters — I’ve used them for years — hooked via tubing to a one-gallon flexible bladder. Fill up the bladder, put it higher than the filter and gravity does all the work while you wait. In about seven minutes, according to specs, you’ll have water filtered down to 0.1 micron, which is just a few tenths of a decimal short of pure.



The Gravity System is perfect for home preparedness, which is why I got it. My plan is to keep it in the original packaging in our preparedness stash just in case we find ourselves filtering pond water to stay hydrated and fed during some kind of major emergency.

MSRP: Around \$40
Sawyer.com

THE SECOND AMENDMENT FOUNDATION CELEBRATING 50 YEARS OF 2A DEFENSE

Dave Workman

Fifty years has gone by pretty fast. Fortunately, during the past half-century, the United States has seen an incredible resurgence of Second Amendment activism as attorneys, politicians, constitutional scholars and grassroots activists have fought to turn the tide of gun control. They are succeeding.

One organization largely responsible for stopping the liberal rush toward erasing the right to keep and bear arms is the Second Amendment Foundation, which is celebrating its 50th Anniversary. In recognition of this landmark occasion, SAF has unveiled a special logo being used throughout 2024.

HUMBLE BEGINNINGS

Once considered so obscure some people in the firearms community hadn't even heard of it, SAF is now recognized as the foremost legal powerhouse of the gun rights movement. Founded and still led by Alan Gottlieb, SAF has literally "brought the fight to the enemy" via state and federal court actions. The most significant was *McDonald v. City of Chicago*, the 2010 Supreme Court ruling nullifying Chicago's 30-year-old handgun ban and — more importantly — incorporated the Second Amendment to the states via the 14th Amendment.

Although *McDonald* was a SAF case, when the ruling came down, many in the media evidently had never heard of the organization or were just too stubborn to acknowledge there might be another gun rights group other than the NRA capable of taking on such a monumentally important case.

SAF was founded in 1974, and since its inception, the organization began priming for battle by creating

the annual Legal Scholars Conference, bringing together some of the brightest minds in the country. Their purpose: Lay the groundwork for courtroom confrontations to eventually restore the Second Amendment to its rightful place within the Bill of Rights.

In 1986, SAF and its sister organization, the Citizens Committee for the Right to Keep and Bear Arms (CCRKBA), held the first annual Gun Rights Policy Conference. Admitted-



ly, the first few of these gatherings were modest affairs but they provided an opportunity for activists, legal experts and leaders of various gun rights organizations, to come together and formulate strategies to rescue Second Amendment rights from the grips of anti-gunners in Congress and state legislatures.

Today, both SAF and CCRKBA have earned reputations for savvy strategic litigation and "common sense" grassroots activism, respectively. Gottlieb, now in his mid-70s, still wears his trademark bow tie and still has the energy and spunk to "fight the good

fight." He also has the vision to have brought on board Adam Kraut as SAF executive director. A Philadelphia attorney previously with the Firearms Policy Coalition (FPC), Kraut came to SAF about two years ago and he has assembled a team to take the organization well into the 21st Century.

GETTING STRONGER EVERY DAY

SAF's footprint has grown larger over the past few years as the National Rifle Association suffered through legal and institutional troubles. Still, the NRA has stood in the way of anti-gunners for decades in the legislative halls. But while the association has excelled in the political arena, SAF has pursued its original legal course, taking a leadership position in firearms litigation.

Joining Kraut are Lauren Hill, senior vice president and vice president of Development; Matt Coffey, vice president of SAF communications; J. Pierce Shields, national director of Advancement, and Bill Sack, director of Legal Operations.

Through the years, SAF has also had another critical player, Julianne Hoy Versnel, vice president of International Outreach and Special Assistant to the Executive Vice President. Because of the global gun control threat, she's likely to be very busy for the foreseeable future.

And it must be noted *GUNS Magazine's* own Massad Ayoob now serves as SAF president, having stepped into the role following the death of legendary 2A advocate Joseph Tartaro a few years ago.

