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APRIL 2024

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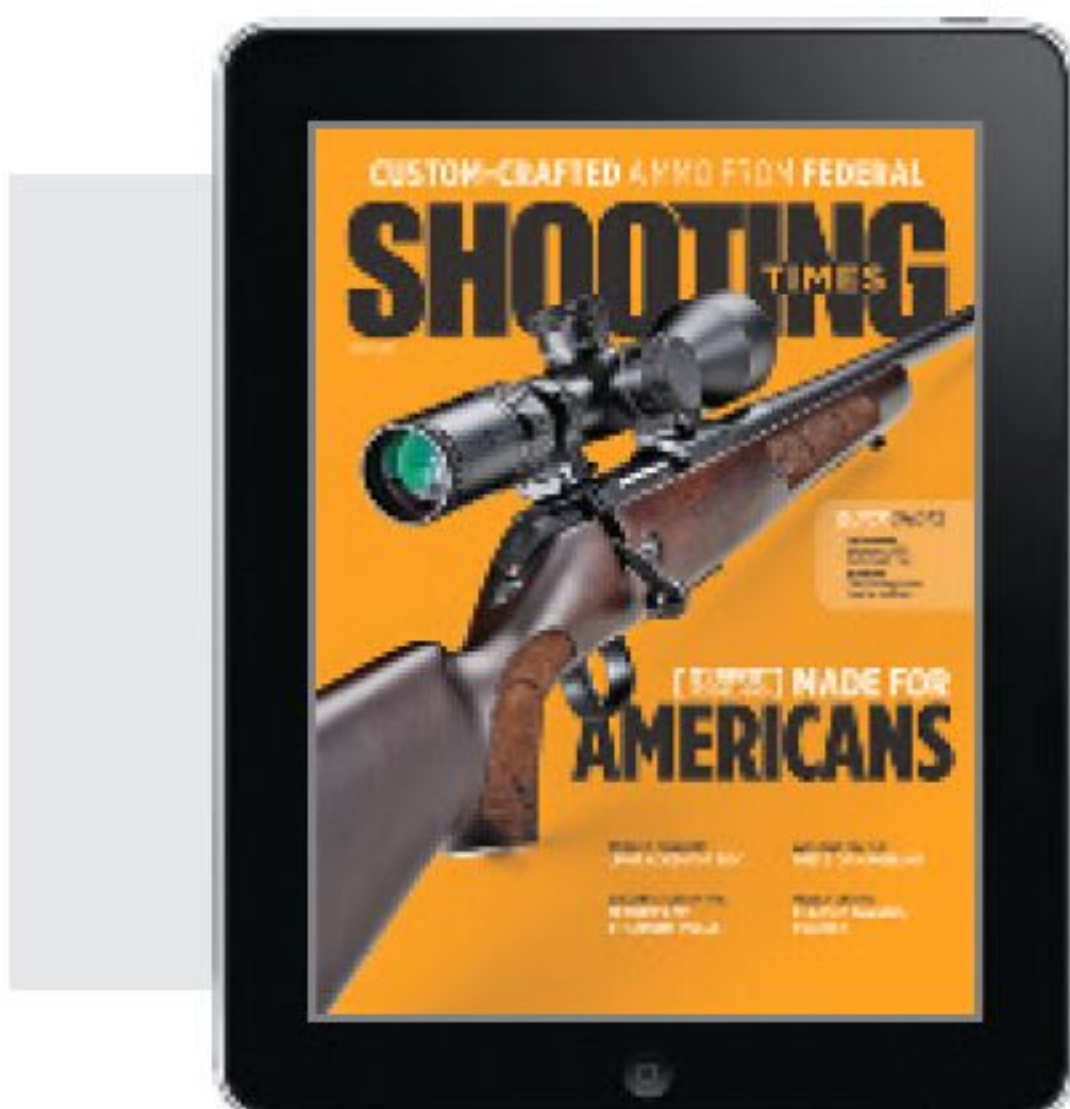
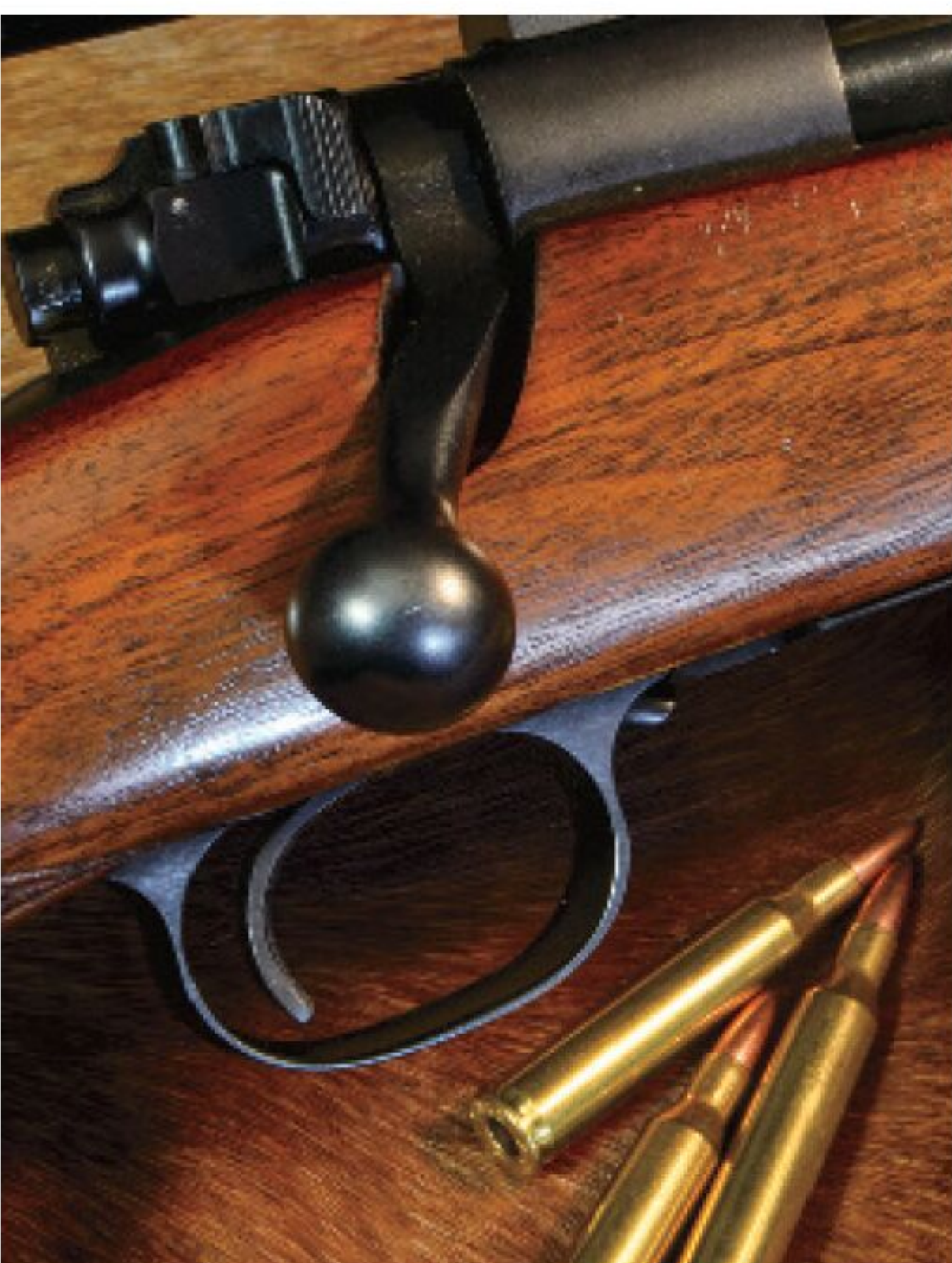
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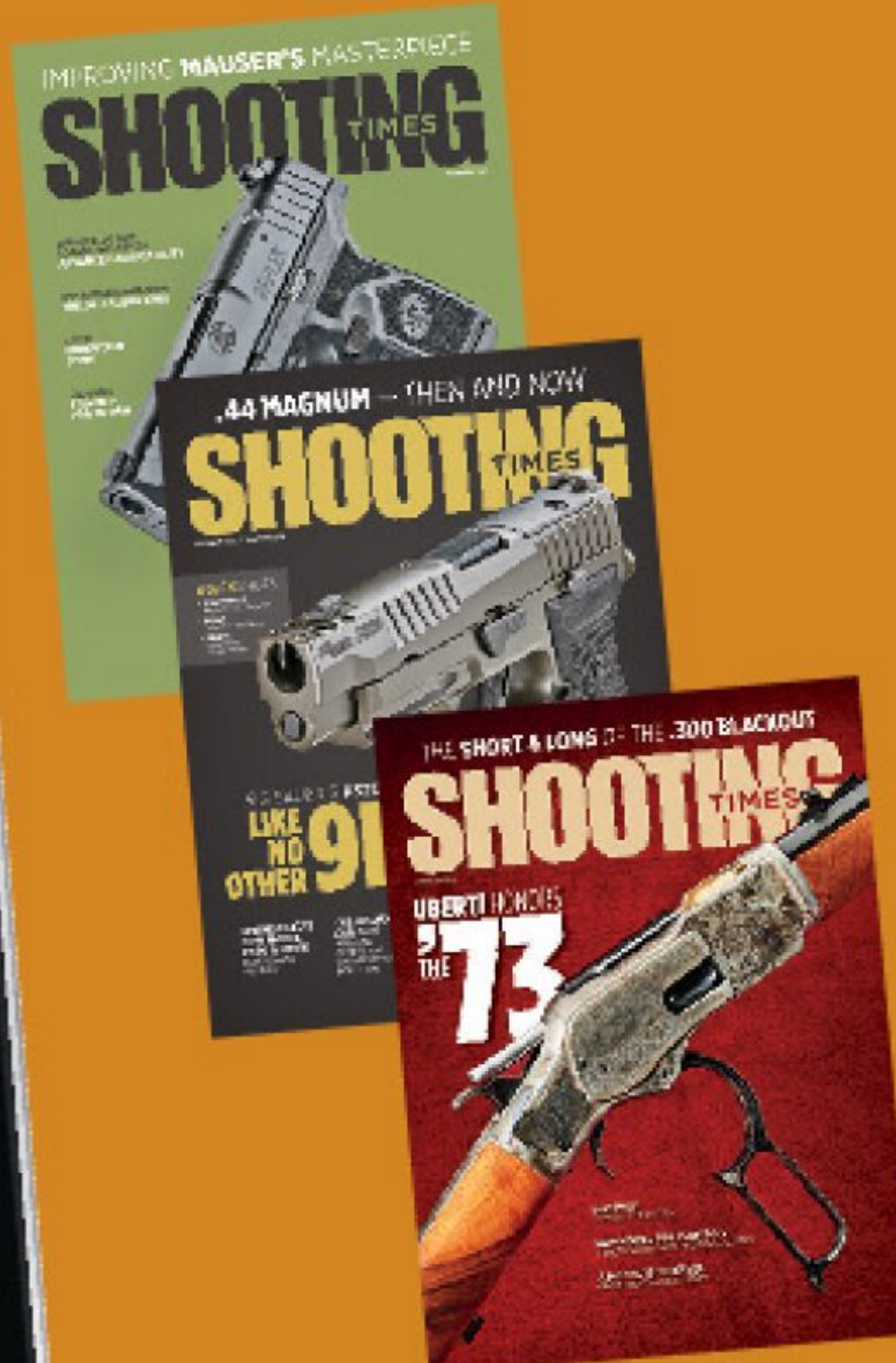
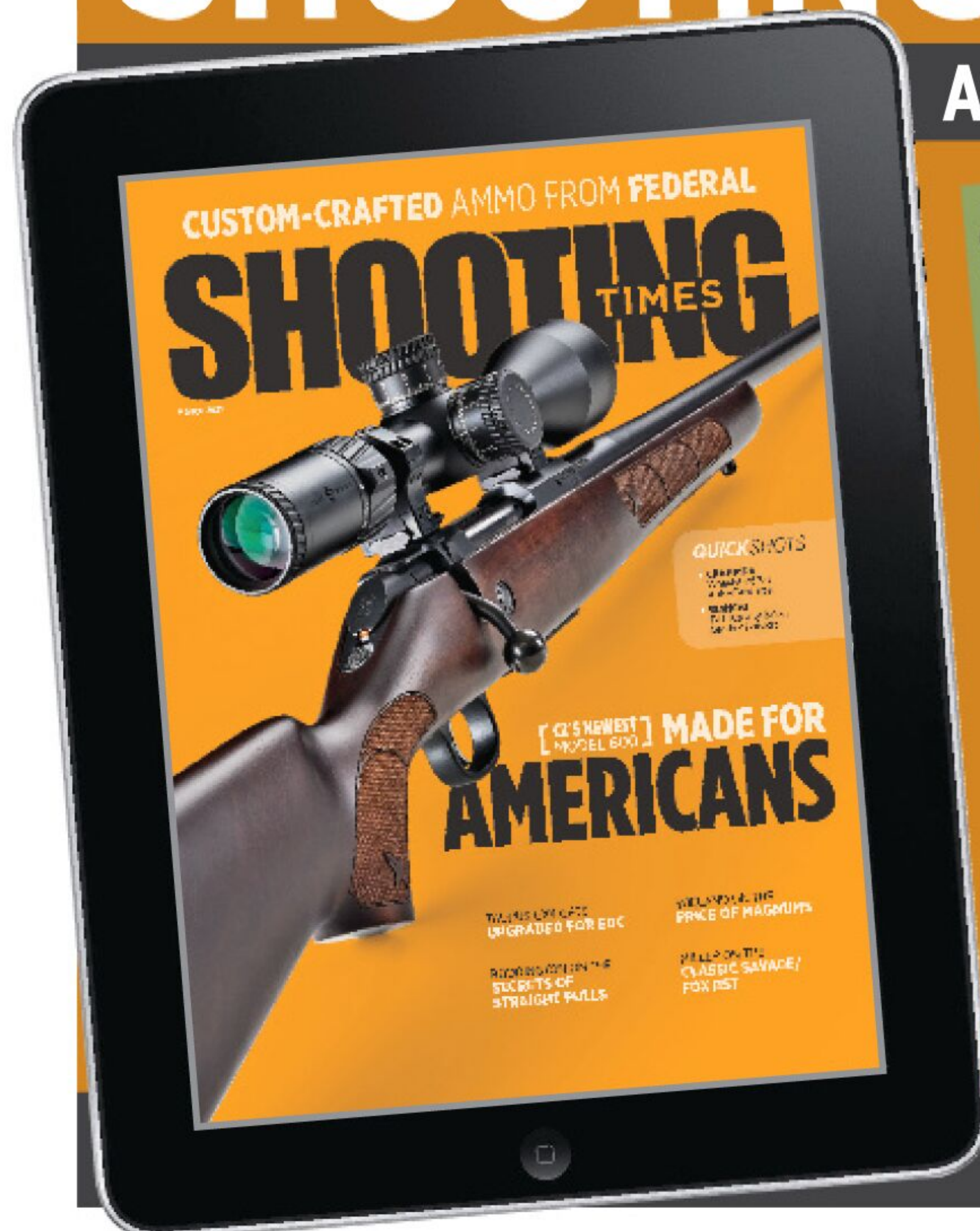
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Thanks for the Memories

TWO COLUMNS IN THE NOVEMBER

2023 issue of *Shooting Times* brought back many memories for me. The first, “Seven Forgotten 7s” by Allan Jones, describes the 7-30 Waters cartridge, a round that I used successfully for many years in a stainless Thompson/Center Contender with a 16-inch heavy barrel and an after-market stock. Hornady and Sierra made “single-shot pistol” bullets in 7mm, and the 130-grain Hornady was my choice for hunting. It took several deer, and two memorably dropped in their tracks. I eventually traded the Contender for a Browning A-Bolt chambered for 7mm WSM, a rifle I couldn’t wait to sell.

The second was Joel J. Hutchcroft’s “Hipshots” column entitled “A Reloader’s Role Model” about the designer of that 7-30 cartridge, Ken Waters. I am lucky to be old enough to have read Ken’s “Pet Loads” articles in *Hand-loader* magazine, and I bought his two-volume *Pet Loads* set of books, among others. I bought my first chronograph after reading his articles and adopted his method of pressure-testing handloads by the “pressure ring measurement” system. And yes, Mr. Waters was responsible for my purchase of that T/C Contender. I miss Ken Waters and his knowledgeable writing. Thanks to both ST writers for the memories.

Joe LaMarco

Via email

No Finer Pump Gun

I enjoyed Joseph von Benedikt’s “The Shootist” column detailing the Ithaca 37 pump shotgun. I would point out that the “37” is still in production. It is manufactured by the Ithaca Gun Company in Upper Sandusky, Ohio. Check out the company’s website; they have a good-looking product.

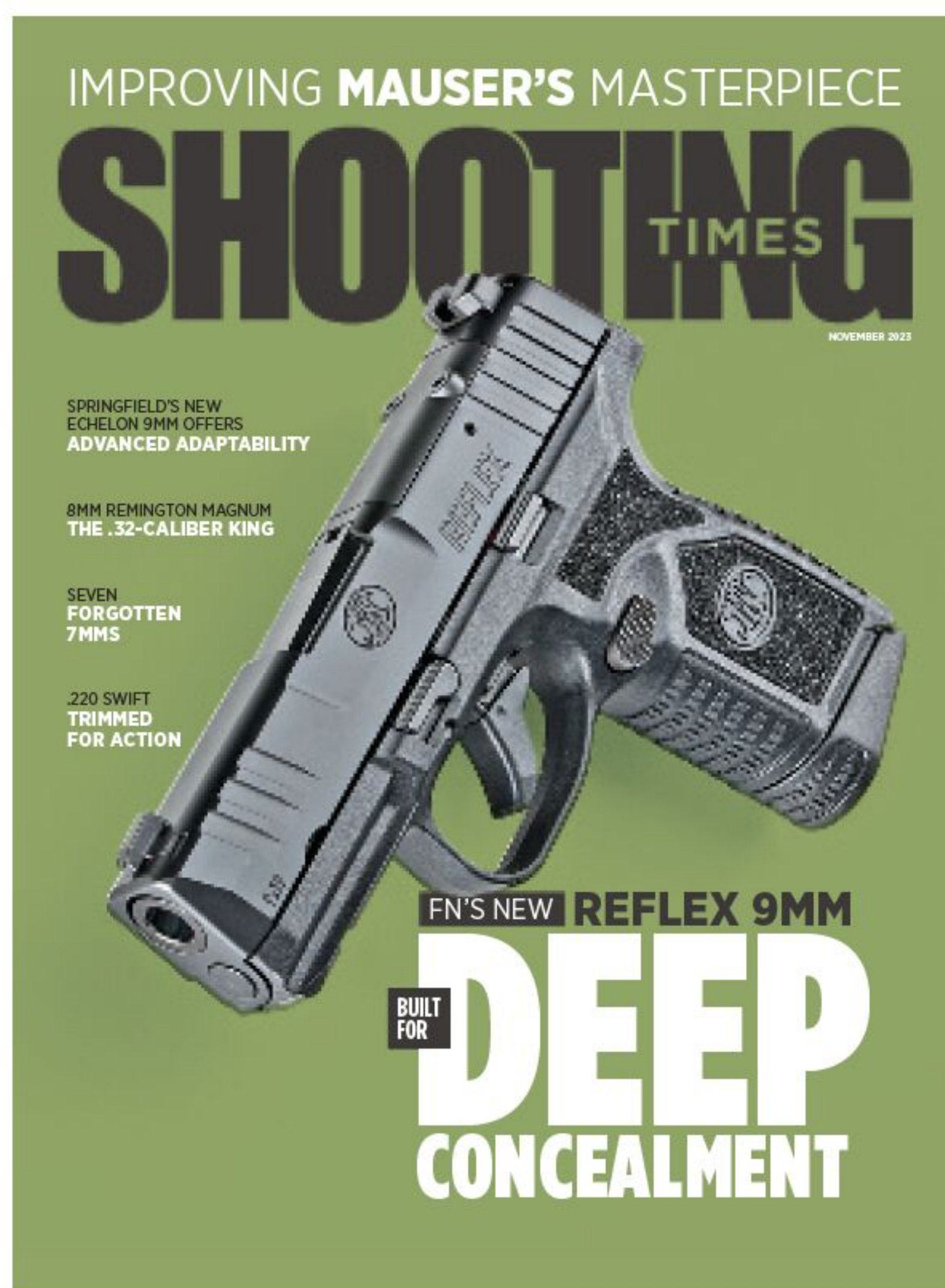
The Ithaca 37 was my first new shotgun (in 1957), and it served well for many years. Currently, I have a 16 gauge and a 12 gauge. I have yet to find a finer pump shotgun than the Ithaca 37!

Warren Graumann

Cumberland Foreside, ME

My 2 Cents

I read the letter to the editor in the December 2023/January 2024 issue by Tom Reynolds about a better way to clean cases. It was great to see that other reloaders have adopted wet tumbling. I never went the route of walnut or



corn cob dry tumbling of used brass. From the start I have used stainless-steel media, Dawn dish liquid, and sometimes just a pinch of Lemi Shine or citric acid with warm water in a hexagonal six-pound tumbler. One hour is plenty of time to clean out the dirt and grime. Shiny and new looking is cool, but I’m doing it just for myself; the paper targets and my guns don’t care about shiny, just clean. I used to deprime before tumbling, but now I don’t as it saves time and, for my purposes, makes no difference. I’m not a hunter or a competitive shooter, just a plinker.

For drying I either stand the cases up on paper towels or place the wet brass in a mesh basket and bake it in an oven around 200 degrees Fahrenheit.

I do take the time to prerinse the brass as part of my sorting when returning from the range. I will add that if washing .45 ACP, .40 S&W, 9mm, and .380 ACP together, you can end up with different size brass nestled inside each other. Another piece of sorting is Large Pistol primer and Small Pistol primer brass being sorted out *after* wash/dry and *before* reloading. Both types shoot the same, but if you are using a rotary or progressive press, it stinks when they are mixed. Not so much with a single-stage reloading press, as you can “inspect” each piece of brass before putting it in the press.

Phil Nutting

Via email

Just the Facts

Allan Jones’s recent column on the Winchester Super Short Magnums was great. He nailed it with brevity, professionalism, being factual, and being extremely informative while remaining totally unbiased, just presenting the facts. Great job, Allan.

Norm Cooter

Via email

A Trip Down Memory Lane

I can’t really say that I read the column on the WSSMs with much interest, but it did inspire a trip down memory lane.

In my opinion, the best thing about the WSSM cartridges is that they inspired a

local big box retailer from Arkansas to clear out its inventory to make room for the new “Mach 3-4 Wunderkinder.” My dad, brother, and I each picked up beautiful new deer rifles for a pittance. I was around age 40, and I never had managed to get a bolt-action deer rifle until that point. Now I have a wonderful Remington 700 in .270 (also my first .270), wood stock, and decent scope, all part of the fire-sale package obtained for just over \$200.

For the last 20 years, each deer that showed up in front of my “new” favorite rifle ended up in the freezer. Oh, and I rarely see WSSM ammo available, but when I do, I’m glad that I don’t have to buy it, given the expensive cost.

Kevin Baxter
Hampshire, IL

Idle Thoughts

I enjoyed reading the column on the classic Model 1892 Argentine Mauser military rifle by Mr. Joseph von Benedikt in the December 2023/January 2024 issue and submit the following idle thoughts.

The rifle under discussion was originally a 7.65x53mm and was converted at some point to chamber .30-06 rounds. A survey of Lyman, Hornady, Sierra, and Speer loading manuals points out the relative weakness of the Model 1891 Argentine action (compared to the stronger Model 1909 Argentine action, which is based on the 1898 Mauser design). Joseph did mention that reloads should be moderate. Cast bullets might be an option for a rifle that is really a .311-06. I am very familiar with these various Argentine military bolt-action rifles and have several in my collection. When I needed 7.65x53mm cases in the past, it was easy to rework .30-06 cases.

Gil Martin
Schnecksville, PA

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SHOOTER'S UPDATE

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SIG SAUER'S NEW CROSS MAGNUM BOLT-ACTION RIFLE IS CHAMBERED IN .300 Winchester Magnum and comes with a 24-inch 5R barrel with an integrated radial compensator, an aluminum Coyote anodized frame, a two-stage match trigger, a free-floating full-length M-LOK and ARCA rail handguard, a forward-angle PRS-style grip with a right-hand thumbrest safety, an adjustable folding precision buttstock, and a six-round AICS magazine. The switch-barrel rifle features a new magnum action receiver that is designed to make switching barrels fast and easy yet provides super-solid lockup for extreme consistency, which translates into optimal accuracy. The rifle is 45.2 inches long overall and weighs 8.9 pounds.

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Blackhawk Stache IWB Holsters

Blackhawk now has Stache inside-the-waistband holsters to fit Springfield Hellcat Pro and SIG SAUER P365-XMacro pistols. The Stache holster is a slim, lightweight polymer IWB design that lets the user choose between left-hand and right-hand carry. The ride height, angle, and how tightly the holster tucks the pistol against the user's body are also user-customizable.

Stache holsters work great with Blackhawk's Stache Non-Conventional Adaptive Carry Holster Option (N.A.C.H.O. Belly Band), and they also are compatible with the Stache Rapid Access Holster Carrier (R.A.H.C.). All Stache holsters come standard with 1.5-inch IWB belt clips included, but 1.75-inch IWB clips are available separately.

MSRP: \$39.95

blackhawk.com



Federal Gold Medal Action Pistol Ammunition

Federal's new Gold Medal Action Pistol ammo is made for shooters who compete at the highest level in any action shooting sport. The company claims this new ammo offers better accuracy and consistency than the original Gold Medal and is loaded to competition power-factor requirements. Offered in 9mm Luger (147 grains) and .40 S&W (180 grains), the new ammo features fully encapsulated FMJ bullets and Catalyst lead-free primers. It comes in 50-round boxes.