Earlier this year, when SAF reminded gun owners of its Golden Anniversary, Gottlieb recalled, "When I started SAF in 1974, I only had one purpose in mind: Defending our firearms freedom one lawsuit

at a time. What began as my quest to ensure our right as Americans to keep and bear arms has grown into an organization that currently has 57 active cases, all with the same goal in mind — securing our Second Amendment rights for generations to come.”

To date, SAF has filed more than 260 cases involving such issues as semi-auto and magazine bans, gun bans in public housing and city park facilities, gun show bans at public fairgrounds and even some First Amendment issues. Increasing financial support from industry and private donors has allowed the foundation the ability to challenge extremist gun control laws from one end of the country to the other. California, New Jersey, Massachusetts, New York, Connecticut, Illinois, New Mexico, Oregon, Washington and other hotbeds of gun control fanaticism have all seen SAF — often partnering with other groups including the NRA, California Rifle & Pistol Association, Illinois State Rifle Association, Minnesota Gun Owners Caucus, Connecticut Citizens

Defense League, Florida Carry and FPC — fighting back.

TROUBLED TIMES

Still, all is not smooth sailing. Following the 2022 Supreme Court ruling in *New York State Rifle & Pistol Association v. Bruen*, which struck down New York’s unconstitutional concealed carry law and established new guidelines for adjudicating Second Amendment cases, some circuit and district court judges have essentially ignored the high court. Along with blatant efforts to dance around the *Bruen* guidelines by some “blue” state legislatures, the stage is being set for a constitutional confrontation.

Meanwhile, SAF has lately taken on some interesting initiatives. The organization established the State Law Preemption Project to protect preemption laws, which provide uniformity in gun laws from one state border to the other and frustrate municipal anti-gun administrations intent on setting up their own gun control fiefdoms.

On another front, SAF earlier this year launched its “Capture the Flag” project, which will challenge so-called “Red Flag” laws depriving individuals of their right to keep and bear arms “based on evidentiary standards that offend constitutional notions,” according to the group. The pilot program is targeting such laws in six states: California, Florida, Maryland, Massachusetts, New Jersey and Washington. The first case involves a Marine Corps veteran targeted by a county official in Maryland.

According to Kraut, SAF is inviting people from those states who may have been subjected to an Extreme Risk Protection Order, risk protection order or emergency gun violence restraining order to contact the organization, via the SAF website: SAF.org.

You can be along for the ride. There are more than 720,000 members and supporters, and more people are joining daily. As proven by this year’s 50th anniversary, when it comes to 2A Defense, SAF is in for the long haul. **GUNS**

CROSSFIRE

Downsizing continued from page 8

sure they could refer to you to someone who could give you a fair estimate of worth. Maybe call a local auctioneer and see who they use, since most of them outsource gun valuation.

If the guns aren’t collectible, you might end up selling them yourself. However, there are enough online resources it’s much easier than it used to be. Gunbroker.com is a pretty good reference source to determine fair market value, plus it’s easy to sell and safe — there are very few scammers present since everything must go through an FFL. Pretty hard to “take the gun and run” from an FFL and it’s pretty easy to verify info on the receiving dealer. If anything looks sketchy, just ask for more information or cancel the sale outright. You’ll pay the sales fees but you’ll still have your gun.

Hope one of those ideas helps. Take care of yourself! —BW



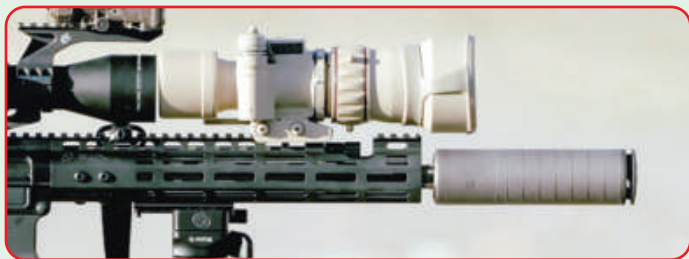
OOPSIE

Regarding the article by Payton Miller on the Stevens No. 35 Offhand .22 pistol. This article was previously published in *American Handgunner*. Whiskey Tango Foxtrot?

Eddie Marsh

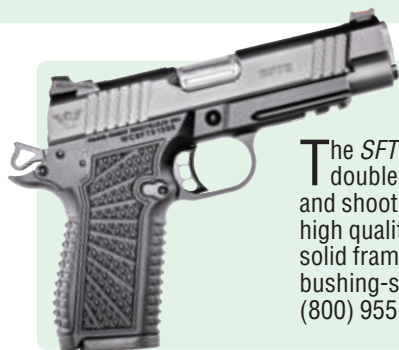
Yes, I thought it was such an important story that I ran it again. Seriously, I couldn’t believe your email but after researching, I discovered the

story was published in January 2024 *GUNS Magazine* and again in April 2024 *GUNS*. Ironically, you’re the first person to bring this to our attention. Payton didn’t do anything wrong; it goes back to simple human error. I seem to remember the story got moved around into a couple of different issues and I either forgot to delete it or tried to delete it but hit the wrong key. In the daily grind of publishing, it slipped through the cracks. —BW **GUNS**



SCYTHE-TI SILENCERCO

The *Scythe-Ti* is SilencerCo's first suppressor that's completely constructed from titanium. The .30-caliber silencer is lightweight and short, but boasts impressive sound suppression. Handling calibers ranging from .223 REM/5.56 NATO all the way up to .300 RUM, the *Scythe-Ti* is ideal for bolt-guns and semi-auto rifles. It ships with a new radial tool, a Bravo tool, a basic tool, a 5/8x24 titanium direct thread mount and a .30-cal aluminum Single-Port Anchor Brake. MSRP: \$1,174. For more info: (801) 417-5384, SilencerCo.com



SFT9 WILSON COMBAT

The *SFT9* is a double-stack 9mm handgun from Wilson Combat. It offers a blend of classic double-stack design mixed with modern reliability enhancements to improve handling and shooting performance for shooters of all skill levels. The *SFT9* begins as a solid block of high quality T6-7075 Aluminum precision machined to come up with the finished one-piece solid frame. It has a Commander-length slide and barrel hand-fitted with a 4 1/4" match-grade bushing-style barrel. Available with a light rail frame option. MSRP: \$3,160. For more info: (800) 955-4856, WilsonCombat.com



ROVER MAMMOTH COOLERS

Mammoth Coolers keeps beverages stylishly cool. The *Rover* is a perfect fit for most cup holders. The tumbler can keep ice for 36+ hours and keep liquids hot for 12+ hours. Double-wall vacuum insulation, a crystal clear lid, rubber gasket, and rubber stopper help maintain temperature without condensation. Designed with kitchen-grade stainless steel, the *Rover* is durable and does not leave a metal taste. *Rover* tumblers are available in 20-oz. and 30-oz. models and finished in stainless steel or more than 18 bold colors. MSRP: From \$14.99. For more info: (816) 295-6321, MammothCooler.com



.45 ACP BULLETS D&L SPORTS

D&L *.45 ACP Bullets* are available with two shoulder types, one for revolvers and one for auto pistols. The *.45 ACP* ammo are loaded with 200-grain RNSWC bullets. These are the best functioning bullets ever designed for 1911 feeding reliability. For more info: (928) 636-1726, DLSports.com

FUSED COTTON PANT BLOCKER OUTDOORS

Blocker Outdoors' Shield Series *Fused Cotton Pant* in Alder is made of a lightweight and durable ripstop fabric. The fabric and fit flow with your movement, and if you happen to snag barbed wire, any rip that forms is limited to the initial tear. The *Fused Cotton Pant* features S3 silver anti-microbial technology for odor protection and scent control, six pockets for storage of essential gear and drawcord ankle adjusters for a custom tapered fit. MSRP: \$44.99. For more info: (866) 344-1385, BlockerOutdoors.com



RUSH MOAB 8 SLING PACK 5.11 TACTICAL

The *RUSH MOAB 8 Sling Pack* is 5.11 Tactical's new addition to its RUSH Series. It offers a slim profile with a 13-liter capacity including a concealment compartment with a loop-faced panel for sticky holsters. Additional storage features include a hydration pocket, a fleece-lined eyewear/gadget pocket, and an interior admin panel for EDC and day-trip needs. Its single-shoulder strap can be switched from left- or right-sided carry and, it can integrate with other backpacks via the RUSH® Tier System for expanded loadout options. MSRP: \$95. For more info: (866) 451-1726, 511Tactical.com