MSRP: \$30.99 (9mm),

\$42.99 (.40 S&W)

federalpremium.com

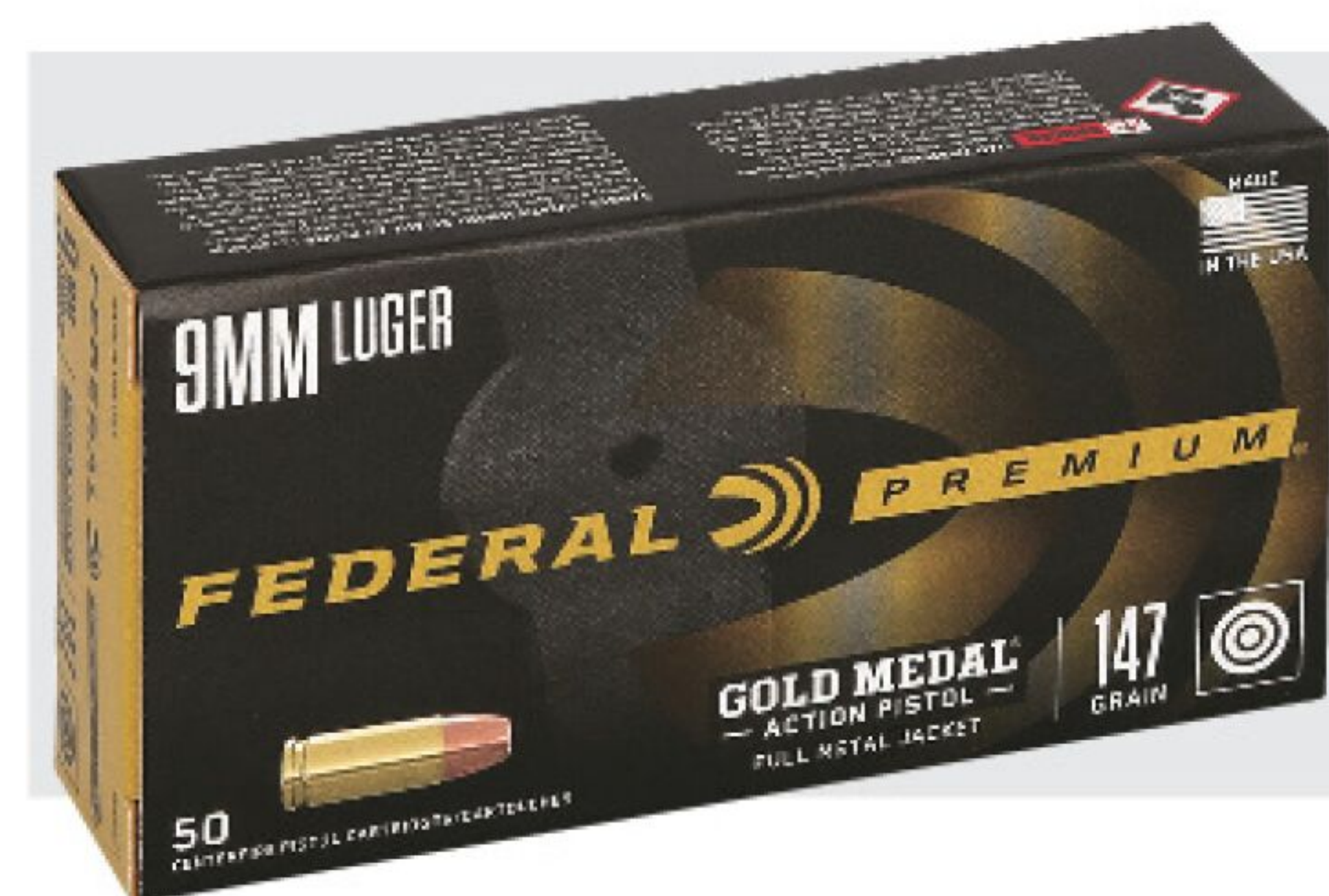
Smith & Wesson Response PCC

The new S&W Response pistol-caliber carbine (PCC) is S&W's first MSR-style PCC. Chambered in 9mm, the Response comes with two 23-round M&P double-stack magazines and two FLEXMAG interchangeable magwell adaptors that allow the carbine to operate with the S&W mags or with Glock G17/G19 magazines.

Other features include a 16.5-inch threaded barrel, a polymer handguard with Picatinny-style rail and M-LOK slots, a Magpul MOE SL stock, a flat-face trigger, and an M&P grip with four interchangeable palmswell adapters. The carbine weighs just under 6.0 pounds.

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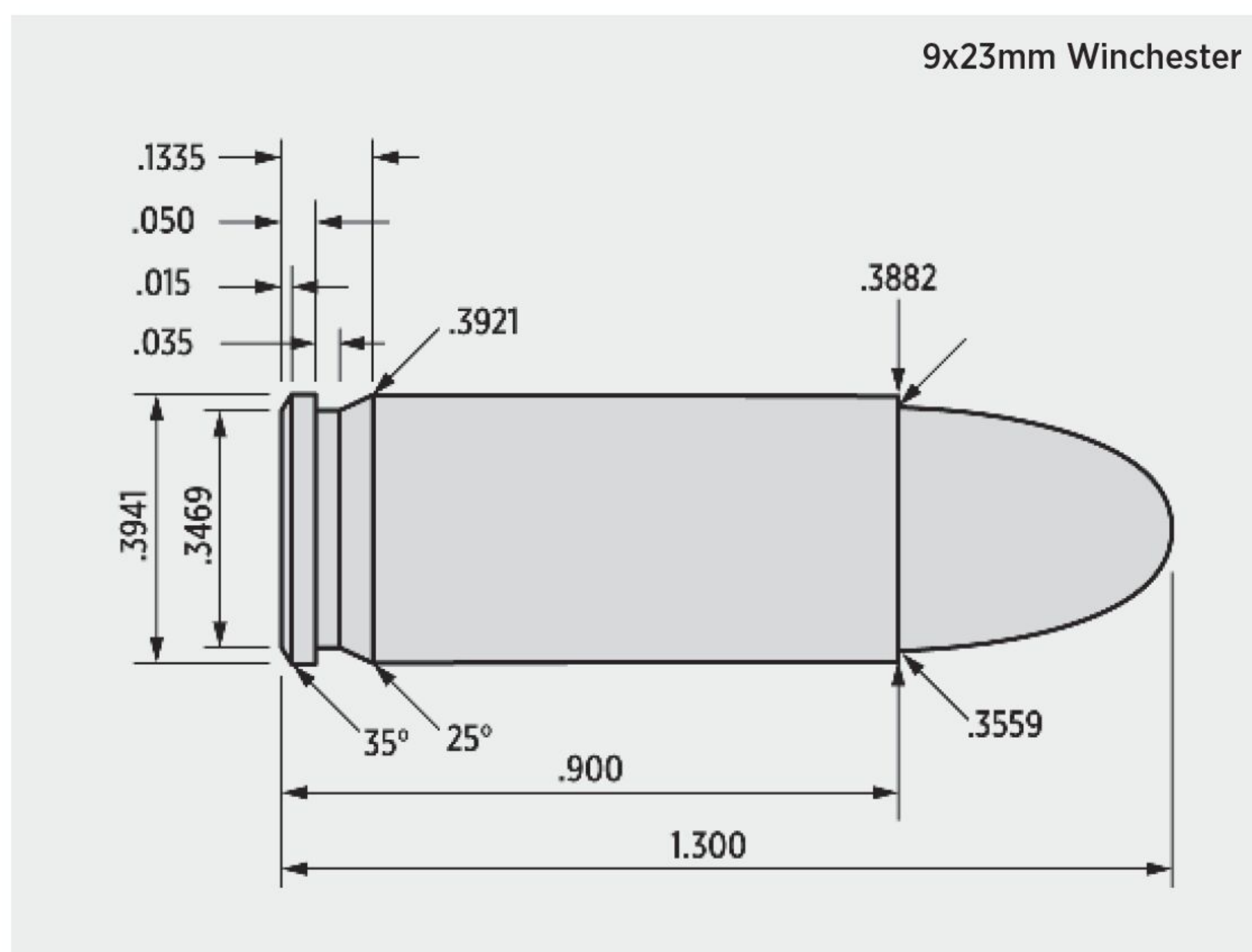
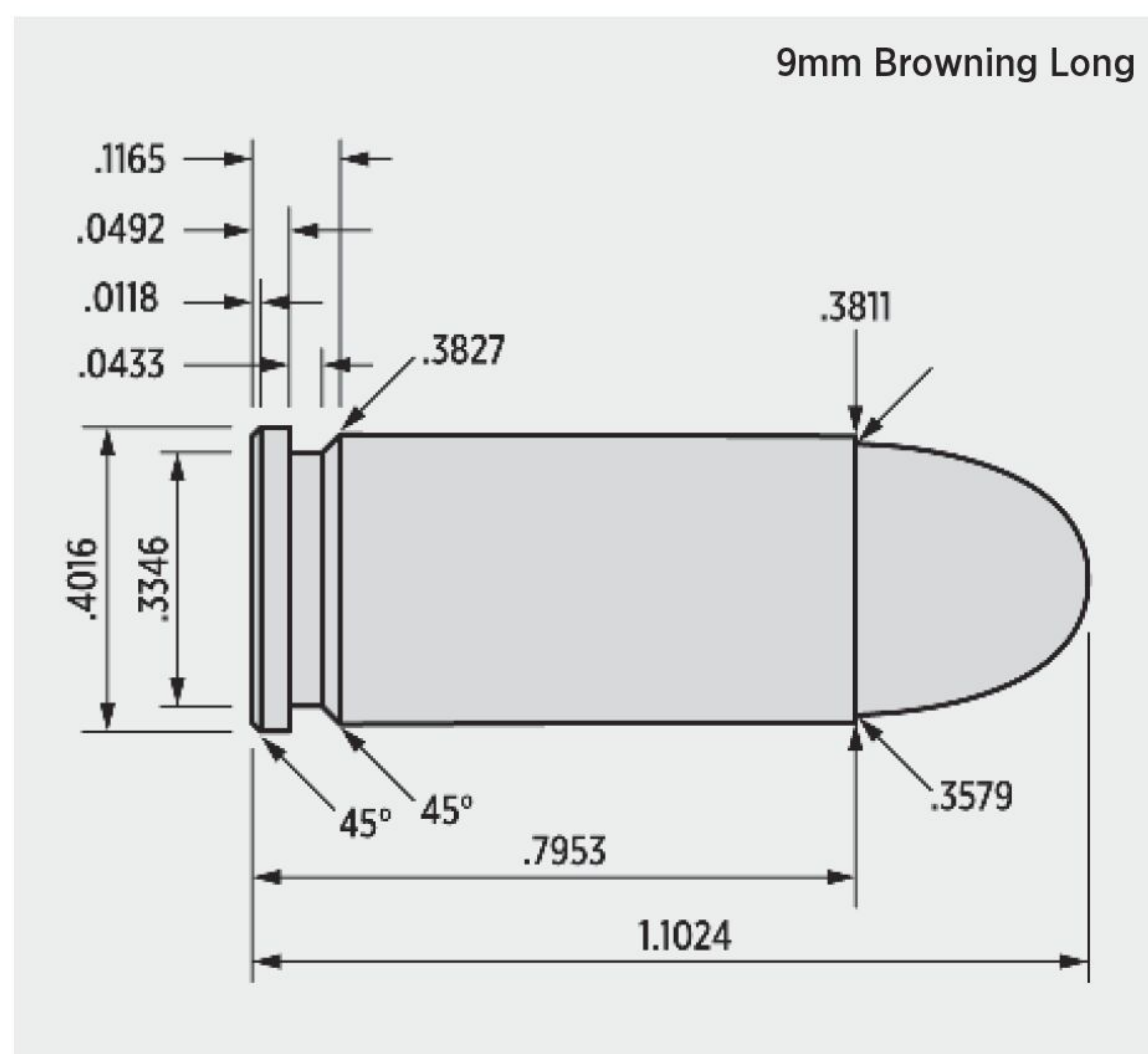


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What About the 9mm Browning Long?

Q. WHILE CLEARING MY UNCLE'S HOUSE, I FOUND THE NOVEMBER 2013 issue of *Shooting Times*, and I have a question. In the "Ask the Experts" section, Bill Dluzniewski asked about 9mm compatibility, and Allan Jones provided a very good answer, in which he referred to several 9mm cartridges. However, he didn't mention anything about the 9mm Browning Long cartridge. I have 10 boxes of 9mm Browning Long ammunition, and I'd like to know if any current guns are chambered for it. I also would like to know if it is actually the 9x23. So, what about the 9mm Browning Long?

Greg Bell
Via email

A. First things first. The 9mm Browning Long is not the 9x23. In Allan's answer (we've reprinted it here, along with Mr. Dluzniewski's original question, for readers who are interested in it), he stated the 9x23mm is the metric designation for the .38 Super. The 23 refers to the length of the .38 Super's case, as in 23mm (0.900 inch). The specification for the 9mm Browning Long's case is 20mm (0.7953 inch). There is actually another 9x23mm pistol cartridge that Allan did not mention, and it is officially called the 9x23mm Winchester. We've included cartridge drawings of the 9mm Browning Long and the 9x23mm Winchester so that readers can compare those two cartridges.

The 9mm Browning Long was created by John M. Browning sometime around 1903 for a semiautomatic pistol that he designed at that same time. It became the FN Browning Model 1903. Sweden used the pistol and cartridge as an official military sidearm beginning in 1907, and Le Français and Webley & Scott chambered pistols for it, but as far as my research goes, American gunmakers never adopted it. I cannot find any pistols (domestic or foreign) currently being chambered for the 9mm Browning Long.