CARGO STORAGE FLOOR PRO-GARD PRODUCTS, LLC

Pro-gard introduces the *Cargo Storage Floor* for the Chevy Tahoe. It is a two-compartment storage system that expands the cargo area, allowing officers to stow a wide range of weapons, equipment and electronics. It creates an elevated floor in the cargo area, providing the convenience of readily storing and accessing weapons and gear. MSRP: From \$2,532.45. For more info: (800) 480-6680, Pro-gard.com

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ROOT BOOSTER TURF TITAN



Enjoy your outdoor space with Turf Titan's *Root Booster*. It creates the ideal conditions for healthy soil, thriving grass and strong roots. It sets the stage for a lustrous lawn by loosening and conditioning compacted soil to promote water uptake and drainage. By building more robust root systems, it makes lawns more resistant to disease and weed pressure. It produces larger plants which produce more and larger vegetables. MSRP: \$39 for 32-oz. w/ hose-end sprayer. For more info: (855) 483-8873, TurfTitanBrands.com

GOLDEN ESTRUS XTREME WILDLIFE RESEARCH CENTER



Wildlife Research Center introduces *Golden Estrus Xtreme* in the new 2-oz. squirt top bottle. It's the Golden Estrus Scent intensified for extra-long range. The proprietary process makes it stronger, more intense and longer reaching. The scent will attract your trophy buck. MSRP: \$18.18 for the 2-oz. squirt top bottle with two (2) Pro-Wicks. For more info: (763) 427-3350, Wildlife.com



GADWALL DECOY CUPPED WATERFOWL

The *Gadwall Decoy* pack from Cupped Waterfowl includes four drakes and two hens. The decoys have self-righting keels and three attachment points for rigging. The paint is guaranteed not to peel or flake. MSRP: \$64.99. For more info: (844) 471-4868, Cupped.com

PRO SERIES GUARDIAN OWB HOLSTER MISSION FIRST TACTICAL

Mission First Tactical equips law enforcement officers with the latest holster technology with *Pro Series Guardian OWB Holster*. The holster utilizes Mission First Tactical's In-Line Magnetic Retention System (ILMRS) combined with an ultra-thin, comfortable profile. The neodymium magnet, boasting an 11-lb. maximum pull weight, securely holds a fully loaded pistol in the holster without the need for any locking devices. Notably, the magnetic retention is not affected by mounted lights. MSRP: \$124.99. For more info: (267) 704-0001, MissionFirstTactical.com



BARRICADE ANTLER KING

Antler King offers hunters and land managers an all-season cover with the *Barricade* plot seed. It creates a cover screen that grows up to 8' tall. Featuring a blend of grain sorghum, forage sorghum, and sorghum Sudan grass, Barricade is ideal for creating funnels and travel corridors, dividing food plots, growing bedding cover, blocking poachers, concealing ground blinds, and providing hunter cover. MSRP: \$24.99 for a 3-lb. bag; \$199.99 for a 40-lb. bag. For more info: (715) 284-9547, AntlerKing.com

ENFORCE X HIGH HAIX USA

HAIX introduces the *Enforce X High*. The new streamlined boot design will appeal to the die-hard traditionalist. Designed with attention to the smallest detail, the Enforce X High offers comfort, durability, foot support and slip resistance. The lightweight all-leather upper is soft, supple and durable since it features quality European bull hide leather. MSRP: \$289. For more info: (866) 344-4249, HaixUSA.com



WL14 WEAPON LIGHT NEXTORCH

The *WL14 Weapon Light* from NEXTORCH is a perfect companion for compact pistols. At only 1.6 oz., the WL14 is lightweight with an output of 500 lumens on high and 52 lumens on low. Its compact design and ambidextrous switches make it great for left- or right-handed shooters. Runtime is up two hours and 30 minutes. A USB-C direct charge port under the body allows the WL14 to be charged without needing to be removed. With its rail mount system, the WL14 can be attached to both MIL-STD-1913 rails and GLOCK accessory rails. MSRP: \$44.99. For more info: (206) 762-4500, NEXTORCH.com



SUBMIT YOUR ENTRY ONLINE:

GUNS Magazine
GOM June 2024
PO Box 488
Escondido, CA
92033

If you are unable to enter online, mail a postcard with your name and address (no envelopes please). Entries must be received by June 30, 2024. Limit one entry per household.