In power, the round falls between the .380 Auto and the .38 ACP (a case length of 23mm but not to be confused with the higher-performance .38 Super), with a standard 110-grain bullet being propelled at a muzzle velocity of 1,100 fps for about 250 to 300 ft-lbs of muzzle energy. It has a maximum chamber pressure limit of 21,000 psi.

The 9x23mm Winchester was developed in 1996, and it has a much stronger case design, which allows a higher maximum chamber pressure of 55,000 psi. It was designed for combat pistol competition in which steel plates are knocked over. As such, it provides high striking energy with relatively low recoil. The prototypical factory loading for the 9x23mm Winchester propels a 125-grain bullet at a muzzle velocity of 1,450 fps for a muzzle energy of 583 ft-lbs.

Now for Mr. Dluzniewski's original question and Allan's response from that 2013 issue.

Q. Being an old guy who has been in love only with revolvers all these years, I never gave much thought to the 9mm cartridge. Then along comes the Glock 17 Gen 4, and I have fallen in love again. I have decided on the 9mm for this gun, but this has caused me a lot of confusion. Glock refers to the cartridge as 9x19, which I have been told by them is the same as the 9mm Luger. Now I

know there is also a 9mm Parabellum out there and have just read an article on a 9x18. I am not a handloader, so I don't need a detailed technical answer down to the third decimal point, but are these cartridges interchangeable and are there any more 9mm cartridges out there that I should know of?

A. Rest easy. You're hearing a variety of common names for one cartridge. In both U.S. (SAAMI) and European (CIP) official nomenclature, it's the 9mm Luger. For those people who like to put everything in metric units, it's 9x19mm (a 9mm diameter bullet loaded in a case that's 19mm long).

9mm Parabellum is an old term for the same cartridge, and it dates to the time of the cartridge's development in 1902 by Austrian gun designer Georg Luger and Deutsche Waffen- und Munitionfabriken (DWM). The word "Parabellum" was derived from a Latin phrase that was DWM's corporate motto.

Because NATO adopted it as the standard sidearm cartridge, you may also find the name 9mm NATO.

They are all the same cartridge.

The metric name is by no means superfluous in that using the case length helps sort several different cartridges that use a 9mm (0.355 inch) projectile but have different case dimensions:

9x17mm: the .380 Auto

9x18mm Ultra: a .380-class cartridge slightly more powerful than the .380 Auto

9x18mm Makarov: actually uses a 9.3mm (0.364 inch) bullet from the Eastern Bloc Makarov pistol

9x19mm: the 9mm Luger that is so common

9x21mm: an Italian development for commercial use, not law enforcement or military

9x23mm: the metric designation for the U.S.-developed .38 Super Auto.

A new Glock pistol will be chambered for 9mm Luger.

Thank you for your question, Mr. Bell. It's great to see that even 10-year-old issues of *Shooting Times* still hold some interest.

Joel J. Hutchcroft

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Shiloh Sharps Model 1863

This pre-metallic-cartridge, falling-block, breech-loading single-shot rifle played a significant role in firearms history. **BY JOSEPH VON BENEDIKT**

NEARLY TWO CENTURIES AGO, RIFLEMEN WERE abuzz with the potential for firearms that loaded from the breech. Innovation abounded among those of inventive bent, and myriad different designs were attempted. Most failed. Others enjoyed a brief existence but faded when metallic cartridges roared onto the scene in the aftermath of the Civil War. Sharps single-shot rifles did not fade. Perhaps they were the only exception.

Christian Sharps's falling-block, breech-loading design of 1848 utilized paper-bodied cartridges and could be loaded with a loose .52-caliber bullet and powder in a pinch. After a few years' worth of refinements, it was renamed the Model 1863, and it became a popular breechloader that fought during the Civil War in the hands of Berdan's Sharpshooters. Various iterations also served in conflicts from India to Argentina to eastern Asia.

The design evolved into the Model 1874—a version that employed metallic cartridges and fast became the

most popular buffalo gun to hunt the Great Plains. It was also a regular contender in international long-range matches at Creedmoor and accounted for the longest recorded shot during the Indian Wars—Billy Dixon's 1,538-yard shot that knocked a warrior from his horse during the Battle of Adobe Walls.

The fundamental Sharps design is—as far as I'm aware—the only proper blackpowder firearm that, with adaptations, successfully made the transition to metallic cartridges. Across all variations, more than 120,000 were made.

Until sometime in the mid-1970s, the only Sharps rifles available were originals. They were costly to purchase, already having some notoriety as collectibles, and firing them was considered somewhat questionable due to that collectible value. Then a company named Shiloh Sharps began manufacturing reproductions—and not just any reproductions: These rifles were as good as if not better than the originals and were absolutely “correct.”

Model 1863 Sharps rifles were falling-block, breech-loading blackpowder designs made to load with bullet and loose powder or with paper cartridges.

Mechanicals

Of falling-block design, the Model 1863 features a massive breechblock with a nipple for a percussion cap at the top right, a vent hole with two right angles through the block and into the chamber, and a pressure plate engineered to self-seal against the rear of the barrel when fired. The top edge of that pressure plate was ground with a sharp edge so as to easily cut through the rear of a paper cartridge, if necessary.

Before opening the lever, it's best to ear the big hammer back to halfcock. Otherwise, the nose of the hammer drags on the nipple and can gall it.

To enable easy field-stripping for cleaning, the lever's pivot pin has a long tail that dovetails into a slot on the side of the receiver and is secured by a detent. Press the detent, rotate the pin's tail, and pull it sideways out of the receiver. The breechblock will slide out into your hand. Clean the barrel from the breech and scrub the breechblock well with a toothbrush and pipe cleaners.

Provenance

During my early teens (some 35 years ago), I became enamored with the Model 1863. I confess I don't recall exactly why. However, I managed to infect my father and brother with my enthusiasm, and we took a long weekend and drove to the Shiloh Sharps manufacturing facility in Big Timber, Montana.

At that point it was still owned by founder Wolfgang Droege, a fine gunmaker of German descent. Droege had negotiated to sell his Shiloh Sharps Rifle company to the Bryans and had a few .54-caliber reproduction Model 1863 personal rifles he was selling off. Two were Sporter versions; the other was a full-stocked military version.

We bought all three. The one pictured here is the Sporter version I ended up with, at the ripe age of 14 or thereabouts.

Rangetime

As Droege showed us, the Model 1863 is easily loaded by dropping a conical, cast lead bullet of appropriate diameter into the chamber, pressing it into the chamber throat with a short dowel, and then pouring in a powder charge before closing the breech. Place a winged musket cap on the nipple, cock the massive hammer, aim, and squeeze the trigger to fire.

If desired, the Model 1863 can also be fired with paper cartridges. Paper or linen that's been treated to be highly combustible is used to form a cylinder, closed on one end, which is filled with blackpowder and then topped with a conical bullet featuring a "tail" around which to

secure the paper cylinder. Droege suggested making the paper cartridges slightly too long for the chamber so the sharp edge of the breechblock would shave off the rear and expose the blackpowder to the flash of the musket cap. Otherwise, the Model 1863 would commonly hang-fire, as the flash of the cap takes a microsecond to burn through the rear of the paper cartridge.

Being a Sporter version, my rifle has a cavernous propellant chamber. I discovered I could fit fully 200 grains of blackpowder in behind a 500-grain conical lead bullet—which would have caused savage recoil. Thankfully, Droege had assured us that it was entirely safe to fire the rifles with the chamber only partially full.

Whether caused by the huge chamber or some other reason, my rifle was never particularly accurate. Groups averaged four to five inches at 100 yards—not the legendary precision I'd associated with Sharps rifles. My brother's military 1863 held 80 grains of blackpowder snugly in the chamber and tended to group much better—around two to three inches at 100 yards. Lucky sod.

Even so, I managed to take a depredation doe with my rifle, shooting her squarely through the vitals as she dashed past not 15 yards away. My brother did me one better, taking his first bull elk with his 1863 from a bit more than 100 yards.

Then the 1990 film *Quigley Down Under* came out. I watched it several times, and it dawned on me that while the Model 1863 is historically significant, the Model 1874 is where the accuracy could be had. I quickly called Shiloh Sharps and laid down \$50 to put a Model 1874 on order—but that's a story for another time.

SHARPS MODEL 1863	
MANUFACTURER	Shiloh Sharps
TYPE	Falling-block single-shot breechloader
CALIBER	.54
BARREL	30 in.
OVERALL LENGTH	46.5 in.
WEIGHT, EMPTY	9.75 lbs.
STOCK	Walnut, Schnabel forearm
LENGTH OF PULL	13.75 in.
FINISH	Blued steel, oil-finished wood
SIGHTS	Buckhorn rear with folding ladder tang sight, German silver blade front
TRIGGER	Double-set, 8.25-lb. pull single, 8-oz. pull set (as tested)
SAFETY	Hammer halfcock notch

I eventually lost interest in the Model 1863. It stood silent sentry in the rear corner of my safe, unfired for more than 30 years. Recently, I gathered up the necessary components and took it to the range.

Just as I recalled, accuracy ran to about five-inch groups at 100 yards. Quite usable for practical purposes, and I rediscovered just how much fun the Model 1863 is to shoot. And although as a teen I dreaded cleaning it, I found meticulously purging the '63 of every trace of blackpowder residue and then rubbing it down with fine gun oil rather therapeutic, now that I've seasoned a bit myself.

Shiloh still manufactures Model 1863 rifles, and Pedersoli and Dixie Gun Works and others now offer them. Prices range from about \$1,200 up for the Italian guns and \$2,468 and up for the Shiloh rifles. In a very nice turn of events, most companies now offer Model 1863s in .45 caliber. You can use typical 0.458-inch-diameter .45-70 bullets cast of a soft lead alloy and lubed with SPG or some other black-powder-specific bullet lube.

What's a reproduction Model 1863 Sharps good for? Pure cool factor. They're historically significant, intrinsically interesting, and a ton of fun to shoot. **ST**

SHARPS .54-CALIBER MODEL 1863 ACCURACY & VELOCITY

BULLET	POWDER		VEL. (FPS)	E.S. (FPS)	S.D. (FPS)	100-YD. ACC. (IN.)
	(TYPE)	(GRS.)				
Rush Creek 475-gr. Cast Lead Conical	FFFg Blackpowder	80	1074	29	11	5.36

NOTES: Accuracy is for one, five-shot group fired from a sandbag benchrest. Velocity is the average of five shots measured nine feet from the gun's muzzle. Ambient temperature: 65 degrees Fahrenheit. Elevation: 5,100 feet.



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Survivors: The .405 and .348 Winchester Cartridges

The .405 Winchester and the .348 Winchester lever-gun cartridges were quite impressive for their time. **BY ALLAN JONES**

The .348 Winchester (left) and the .405 Winchester (right) survived the “Great Dying” of big-bore lever-action cartridges, but they aren’t exactly reborn. (The component bullets shown are from Northern Precision.)

I PREVIOUSLY SURVEYED OLD LEVER-GUN cartridges that, in their day, were considered appropriate for very large game. There are two that, with the .45-70, survived the “Great Dying” of big lever-gun cartridges after World War II. Both were Winchester developments, and both were quite impressive for the time. I’m referring to the .405 Winchester and the .348 Winchester.

The .405 Winchester

Winchester’s first box-magazine lever gun, the Model 1895, was initially chambered for existing .30-caliber deer-class cartridges like .30-40 Krag and .303

British. For larger game, Winchester created two new heavy-caliber cartridges for the Model 95. Handicapped by blackpowder and low velocity (about 1,400 fps), the .38-72 and .40-72 cartridges were little more than throwbacks to the 1880s, and they failed to thrive.

Winchester replaced the two underperformers with potent smokeless cartridges in 1903/1904—the .35 Winchester and the .405 Winchester. They shared roughly the same case head diameter and cartridge overall length (COL) of the .40-72 but sported a .30-40 Krag rim diameter and, most significantly, power not expected from lever guns.

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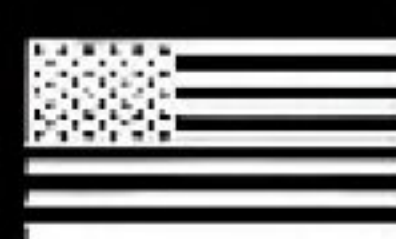
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The .35 Winchester impressively drove a 250-grain bullet to 2,200 fps and nearly 2,700 ft-lbs of muzzle energy. However, Winchester discontinued the .35 Win. cartridge in 1936 along with the Model 1895.

The .405 Winchester launched a 300-grain bullet at a nominal 2,200 fps, making 3,200 ft-lbs of muzzle energy. That's 30 percent more than Winchester's massive .50-140, the company's most powerful black-powder cartridge. The .405 was one of the most powerful purely American commercial rifle cartridges through the first half of the 20th century.

African hunter and writer John Taylor discounted the .405 for large African game based on low sectional density, but it was used there anyway. It was likely the best option at the time for large, even dangerous, North American game. The .405 was cataloged until about 1955, then resurrected in 2001 to service replica Model 1895 rifles.

The .348 Winchester

In 1936 Winchester modernized its heavy-frame Model 1886 lever gun, calling the new variant the Model 71. The company also introduced a potent new cartridge exclusively for it: the .348 Winchester.

Until about 1962, the .348 was offered with 150-, 200-, and 250-grain bullets, all putting it in the same power class as the .30-06 and .35 Whelen. The 250-grain factory loads were rated at 2,350 fps with over 3,000 ft-lbs. The Model 71 rifle survived until 1958, but the .348 is still around, which is impressive for a cartridge that was offered in only one rifle model.

The rimmed .348 has a rather fat case compared to other lever-gun cartridges. Speculation about its ancestry varies, but case dimension tables show a simple explanation. Compare the .348's rim and head dimensions to the 19th-century .50-110 Winchester cartridge, and they are "too close to call."

What about today?

Primarily due to replica offerings of the Model 1895 and Model 71 rifles, both cartridges are still listed as "active" by SAAMI at the time of this writing.

The .348 Winchester has a maximum average pressure (MAP) of 40,000 CUP and a guideline velocity of 2,505 fps with a 200-grain bullet. It has no transducer standard. Bullet diameter spec in inches is 0.3495-0.003 inch; recommended twist rate is one turn in 12 inches (1:12). Winchester and Hornady catalog 200-grain factory loads; Hornady loads its modern FTX LEVERevolution bullet.

The .405 Winchester has modern transducer standards. Its MAP is 46,000 psi, in the same pressure class as the .444 Marlin and the .450 Marlin. Guideline

velocity remains 2,200 fps with a 300-grain bullet. The bullet spec is 0.4115-0.003 inch; the recommended twist rate is 1:14. Hornady is the only "major" maker that currently catalogs the .405, listing a 300-grain Inter-Lock pointed SP. Wait! Pointed? Yes, the Model 1895 has a box magazine. Buffalo Arms lists a 1,400 fps cast bullet load for Cowboy Action Shooting.

So what is the component situation? Not great. Panic buying of popular cartridges' components has trashed the availability of older, less-popular cartridges and their components. Still, we can survey what is cataloged today.

The .348 is better off for case offerings with two. Winchester still catalogs new unprimed cases, although MidwayUSA flags it as out of stock. Starline currently lists .348 cases on its website but says they're "on backorder."

Some .348 jacketed hunting bullets are listed by major bullet companies. Swift shows a 200-grain A-Frame FN-SP. Barnes lists 220-, 250-, and 300-grain FN-SPs in the "Original" series. All are shown out of stock or on backorder.

The .405 starts out with a handicap. Although Hornady catalogs loaded ammo, it no longer shows unprimed cases for sale. Only Bertram catalogs new .405 cases, but they're out of stock.

Hornady and Barnes catalog 0.411–0.412-inch bullets. Hornady lists the same 300-grain SP it loads in the ammo, and Barnes has a 300-grain TSX all-copper bullet.

There is another bullet source for both cartridges. Recently, Bill Noody at Northern Precision Custom Swaged Bullets sent me samples of .348 and .405 bullets. Noody does not want to be a mass producer, preferring to do small orders, often for bullet styles, weights, or diameters not available elsewhere.

He sent 200- and 250-grain .348 Winchester bullets and 225- and 300-grain samples for the .405. The website shows 0.348-inch bullets from 160 to 300 grains, and from 200 to 350 grains in 0.412-inch diameter.

By the way, the .405's performance can be duplicated today with the .444 Marlin. Safe handloads with 300-grain bullets can do 2,150 to 2,200 fps, depending on the bullet make.

I don't declare these two old cartridges reborn. Both are struggling in the current buying environment. My intent here is to help those who use them enjoy their rifles more and to help others more deeply appreciate the rich history of our sport. After all, 3,200 ft-lbs from a lever rifle was a seismic event for hunters 120 years ago.

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.204 Ruger Versus .22-250 Remington

Shooting Times reader Dale Baldwin asked for some .204 Ruger handloads and also wanted to know how it compares to the .22-250. Lane was happy to provide the necessary answers. **BY LANE PEARCE**

The .204 Ruger was conceived to be the fastest and flattest-shooting varmint cartridge, and it is in fact slightly flatter-shooting than the classic .22-250.

SHOOTING TIMES READER DALE BALDWIN recently acquired a used Ruger No. 1 rifle chambered for .204 Ruger and asked for a few good handload recommendations. He also asked how the .204 Ruger compares to the .22-250 as a varmint cartridge. Fortunately, I've had quite a bit of experience with both rounds and currently have a pair of bolt-action rifles chambered for each round.

The .22-250's legacy began around 1915 when Charles Newton (a brilliant firearms and cartridge designer) designed a powerful .25-caliber round for Savage's 1899 lever-action rifle. Based on a shortened .30-06 case, the .250-3000 Savage originally pushed a 100-grain bullet with a muzzle velocity of 2,800 fps. Savage wanted a bit more marketing shazam, so Newton reduced the bullet weight to 87

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	OP 1000BT (.308)	16" CHROME LINED, 1:10 TWIST			34.5" RETRACTED
	OP1500 (5.56)	16" CHROME LINED, 1:9 TWIST			33" RETRACTED

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grains and bumped up the velocity to an unheard of 3,000 fps.

Experimenting further with the .250-3000 case, Newton necked it down to .22 caliber to come up with the .22 Hi-Power, also intended for the Savage 1899 lever action. Unlike today's typical 0.224-inch-diameter .22-caliber bullets, the .22 Hi-Power (or IMP, as it was casually labeled) was topped with 0.227/0.228-inch-diameter bullets.

Newton often shared the results of his experiments with other industry friends. J.E. Gebby visited Newton and obtained a sample .22/.250-3000 cartridge. Years later, circa 1935, Gebby and Grosvenor Wotkyns resurrected Newton's wildcat but topped it with 0.224-inch bullets and copyrighted the label .22 Varminter. The Varminter rapidly became popular in the varmint- and competition-shooting circles. Remington adopted it in 1965 as the .22-250 Remington. Most .22-250 rifles featured 1:14 twist rifling, and factory ammo was loaded with 40- to 55-grain jacketed bullets at muzzle velocities of 4,100 and 3,600 fps, respectively.

Because typical .22-250 rifles have that slower twist rate, bullets weighing more than 60 grains won't stabilize and are not accurate at extended ranges. In recent years, however, several new and heavy-for-caliber 0.224-inch bullets have been introduced, and faster-twist-rate barrels are now available, such as the Bergara B-14 HMR with 1:9 twist.

The .20-caliber .204 Ruger cartridge was a joint venture between Ruger and Hornady. In 2014 Dave Emary, Hornady's chief ballistics guru at the time and now a *Guns & Ammo* contributor, conceived the .204 Ruger as the fastest and flattest-shooting varmint cartridge. It's best described as a modified .222 Remington Magnum (.222 RM) case with a shortened and reduced diameter neck. The case length is the same as the .222 RM; however, the .204 Ruger's shoulder is located a bit farther forward (0.075 inch) to maximize case capacity. Hornady's 32-grain V-Max loading pushes 4,100 fps, and its 40-grain V-Max goes 3,900 fps. I've fired hundreds if not thousands of

rounds, and out to 300 yards or so, it is quite effective on varmints.

Mr. Baldwin's No. 1 rifle has a 24-inch barrel with a 1:12 twist rifling, so the ballistic values shown in the accompanying chart may not be quite achievable within safe pressure levels. However, if he limits the range to 300/350 yards, any varmint should be humanely dispatched.

Answering the question, "Which one is the best varmint round?" is not so easy. They're both great!

The typical .204 Ruger rifle barrel has 1:12 RH twist. Factory ammo is typically loaded with bullets weighing 45 grains or less. Comparing similar .204 Ruger and .22-250 bullets (i.e., sectional density, ballistic coefficient), you'll find the .204's muzzle velocity is a bit faster than the .22-250's. So if drag characteristics are almost equal and velocities favor the .204, the .204's bullet is also traveling a bit faster and flatter out to extreme range. But not enough so that a groundhog or prairie dog struck by either bullet will notice!

Theoretically, similar-weight .204 Ruger rifles generate a little less recoil, meaning the optic sight picture on a .22-250 rifle may be a bit less stable. I've actually never noticed any difference. In my shooting experience and based on my studious analysis of ballistics charts, with a 200-yard zero, the .204 Ruger is surely the "flattest and fastest" as advertised when comparing 40-grain bullets.

Of course, if you're hunting coyotes or bobcats, I think the .22-250 is preferable. The heavier bullets can be launched accurately even in 1:12 twist barrels. The improved ballistic coefficients of typical .22-caliber bullets compensate for the reduced muzzle velocities, ensuring optimal terminal performance on larger-size varmints.

ST

FAVORITE .204 RUGER HANDLOADS

BULLET	POWDER		PRIMER	VEL. (F.P.S.)
	(TYPE)	(GRS.)		
Sierra 39-gr. BlitzKing	Reloder 15	27.7	Fed. 205	3800
Sierra 39-gr. BlitzKing	Varget	28.0	Fed. 205	3650
Hornady 40-gr. V-Max	BL-C(2)	30.0	WSR	3775
Hornady 40-gr. V-Max	IMR 8208 XBR	27.3	WSR	3750
NOTES: All load data should be used with caution. Always start with reduced loads first and make sure they are safe in each of your guns before proceeding to the high test loads listed. Since <i>Shooting Times</i> has no control over your choice of components, guns, or actual loadings, neither <i>Shooting Times</i> nor the various firearms and components manufacturers assumes any responsibility for the use of this data.				

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GEN III

BY JOEL J. HUTCHCROFT



ONE OF MY SHOOTING BUDDIES, WHO shall remain nameless, really likes Ruger's American Rifle. I don't know for certain exactly how many he owns, but it's a lot. And they're chambered for a wide variety of cartridges, everything from .224 Valkyrie to .450 Bushmaster. He's gone so far as to have some of them rebarreled to some rather obscure (even obsolete) cartridges. Now, he's probably not your typical rifleman, but his appreciation for the bolt-action Ruger American Rifle is pretty common. From the day it was first announced about a dozen years ago, the American Rifle has been extremely popular with hunters and shooters. In all its various configurations, it's always been a very good value. Big news from Ruger for 2024 is that the platform has been updated, and according to the company, these improvements are what customers have been asking for. Ruger is calling the new version Generation II, and the first configurations to receive the updates are the Standard and the Ranch models. *Shooting Times* received a Standard Gen II chambered for 6.5 Creedmoor to evaluate for this report.

New Features

One the most noticeable changes to the Gen II rifle is the stock. Instead of the plain black synthetic of the previous Standard American Rifle, the Gen II Standard has an improved stock. Most importantly, the new stock is more rigid and ergonomic. It's finished in gray with black splatters, and it features a removable low comb riser and a removable length-of-pull spacer. With the spacer in place, the length of pull is 13.75 inches. Without the spacer, the length of pull is 12 inches. Other length-of-pull spacers and different-height comb risers (medium and high) will be available for purchase through the shopruger.com website.





AMERICAN RIFLE GEN II	
MANUFACTURER	Sturm, Ruger & Co. Inc. ruger.com
TYPE	Bolt-action repeater
CALIBER	6.5 Creedmoor
MAGAZINE CAPACITY	3 rounds
BARREL	20 in.
OVERALL LENGTH	41.25 in.
WEIGHT, EMPTY	6.5 lbs.
STOCK	Synthetic
LENGTH OF PULL	Adjustable, 12 or 13.75 in.
FINISH	Gun Metal Gray Cerakote barrel and receiver, gray and black stock
SIGHTS	None
TRIGGER	4.5-lb. pull (as tested)
SAFETY	Three position
MSRP	\$729

The stock also features Ruger’s patented Power Bedding integral bedding block system that positively locates the receiver and free-floats the barrel; a wide, soft-rubber recoil pad that progressively collapses to reduce felt recoil; and steel sling-swivel studs.

Also new to the Gen II is an intuitive, tang-mounted, three-position safety that prevents inadvertent bolt opening while allowing the rifle to be unloaded with the safety engaged. The “Fire” position is all the way forward, and in this position, a red line at the rear of the safety button is visible. The middle position prevents the trigger from being squeezed but allows the bolt to be operated so that a loaded cartridge can be removed with the safety engaged. The third position (all the way to the rear) locks the bolt from being raised and prevents the trigger from being operated. White lines ahead of the safety button indicate each of the “Safe” positions. Moving the safety button from position to position is both audible and tactile.

Speaking of the trigger, the rifle utilizes Ruger’s Marksman Adjustable Trigger, which has a safety blade integrated into the mechanism. The trigger pull is user-adjustable from 3.0 pounds to 5.0 pounds. Right out of the box, our sample’s trigger pull averaged 4 pounds, 8 ounces over five measurements with an RCBS trigger pull scale. The highest measurement was exactly 5 pounds, and the lowest measurement was 4 pounds, 4 ounces, and that indicates good consistency. The pull was smooth, and let-off was crisp.