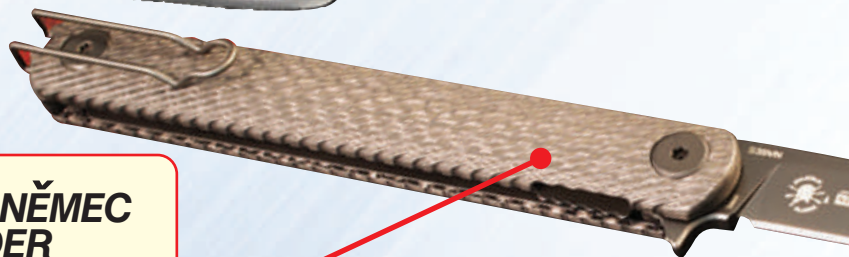
WINNERS CHOSEN BY RANDOM DRAWING. Limit one entry per household. To protect the privacy and security of winners, their names will NOT be made public. Contest void where prohibited by law. Winners must undergo a background check and comply with all other federal, state and local laws. Taxes and fees will be the responsibility of the winner. Contest open to U.S. residents only. Employees and agents of Publishers' Development Corp. are not eligible. No purchase necessary. Winners will be notified by certified mail on official letterhead. Attention deployed military: Use stateside address! Giveaway guns and accessories may have evidence of being test fired or exhibit minor handling marks. Factory warranties may apply in some cases. The Gun of the Month package is awarded only to the entrant drawn and will not be awarded if the firearm presented is illegal in the jurisdiction of the winner. An alternate, authorized winner will be selected. No substitutions or transfers to a third party are allowed.



RM1C

Manufacturer: Rost Martin
RostMartin.com
(844) 237-2890

Caliber: 9MM; **Capacity:** 15+1 or 17+1; **Barrel Length:** 4"
Value: \$459



SPARTAN NĚMEČ FOLDER

Manufacturer: Spartan Blades
SpartanBladesUSA.com
(910) 757-0035
Value: \$150



CKAGE GIVEAWAY



TOTAL VALUE:
\$725

RM1C PISTOL PACKAGE

Introducing our gun-of-the month for the June issue — the *RM1C*. It is the premier offering from Rost Martin, the newest American-made firearms manufacturing company headquartered in Dallas, Texas. Carrying 15+1 with a flush mag or 17+1 with the extended mag, the *RM1C* represents a formidable product introduction from Rost Martin. With high-level details usually reserved for custom pistols, the 9mm *RM1C* has a 4" hammer-forged barrel, aggressive front and rear slide serrations, ambidextrous mag release, and a smooth, light 5-lb. trigger pull with a clean break and short reset. Non-glare top slide serrations combat eye fatigue and allow for quicker sight picture clarity. The low bore axis paired with the hammer-forged barrel provides accuracy and improves muzzle control. The pistol comes optic-ready with a metal RMR plate and accepts all other popular optic footprints as well as popular weapon lights.

The *Spartan-Němec Folder* is a fusion of style and functionality by acclaimed European knife designer Ondřej Němec. The slim and lightweight knife features an 8" CPM S35VN blade and incorporates materials such as carbon fiber and titanium.

The *Fenix TK11R Rechargeable Tactical Flashlight* delivers a powerful 1,600-lumen beam that reaches 1,378 feet. Impact-resistant and IP68-rated dust/waterproof, the *TK11R* is powered by one 18650 Li-ion battery. Two CR123A batteries can be used as a backup power source.