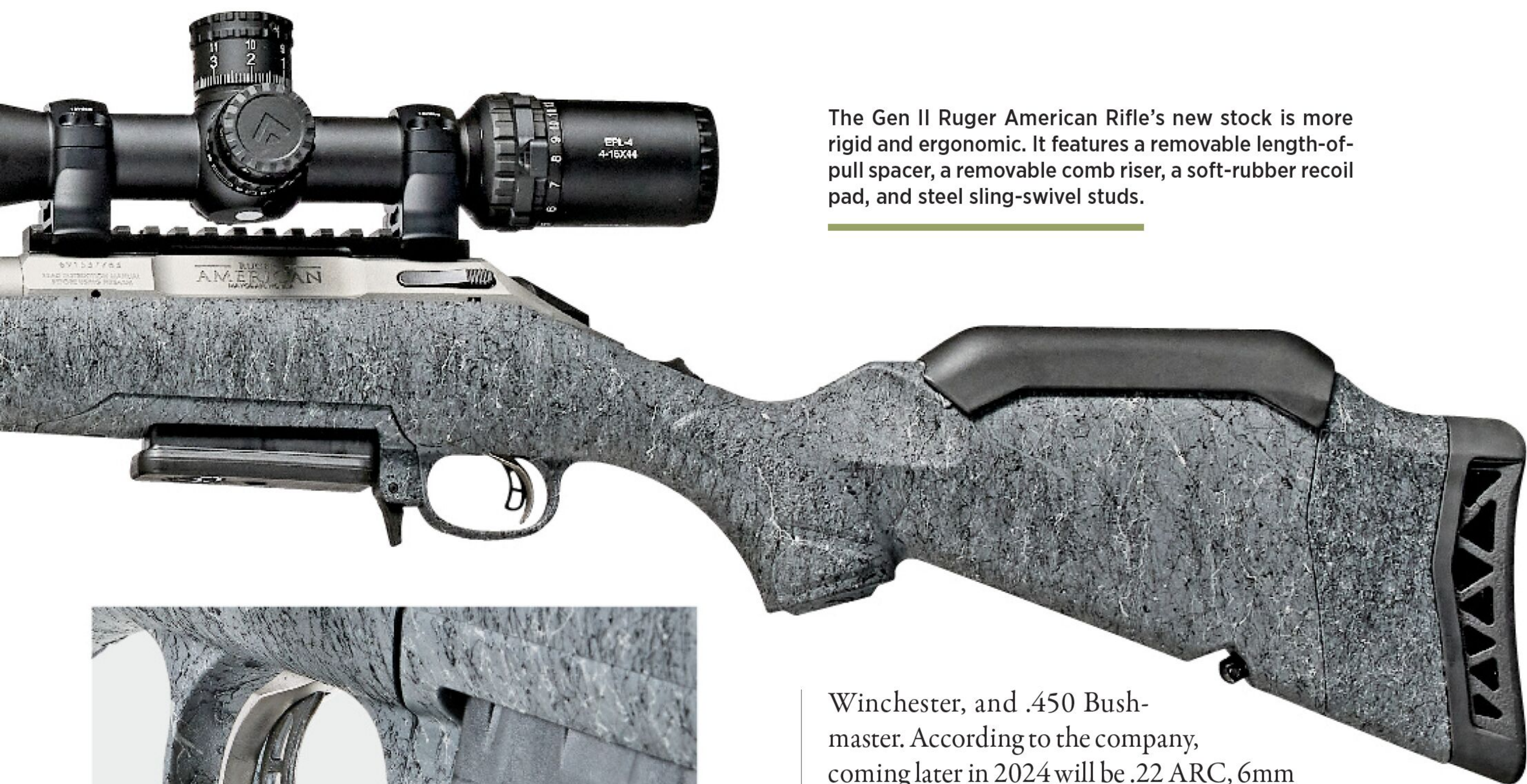
Also new is the Gen II rifle’s safety. It is a three-position, forward-to-fire mechanism. The middle position prevents the trigger from being operated but allows the bolt to open for unloading a chambered round with the safety engaged.

I wanted to see how accuracy was affected with the trigger pull as it came from the factory, so I didn’t adjust it. You will see later that I achieved very good accuracy with the rifle, so as far as I’m concerned, the 4.5-pound pull did not have any adverse effect. For anyone who wants to know the procedure to adjust the trigger pull, I’ll direct them to the operator’s manual because it has very detailed instructions. I’ll just say here that the barreled action must be removed from the stock to adjust the trigger, and there are good instructions on how to do that in the manual as well. By the way, the manual also presents detailed information on how to remove the stock’s length-of-pull spacer and the comb riser.

Other Features

The Gen II American Rifle has a lot of other great features. The full-diameter stainless-steel bolt is CNC machined and has three locking lugs and a 70-degree throw. The threaded bolt handle comes with a round anodized knob installed, but the threads allow easy customization of the knob.

The Standard rifle’s detachable box magazine is made of a synthetic material, and it holds three rounds. For our 6.5 Creedmoor-chambered Standard rifle, it’s an AI-style magazine. The



The Gen II Ruger American Rifle's new stock is more rigid and ergonomic. It features a removable length-of-pull spacer, a removable comb riser, a soft-rubber recoil pad, and steel sling-swivel studs.



The Ruger Marksman Adjustable Trigger is user-adjustable from 3.0 to 5.0 pounds of pull. Our sample rifle's trigger pull averaged 4.5 pounds straight from the box.

magazine release is a lever type that is located under the receiver immediately behind the magazine well. It pushes forward to release the magazine.

As our photographs show, the Gen II Standard has a Picatinny rail on top of the receiver (which makes scope installation fast and easy), and the rifle has a spiral-fluted barrel. The receiver and the barrel are finished in Gun Metal Gray Cerakote. The Standard rifle's barrel is 20 inches long, cold-hammer-forged, and medium in contour. The 6.5 Creedmoor muzzle is threaded 5/8-24, and it comes with a removable radial muzzle brake installed. The twist rate for the 6.5 Creedmoor rifle is one turn in eight inches. Of course, the twist rate varies depending on the chambering, and so does the muzzle thread rate. Ruger says this allows the mounting of common muzzle devices for the specific caliber.

Initial chambering offerings for the Gen II Standard American Rifle include 6.5 Creedmoor (as tested), .204 Ruger, .223 Remington, .243 Winchester, 7mm-08, .308

Winchester, and .450 Bushmaster. According to the company, coming later in 2024 will be .22 ARC, 6mm ARC, 6mm Creedmoor, 6.5 Grendel, 6.5 PRC, .270 Winchester, 7mm PRC, .30-06, .300 Winchester Magnum, .350 Legend, and .400 Legend.

The other new introductory Gen II model, the Ranch rifle, comes with a 16.1-inch barrel and a three-, five-, or 10-round magazine, depending on the chambering. The stock is Flat Dark Earth with black splatters, and the barrel and receiver are finished in Cobalt Cerakote. Initial chamberings include 5.56 NATO, .300 Blackout, 7.62x39, and .450 Bushmaster, with .22 ARC, 6mm ARC, 6.5 Grendel, 6.5 Creedmoor, .350 Legend, and .400 Legend slated to be available later in 2024.

Range Report

I reasoned that most shooters who choose the new Gen II American Rifle will most likely be using it for hunting, so I test-fired a selection of 6.5 Creedmoor factory ammo that's intended for hunting big game. The bullet weights ranged from 120 grains to 143 grains. The loads were chronographed with a Competition Electronics ProChrono Digital chronograph placed 12 feet from the gun's muzzle, and all velocity data shown are averages of five rounds. The accuracy results are averages of three, five-shot groups for each loading fired from a benchrest at a distance of 100 yards. As you can see from the accompanying chart, four of the five loads averaged 1.00 inch or less, with the overall average for all five loads coming in at 0.94 inch.

My best accuracy with the new Gen II rifle came with the Federal Fusion 140-grain ammo. It averaged 0.75 inch. That load produced an average velocity of 2,560



The American Rifle's bolt has three locking lugs and a threaded bolt handle that allows customization of the bolt knob.



The Gen II Standard rifle's detachable AI-style magazine holds three rounds. The magazine release is a lever type located at the rear of the magazine well.



The barrel length of the Gen II Standard rifle is 20 inches. It is cold-hammer forged, spiral-fluted, and threaded. It comes with a removable radial muzzle brake installed.

an average velocity of 2,577 fps, with an extreme spread of 45 and a standard deviation of 16 fps.

And bringing up the rear as far as accuracy went, the Winchester Deer Season 125-grain Extreme Point ammo averaged 1.13 inches. That load produced an average velocity of 2,625 fps (which was the highest velocity of the bunch), with an extreme spread of 42 and a standard deviation of 18 fps.

As you can see, the SIG SAUER ammunition produced the lowest velocity extreme spread and standard deviation, but all of the factory ammo produced more than acceptable extreme spreads and standard deviations.

fps, with an extreme spread of 37 and a standard deviation of 15 fps.

The next best accuracy was with the SIG SAUER Elite Hunter 130-grain Expansion Tip ammo. It averaged 0.88 inch. Its average velocity was 2,568 fps, with an extreme spread of 33 and a standard deviation of 13 fps.

Third place in the accuracy race went to the Hornady Precision Hunter 143-grain ELD-X ammo. It averaged 0.95 inch. That load produced an average velocity of 2,551 fps, with an extreme spread of 37 and a standard deviation of 20 fps.

With an average of 1.00 inch, the Browning 120-grain BXS ammo came in fourth place accuracy-wise. That load produced

I'll mention that I used a brand-new scope brand (to me) for this report. It's Arken Optics, and the scope I installed on the new Gen II Ruger American Rifle is the EPL-4 4-16X 44mm FFP model. The company says EPL stands for extreme precision light, and the EPL family of scopes is the company's lightweight hunter version of its Extreme Precision scope series. This scope has a 30mm tube, resettable zero-stop turrets, and an illuminated VHR reticle. (VHR stands for variable hunter reticle.) As the model designation indicates, the reticle is located in the first focal plane, the objective lens diameter is 44mm, and the magnification range goes from 4X to 16X. The illumination is powered by a CR2032 battery, and the red reticle has six brightness settings with "Off" positions



The 6.5 Creedmoor Gen II Standard American Rifle weighs 6.5 pounds and is 41.25 inches long with the length-of-pull spacer installed.

between each one.. The scope is constructed of strong and rugged aluminum, and the Japanese ELD glass lenses offer low dispersion. The scope is parallax adjustable from 10 yards to infinity, and it has an eye relief of 3.6 inches. The field of view is 30 feet on 4X and 7.5 feet on 16X at 100 yards. The scope is waterproof and shock-proof, and it's backed by a lifetime warranty. It is 13.2 inches long and weighs 23.8 ounces. It came with rubber lens covers, and I installed the company's accessory power-ring throw lever (MSRP: \$39.99), which made switching the power setting quick and easy. I also used Arken Halo scope rings (MSRP: \$69.99).

During my sighting-in session, I took a little extra time and made note of how precise the adjustment changes were. The company says they are in 0.1-Mil increments. That's equal to 0.36-inch increments at 100 yards, and I found that at that distance, point of impact tracked precisely when I did the math correctly. The clicks are audible and tactile. The performance of this scope was excellent, and at an MSRP of \$449.99, the price is excellent, too.

After working with the new Gen II Ruger American Rifle, I think the friend I mentioned at the beginning of this report is going to like the new version even more than he does the first generation. I think he's going to be buying Gen II rifles in any and every chambering he doesn't already own, and I wager a lot of you will be, too. **ST**



Joel used an Arken EPL-4 4-16X 44mm scope for testing the new Gen II American Rifle. It features a 30mm tube, resettable zero-stop turrets, and an illuminated reticle. It is backed by a lifetime warranty, and the MSRP is \$449.99.

RUGER GEN II AMERICAN RIFLE ACCURACY & VELOCITY				
AMMUNITION	VEL. (F.P.S.)	E.S. (F.P.S.)	S.D. (F.P.S.)	100-YD. ACC. (IN.)
6.5 Creedmoor, 20-in. Barrel				
Browning 120-gr. BXS	2577	45	16	1.00
Winchester Deer Season 125-gr. Extreme Point	2625	42	18	1.13
SIG SAUER Elite Hunter 130-gr. Expansion Tip	2568	33	13	0.88
Federal 140-gr. Fusion SP	2560	37	15	0.75
Hornady Precision Hunter 143-gr. ELD-X	2551	37	20	0.95
NOTES: Accuracy is the average of three, five-shot groups fired from a sandbag benchrest. Velocity is the average of five rounds measured 12 feet from the gun's muzzle.				

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CARTRIDGE EVOLUTION IN ACTION

INITIALLY PROPOSED AS THE 6MM OPTIMUM, HORNADY'S 6MM ADVANCED RIFLE CARTRIDGE (ARC) IS THE RESULT OF THE TRANSFORMATION OF AT LEAST FIVE PREVIOUS CARTRIDGES.

BY STEVE GASH

THE MILITARY IS ALWAYS ON THE LOOK-out for better armament, and this includes new cartridges that can fill many roles. *Infantry* magazine is published by the U.S. Army in Fort Benning, Georgia, and in a 1999 edition of the magazine an article by Stanley C. Crist (1921–1998) was printed. That article called for the development of just such a new cartridge. Crist was a former tank commander, platoon sergeant, training NCO, scout section leader, consultant, and writer, and he called his hypothetical round the 6mm Optimum. It would have more power than the 5.56mm NATO; light recoil; about the same terminal performance as the 7.62x51 NATO; and could be used in infantry rifles, machine guns, and sniper rifles. And the ammo would weigh about the same as the 5.56.

The details of such a proposed round are pretty impressive. Crist said that it would launch a 100-grain 6mm bullet at a velocity of about 2,900 fps. This would produce 1,868 ft-lbs

of energy at the muzzle and have modest wind deflection.

The 6mm Advanced Rifle Cartridge (ARC), as it is now called, was introduced in 2020 by Hornady, and the development of the cartridge has an interesting and illustrative history. The 7.62x39 appeared in 1943 and was reformed into the .220 Russian (a.k.a. the 5.6x39 Vostok) in 1961. In 1972, the .220 Russian was reformed into the .22 PPC benchrest round by Dr. Louis Palmisano and Ferris Pindell. In turn, in 1987 the .22 PPC was necked up to 6mm to form the super-accurate 6mm PPC. With slight modification, the 6mm PPC was necked up to form the 6.5 Grendel in 2002. But wait, there's more!

The 6.5 Grendel (a powerful, accurate, and multidimensional round in its own right) was necked down to 6mm and modified slightly to become the 6mm ARC. So, we went from the 7.62x39 to the 5.6x39 to the .22 PPC, 6mm PPC, 6.5 Grendel, and finally to the 6mm ARC. This is an example of cartridge evolution in action, and the results are impressive.

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CARTRIDGE EVOLUTION IN ACTION



Hornady introduced the 6mm ARC in 2020 and currently offers three factory loads: the 103-grain ELD-X Precision Hunter, the 105-grain BTHP BLACK, and the 108-grain ELD Match.

Ballistically Speaking

I find it fascinating to compare Crist's proposed ballistics with those of the 6mm ARC. Hornady's results come pretty close to many of Crist's desired performance goals.

Hornady put a lot of thought into the final design of the 6mm ARC case and the bullets it shoots. The 6mm Advanced Rifle Cartridge is certainly advanced. The accuracy and uniform ballistics of the 6.5 Creedmoor are well known and are the result of the strict dimensional specifications of its case and chamber, and these criteria were applied to the 6mm ARC.

The base and rim diameters of the 6mm ARC and the 6.5 Grendel are essentially the same (0.441 and 0.438 inch). The 6mm ARC's case capacity is about 43 grains of water, and its case length is 1.490 inches, shortened slightly from the 6.5 Grendel's 1.516 inches. Both have 30-degree shoulders. Neck lengths of about one caliber are thought to be optimal for the best ballistics and accuracy, and the 6mm ARC has a neck length of 0.234 inch (.96 caliber), compared to the Grendel's 0.243 inch (.92 caliber). Overall cartridge length of the 6mm ARC is set at 2.26 inches, making it compatible with AR-platform magazines.

Another point emphasized by Crist was that his proposed 6mm cartridge would have better downrange performance, with less wind drift. And this was before today's high-ballistic-coefficient bullets, but he talked about "very low drag" bullets. Another factor that optimizes the 6mm ARC round's performance with new long and heavy-for-caliber bullets is a really fast twist, set at one turn in 7.5 inches.

Plus, the new 6mm ARC is mild mannered and doesn't kick your socks off. The

free recoil of a typical rifle with representative loads is a mere 4 to 6 ft-lbs. This also contributes to great achieved accuracy.

The muzzle energy of full-power 6mm ARC rounds with 100-grain bullets is about 1,600 ft-lbs. The same metric for the 5.56 NATO with a 55-grain bullet is about 1,030 ft-lbs. Plus, a soldier could carry about as many of the 6mm ARC rounds as 5.56 rounds but with an increase in muzzle energy of about 55 percent. Add this improvement in downrange ballistics and light recoil, and the many advantages of the 6mm ARC are obvious.

Rifles have to have ammo to perform, and as I write this, to the best of my knowledge, only Hornady makes 6mm ARC factory loads, but they cover the varied applications of the 6mm ARC very well. For competition shooters, there is the Match load with a 108-grain ELD Match bullet at a listed 2,750 fps. For the AR, the BLACK load carries a 105-grain BTHP bullet, also listed at 2,750 fps. Then there is the new Precision Hunter load with the excellent 103-grain ELD-X bullet at 2,800 fps. The ballistic coefficients of these three bullets are eye-popping. For the ELD Match, it's .536. For the BTHP, it's .512. And for the ELD-X, it's .530.



A Snap to Handload

On top of all that, the 6mm ARC case is a snap to reload, and there are scads of high-tech 6mm bullets for the handloader. Hornady offers cartridge cases, reloading dies, and other precision tools for the handloader. Many powders work well in the ARC, but Hodgdon LEVERevolution is a top choice.

Crafting super accurate handloads is a delightful enterprise, since the little case

seems to like almost every load combination, and the handloader can whip up loads for long-range varmint or target shooting or popping steel. But for me, the most interesting aspect of the new round is the extreme versatility with the myriad of bullet designs. Western rockchucks are in big trouble this fall!

Shooting Results

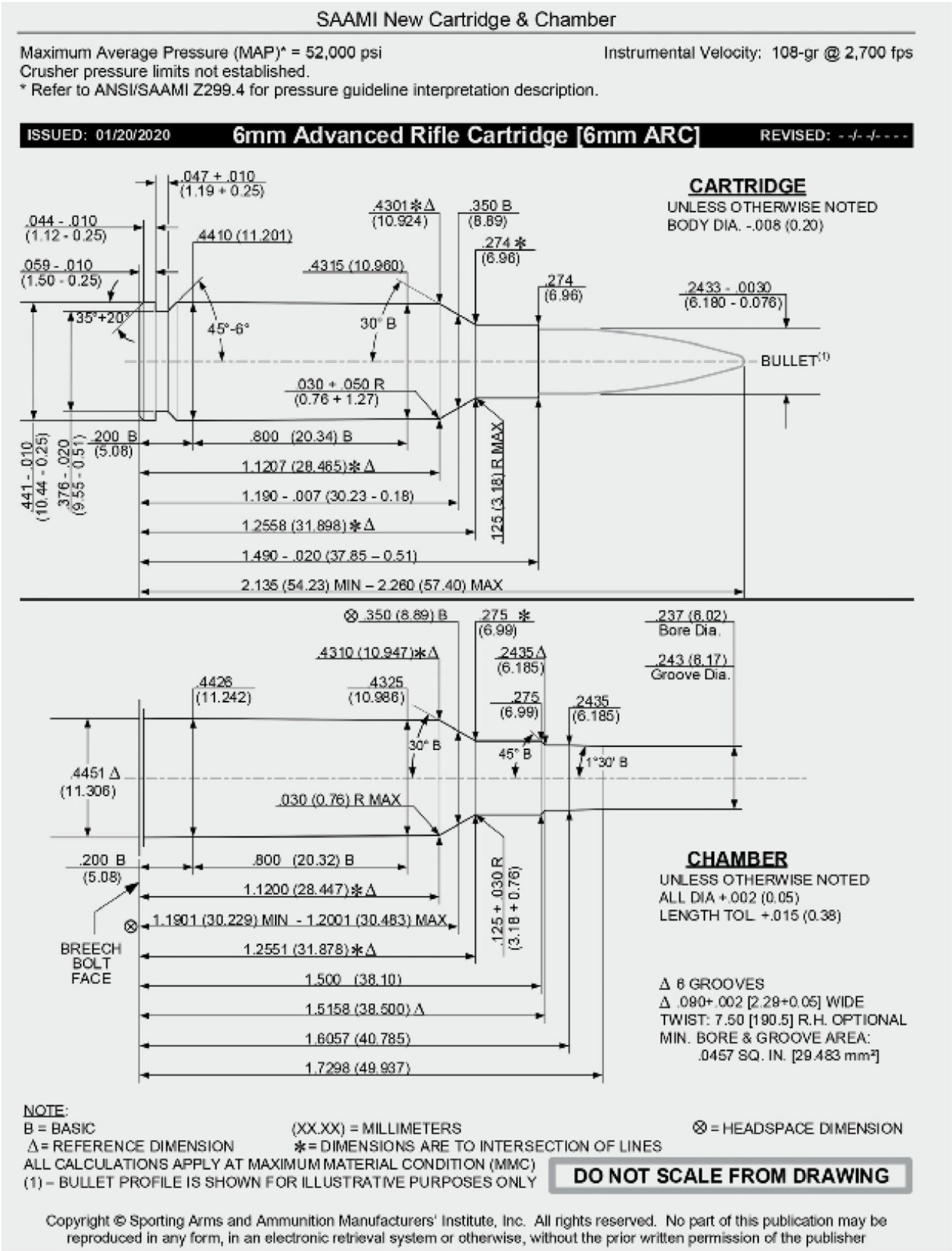
For this report, I was fortunate to have two high-quality and very accurate bolt-action rifles in which to evaluate 6mm ARC factory ammo and handloads. A fairly new offering from Savage is the Model 110 Carbon Predator. It has an 18-inch Proof Research carbon-fiber barrel with a 1:7.5 twist. The muzzle is threaded, and the rifle comes equipped with Weaver-type scope bases. I scoped the rifle with a Trijicon Tenmile 3-18X 44mm FFP scope. So equipped, this rifle is a mite heavy, but it shoots terrifically.

The other 6mm ARC test rifle is an experimental prototype Ruger American. It has a 22-inch barrel with a 1:7.7 twist. The Americans have a well-earned reputation for accuracy, and this one certainly lived up to its reputation. I used a Leupold VX-3HD 2.5-8X 36mm scope on it.

The results of all bench testing are shown in the accompanying chart, and as noted earlier, the only factory loads for the 6mm ARC are from Hornady. All were accurate. As for the handloads listed, I tested many, and the examples shown were selected as a representative cross-section of potential loads for each rifle.

In the Model 110, the average of the three factory loads was a dazzling 0.52 inch, and the handloads averaged 0.68 inch. In the American, the factory loads averaged 0.72 inch, and the handloads averaged 0.84 inch. It's easy to see that one can find a factory load or a handload for just about any shooting purpose, whether it's formal long-range target shooting or just busting rocks in the back pasture.

And in addition to the plain shooting fun with the ARC, I think one of its many virtues is its potential in the hunting fields.



The 6mm ARC is based on a necked-down 6.5 Grendel case. The 6.5 Grendel came from the 6mm PPC, which grew out of the .22 PPC. The .22 PPC was based on the .220 Russian, which was modified from the 7.62x39.

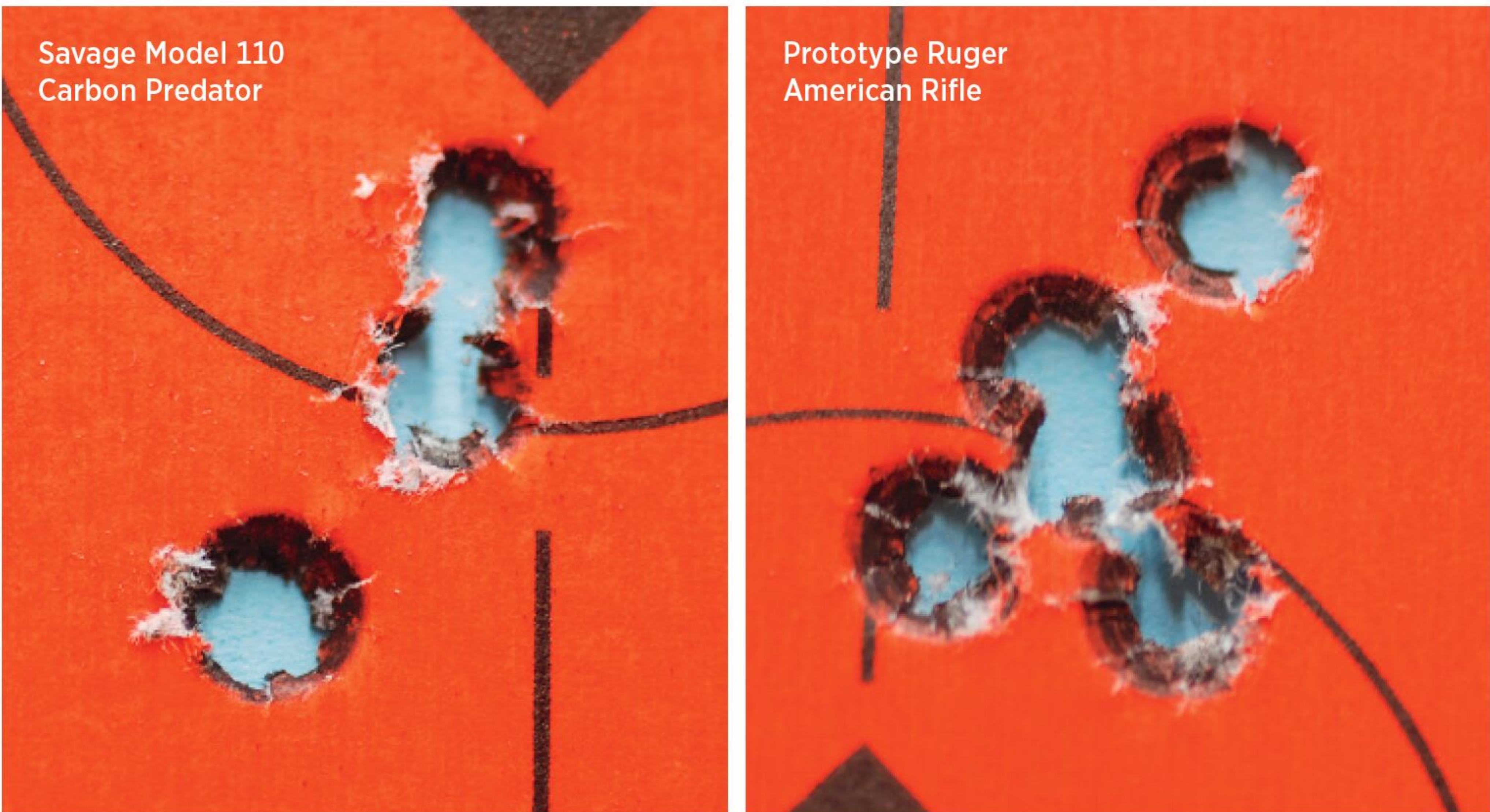
BALLISTICS COMPARISON			
CARTRIDGE	MUZZLE VELOCITY (F.P.S.)	300-YD. ENERGY (FT-LBS)	400-YD. ENERGY (FT-LBS)
5.56 NATO 62-gr. FMJ	3060	604	456
6mm ARC 103-gr. ELD-X	2800	1197	1038
.243 Win. 100-gr. BTSP	2900	1175	980
6.5 Grendel 123-gr. SST	2580	1193	1028
6.8 SPC 120-gr. SST	2460	925	758

6MM ARC CASE DIMENSIONS	
MAXIMUM CARTRIDGE LENGTH	2.260 in.
BASE AND RIM DIAMETER	0.441 in.
LENGTH TO SHOULDER	1.121 in.
DIAMETER AT SHOULDER	0.430 in.
LENGTH TO DATUM POINT	1.190 in.
DIAMETER AT DATUM POINT	0.350 in.
SHOULDER ANGLE	30 degrees
NECK DIAMETER	0.274 in.
NECK LENGTH	0.234 in.
MAP	52,000 psi

CARTRIDGE EVOLUTION IN ACTION

The Match and BLACK factory loads would surely handle varmints, as would handloads with 65-, 75-, or 80-grain bullets. These high-ballistic-coefficient bullets hold velocity and energy well, so they would certainly be adequate for smaller big game like prong-horn antelopes and Texas deer. And there are several controlled expansion bullets, too.