Rost Martin's *RM1C*, a *Spartan Blades* knife and *Fenix* flashlight await you when you win this giveaway. But remember, you can only win if you join! Go to GUNSMAGAZINE.COM/giveaways or mail a postcard. —Jazz Jimenez **GUNS**

TK11R RECHARGEABLE TACTICAL FLASHLIGHT

Manufacturer: Fenix
FenixLighting.com
(888) 775-9996
Value: \$116



A PRINCE, A PAUPER & SOME GOOD LUCK OLD WEST MEETS AFRICA

Jeff “Tank” Hoover

The sable is known as “the prince of Africa” for its majestic beauty. It’s a perfect moniker too. With sweeping, ringed horns, black saddle and gorgeous face, it’s certainly one of the noblest creatures in Africa.

When Tim Sundles, owner of Buffalo Bore Ammo, invited me on a cull hunt early in ’23, the sable was a top contender for my “most wanted” animal besides Cape buffalo.

However, it would be like finding the proverbial “needle in a haystack” proposition as Sundles told me he only knew of two mature sables on his 15,000-acre property in the Eastern Cape of South Africa.

THE HUNT

Since Sundles figured getting the right Cape buffalo would be the hardest task, we started hunting them first. I wanted to take a Cape buffalo with my peep sighted Marlin SBL 1895 .45-70, it’s what I would be carrying



Close-up of Buffalo Bore 8DG 380-grain monolithic solid Tank used on the Sable.

until we got our buffalo. Starting at the crack of dawn, we left the house to find buffalo. We saw a few, attempted some stalks, but the buffalo weren’t cooperating, being very wary, taking off before we could get near them for a closer look.

Mid-morning, while driving one of several roads traversing through a thick savannah we stumbled onto a nice, lone sable. His backward



Here’s Tank’s sable. Having Tank in the picture would have only detracted from the beauty of this majestic beast.

sweeping horns were thick and huge. Stopping the Land Cruiser, Tim examined the “Prince of Africa” for several minutes with binoculars. As he studied the bull, assessing his trophy status, he observed the horns had secondary growth rings at the bases.

Somehow, Sundles determined this particular sable was one of the original ranch sables from when he purchased the property. Turning slowly, he asked, “Do you want this sable?” Before his voice trailed off, finishing the sentence, I’d already opened the door and chambered a round in my ’95. I guess you could say action speaks louder than words.

The sable was around 110 yards away, above, and forward of us, standing on a small ridge with a dry creek bed to his left. He was facing left to right and had no idea we were there. Shouldering the Marlin SBL, I quickly found the bull’s right shoulder in the peep sight and centered the Skinner Sights white-lined Bear Buster front sight in the peep’s aperture. The gun was loaded for buffalo, literally, with monolithic 380-grain solids of flat-nosed design (8DG).

With the top of the front sight tattooed tightly behind the sable’s right shoulder, I started my trigger press. At the shot, the sable just stood there as if nothing happened. I knew he was hit but wasn’t taking any chances. Moving in slow motion, the sable slowly turned



Tank practiced for three months prior the hunt and was getting pretty acquainted with the Skinner peep sights.

around to walk in the opposite direction. I’ve seen animals act like this before, when “dead on their feet,” but I wasn’t risking losing the trophy of a lifetime!

I quickly levered another round and shot, hitting the sable in the left shoulder. The second shot knocked him down, rolling him into the dry creek bed. Closer examination revealed either shot was fatal, but better to be safe than sorry.

The first shot landed tightly in the crease, behind the right shoulder. The second shot went where I was aiming, through the left shoulder joint after he turned around, breaking him down. I wasn’t risking losing this beautiful animal!

PREPARATION/STRATEGY

I’d spent three months shooting the Ruger Marlin 1895 SBL with its Skinner Sight set-up. Using Buffalo Bore 8DG ammo I could shoot 1–1.5” groups with the peep-sighted lever gun. When scoped, groups shrunk to 0.75” for three shots.

I had my sights zeroed for 100 yards. With my Skinner Sights 1-6X24 scope using a Talley Quick Detachable Mount, it was sighted-in for the Buffalo Bore 350-grain soft point. This ammo also grouped under an inch with the scoped lever gun. This speaks volumes on the quality of gun, ammo and scope by shooting sub-MOA groups, with a sporter-style rifle, and lever gun at that!

My strategy was to hunt with the peeps until I got my buffalo, then pop the scope on for other game using the 350-grain load. The only fly in the ointment was once I started killing things with the peep sight, I didn’t want to use the scope. Using peeps on a lever gun is fun, traditional and just felt right. I ended up taking my sable, Cape buffalo and blue wildebeest using “just” the peeps.

I then started hunting with my scoped Ruger African in .375 Ruger, but that’s another story ... another successful story.

GUNS



The Talley QDM worked perfectly, but Tank never used them once in Africa, preferring the peep sights.

Ruger.com
SkinnerSights.com
TalleyManufacturing.com

The companies listed have featured advertisements in this issue.
Look to them first when you are ready to make a purchase.

ADVERTISER	PAGE	ADVERTISER	PAGE
Bravo Company USA	2	SDS Imports LLC	45
Ed Brown	53	SIG SAUER	11
EOTECH Inc.	5	Spartan Blades USA	19
GlockStore	13	Springfield Armory	68
HSS Corp.	65	Standard Manufacturing Co.	15
Kirkpatrick Leather Co.	23	The Bradford Exchange	9
Nighthawk Custom	41	Trijicon	67
North American Arms	12	Turnbull Restoration Co.	19
O.F. Mossberg & Sons	3	Walk The Talk America	64
Ruger	7	WRB Inc.	23



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most likely to see today in garages and on work benches.

The larger 20mm ammunition box (aka "Rocket Box") also arrived in 1942 for carrying high-explosive shells. From all these initial designs, alternate models have now proliferated. Of course, many other countries have their own locally produced versions.

Some things, such as hand grenades and land mines, are still shipped in wooden boxes. These stout boxes make wonderful storage containers if you can find them but they are significantly bulkier. I've got a couple around here somewhere, one of which is home to my collection of cast-iron campfire Dutch ovens. The rope handles make easy work of transporting the dirty and heavy cooking pots.

STRATEGIC STOCKPILE

Even if you don't own a single gun, the ammo can is easily one of the best containers ever devised for storing everything from tent pegs to spare bicycle parts. I'm told the M2A1 is perfect and widely used to store welding rods. With the removable, vapor-tight lid, you don't have to worry about moisture getting to the contents and truly there is nothing short of explosives — yeah, I've done it — which can damage them beyond function. A big added bonus is they're inexpensive, usually around \$10 apiece, though I've noticed the supply seems to have tightened up considerably since the last big jump in gun sales.

My own collection of ammo cans numbers in the dozens, a modest assemblage by some standards, and they hold everything under the sun. Aside from securely storing my spare ammunition in several caches at various locations, I have ammo cans holding gun cleaning supplies, gun-specific tools, spare parts, parachute cord, a stash of retired knives and one protecting my duck and turkey calls in the off-season. Another protects delicate archery items such as bow sights and broadheads, while another is full of my muzzleloader "possibles." Its identical twin is nearby, holding my stash of black powder keeping it safe from both

moisture and sparks. The two large 20mm cans on the floor contain my "good" hunting and self-defense shotgun ammo.

And yes, as I mentioned in a previous *Insider*, while cleaning out my barn, I once accidentally discovered an unmarked ammo can holding years-old catfishing stink bait. I can still taste that smell on the back of my tongue. However, to the ammo can's credit, it somehow held back those several hundred square miles of mind-boggling stench until I cracked open the lid.

When talking about the other uses for ammo cans, one of the more unusual was the widespread adaptation of 20mm rocket boxes on commercial whitewater rafting trips in the Western U.S. Lined with a plastic trash bag, these were used as a group commode since the lids could be securely fastened in order to pack out and hygienically dispose of the contents therein. This usage gave rise to the colloquial name of rocket boxes as "Groovers" for the grooves they leave on a posterior of the user.

THE CAN, CAN

With uses ranging from taxidermy to tools, parts to parachute cord — and even as a transportable toilet, too — a world without the unpretentious ammo can would indeed be far more disorganized and less protected.

Of course, nothing is perfect and there are downsides to ammo cans. Since they formerly contained ammunition or explosives, the cans are not safe for food, medicine or cosmetics storage unless thoroughly decontaminated — so don't store your tactical mascara in one. They are heavy when carried long distances and will gouge the dickens out of a backpack, painted surfaces or fiberglass boats unless well-padded. Finally, an ammo can will smash the heck out of toes if accidentally dropped or knocked off a shelf.

But these drawbacks are minor compared to the utility of these wonderful containers. As a shooter, you're really missing the boat if you aren't using ammo cans to store all the trash — er, "treasures" I mean — that make our hobbies so enjoyable.

Even the stink bait.

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AMMUNITION CANS

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Brent T. Wheat

And now, since the congregation has been seated, please join me in singing the praises of one of the most important yet overlooked constituents of the firearms community. Without these unsung heroes, the shooting world would be less organized and far more exposed to the vagaries of an unfriendly world.

Of course, I'm talking about magazine editors.

I wish. Actually, I'm talking about one of the most ubiquitous but underappreciated shooting accessories — the humble ammunition can.

CANNED HISTORY

I'd be willing to bet at least three-quarters of our readers have at least one military ammo can in the garage, shed, barn or storage unit. It is sitting there mostly forgotten, forlornly gathering cobwebs and waiting patiently for the day it gets hauled out for one shining moment of glory, taking center stage in some grand and glorious adventure. Or, at least, getting a trip to the shooting range.

Then again, it could be waiting like a ticking time bomb, full of old stink bait or forgotten, badly tanned squirrel tails, primed for the unfortunate soul who happens to release the copious horrors within. Regardless, the unassuming green metal ammo can is one important yet ignored shooting accessories.

I never really stopped to think about these somewhat ungainly but supremely useful containers until I recently ran across a webpage explaining the history behind the classic U.S. Military olive-drab ammo tote. You probably won't be surprised to learn the history isn't all that fascinating unless you are deeply curious about the evolution of metal-forming technology or the history of the U.S. Quartermaster's

Corps. Yet the page did spark a deeper appreciation for this low-key icon of the shooting world.

First off, nomenclature. Several authoritative sources declare the official name of these containers is "ammunition box." However, I point out the most commonly used term is "ammunition can." I'm sure I'll get letters from both factions, pointing out how stupid, ignorant and possibly evil



the people are who use the opposing terminology. I'll use both interchangeably so all factions have a nice fat target for their wrath.

And, yes, of course — there are web pages devoted to the ammo can, and even ammo can societies. I wouldn't be surprised to find they have an official song and lobbying firm in Washington, D.C.

On the off-chance you're one of the few shooters in the world who aren't familiar with these marvelous containers, the sturdy steel boxes — occasionally made of plastic or other materials — are used by most of the world's military for storage of ammunition, rockets, bombs, grenades and all sorts

of other stuff that goes "Ka-Boom!" They're built tough so they protect ammo during storage and transport, then survive to be returned and refilled. After their compulsory military service, they end up with folks like us, filled with any manner of goody, gadget and occasionally, ammunition.

The olive-drab rectangular steel body has considerable strength and is topped off with a heavy latched lid, complete with a rubber gasket to make the container air- and moisture-tight. They incorporate a stout metal folding handle and aside from being rugged and easily man-portable, they're strong enough to stack higher than common sense would allow, even when loaded full with ammo.

As an aside, I'm told spraying the inner lid with "Flex Seal" or similar product is almost as good as fitting a new gasket. Almost.

MOVE 'EM OUT!

Shipping ammunition has been a problem since soldiers put down their cudgel and picked up a gun. Evolving from barrels to crates to boxes and finally morphing into steel containers, the first "modern" ammo cans showed up in WWII.

In 1942, the reusable M1 ammo box containing .30 caliber machine gun ammo was introduced. At the same time the larger M2 Steel Ammunition Can debuted to hold belts of ammo for the M2 .50 cal. Browning machine gun. Meanwhile, the vacuum-sealed non-reusable M5 "Spam Can" was being used to supply .45 ACP ammunition to the troops.

In the 1950s, both the M1 and M2 boxes were redesigned with new features such as weatherproof seals, along with a redesigned latch and lid made to stack more easily. Both of these designs are the boxes we are

continued on page 65

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