The 6mm ARC compares favorably with the classic .243 Winchester and some other rounds with big-game bullets. Using Hornady’s factory-listed ballistics, the data is listed in the accompanying chart. Almost everyone would agree that the .243 Win. with a 100-grain bullet is a perfectly adequate deer or antelope load out to 300 yards, or maybe even 400 yards. As you can see, the 6mm ARC stacks up favorably at 300 and 400 yards. Just for reference, I have taken quite a few white-tails with the .243 Win., an axis deer with the 6.8 SPC, and a 236-pound aoudad ram with the 6.5 Grendel. Looking



Steve tested 6mm ARC factory ammo and handloads in a Savage Model 110 Carbon Predator rifle and a prototype Ruger American rifle. As these half-inch five-shot groups at 100 yards indicate, the ammunition and rifles performed very well.

at the numbers, it’s plain to see that the 6mm ARC would have filled such hunting roles admirably. The 6mm ARC is accurate, economical to shoot, and hits way above its weight class. It’s a neat, well-designed little round.

I haven’t decided on my deer rifle this fall, but I think Hornady’s 103-grain ELD-X factory load in 6mm ARC is a great candidate and may get the nod.

ST

6MM ARC VELOCITY & ACCURACY									
BULLET	POWDER		CASE	PRIMER	COL (IN.)	VEL. (F.P.S.)	S.D. (F.P.S.)	ENERGY (FT-LBS)	100-YD. ACC. (IN.)
	(TYPE)	(GRS.)							
Savage Model 110 Carbon Predator, 18-in. Barrel, 1:7.5 Twist									
Hornady 65-gr. V-Max	X-Terminator	31.0	Hornady	Fed. 205	2.115	3267	17	1541	0.51
Hornady 75-gr. V-Max	P.P. Varmint	31.4	Hornady	Fed. 205	2.100	3118	11	1619	0.88
Berger 80-gr. Varmint	IMR 8208 XBR	27.2	Hornady	Fed. 205	2.160	2736	10	1330	0.90
Hornady 90-gr. ELD-X	LVR	30.3	Hornady	Fed. 205	2.215	2882	9	1660	0.45
Hornady Precision Hunter 103-gr. ELD-X		Factory Load			2.501	2640	15	1593	0.55
Hornady BLACK 105-gr. BTHP		Factory Load			2.204	2614	9	1595	0.56
Hornady Match 108-gr. ELD Match		Factory Load			2.503	2564	5	1577	0.47
Ruger American, 22-in. Barrel, 1:7.7 Twist									
Nosler 80-gr. Ballistic Tip Varmint	H4895	27.0	Hornady	WSR	2.180	2754	14	1348	1.06
Nosler 95-gr. Ballistic Tip Hunting	LVR	28.5	Hornady	WSR	2.260	2697	12	1535	0.52
Nosler 95-gr. Partition	Ball-C(2)	28.5	Hornady	WSR	2.100	2623	13	1452	0.81
Nosler 105-gr. RDF	StaBALL 6.5	30.5	Hornady	WSR	2.260	2502	16	1460	0.96
Hornady Precision Hunter 103-gr. ELD-X		Factory Load			2.501	2657	20	1615	0.62
Hornady BLACK 105-gr. BTHP		Factory Load			2.204	2610	19	1589	0.79
Hornady Match 108-gr. ELD Match		Factory Load			2.503	2585	23	1603	0.75
NOTES: Accuracy is the average of five, five-shot groups fired from a benchrest. Velocity is the average of 10 rounds measured 10 feet from the guns' muzzles. Range temperatures were 54 to 76 degrees Fahrenheit.									
All load data should be used with caution. Always start with reduced loads first and make sure they are safe in each of your guns before proceeding to the high test loads listed. Since <i>Shooting Times</i> has no control over your choice of components, guns, or actual loadings, neither <i>Shooting Times</i> nor the various firearms and components manufacturers assumes any responsibility for the use of this data.									

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SMITH & WESSON M&P 22 MAGNUM



THIS HIGH-CAPACITY, POLYMER-FRAMED SEMIAUTOMATIC PISTOL COULD BE THE MOST VERSATILE .22 WMR SIDEARM EVER DEVISED.

BY JOSEPH VON BENEDIKT

SMITH & WESSON M&P 22 MAGNUM

SMITH & WESSON’S NEW HIGH-CAPACITY .22 Magnum pistol is one of the most innovative handguns introduced in the last 12 months. It is sleek and lightweight, yet it packs an astonishing 30 cartridges in its magazine.

Unlike most ultracapacity pistols, the M&P 22 Magnum does not have an awkwardly fat grip. On the contrary, thanks in part to the slender nature of the .22 Magnum (WMR) cartridge and in part to excellent grip frame engineering, the pistol has a slim, comfortable grip.

Another unique feature is that although the M&P 22 Magnum looks like a striker-fired pistol, it actually features a single-action internal hammer. This enables it to have a better trigger than nearly any striker-fired pistol.

Those features, however, are really just features. The engineering genius comes into play with the unique barrel system. The action is fundamentally a blowback type. However, it’s a delayed system—crucial to harnessing the zesty energy of the .22 WMR cartridge and converting it into a reliable operating system.

Vital to this system is the shrouded barrel. What appears to be the barrel is actually a fixed shroud. The barrel proper is a slender affair housed inside that shroud. The delayed function is achieved via a port near the front of the barrel, which bleeds propellant gases off. These gases provide the rearward thrust needed to propel the barrel breech rearward within the shroud. This imparts a robust shove to the slide face, opening the slide and extracting and ejecting the fired case. The slide is then propelled forward as the recoil spring decompresses, picking up a fresh cartridge from the magazine and chambering it.

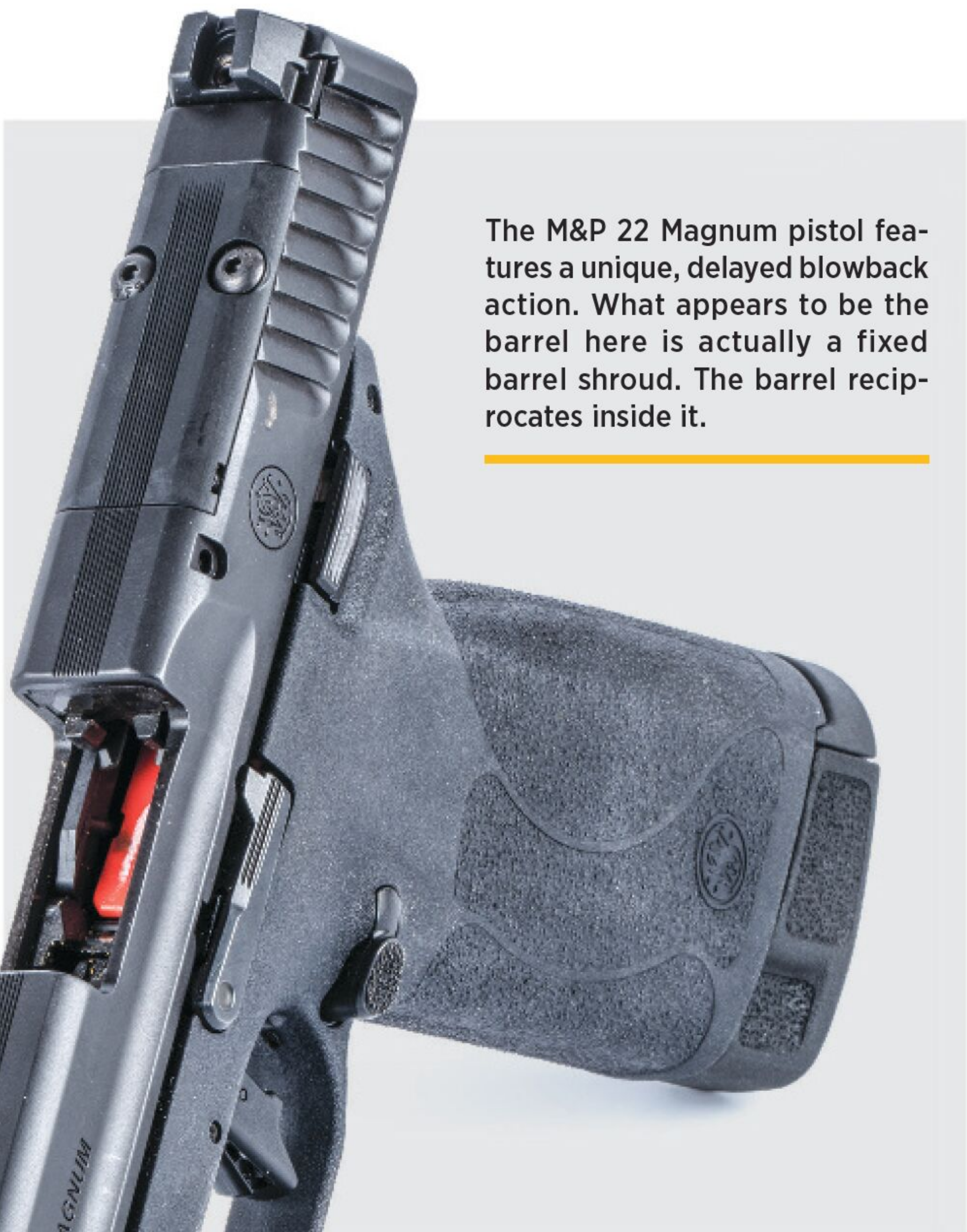
Historically, semiautomatic .22 WMR firearms have always been problematic. As a result, revolvers and bolt-action rifles are far more common. Time will reveal whether the delayed blowback system of the M&P 22 Magnum overcomes those issues, but it’s good to know that the entire system was designed specifically for the cartridge.

For whatever reason, the .22 WMR cartridge gained a cult-like following early on, and it has maintained that discipleship since its introduction in 1959. Possessing a pistol that holds a full 30 rounds of .22 WMR ammunition is a compelling temptation.

Features

In addition to the 30-round capacity and its unique operating system, the M&P 22 Magnum has a plethora of attractive features.

For those with fading middle-aged eyesight (like me), or for those who simply prefer a red-dot optical sight atop their pistol, the M&P 22 Magnum comes optic-ready, with the slide machined to fit popular red-dot sights and a filler plate installed. The factory sights are good, too. The front is a nice yellow/green fiber-optic



The M&P 22 Magnum pistol features a unique, delayed blowback action. What appears to be the barrel here is actually a fixed barrel shroud. The barrel reciprocates inside it.

M&P 22 MAGNUM	
MANUFACTURER	Smith & Wesson
TYPE	Delayed blowback autoloader
CALIBER	.22 WMR
MAGAZINE CAPACITY	30 rounds
BARREL	4.35 in.
OVERALL LENGTH	8.4 in.
WIDTH	1.13 in.
HEIGHT	5.9 in.
WEIGHT, EMPTY	22 oz.
GRIPS	Integral to polymer frame
FINISH	Matte black
SIGHTS	Black square-notch rear, fiber-optic front
TRIGGER	4.06-lb. pull (as tested)
SAFETY	Trigger safety lever
MSRP	\$649

type, and the square-notch rear sight has antiglare striations. The pistol is configured with a Picatinny rail on the frame in front of the trigger guard, and it makes mounting a light/laser device easy. The fire controls are fully ambidextrous, with the exception of the magazine release—which is reversible, so southpaw shooters can set up their sidearm exactly as they wish. There’s a slide lock lever and a manual thumb safety lever on each side of the pistol. They are low in profile but feature slip-reducing striations that help make operation sure.

Elegant directional grooves grace the rear of the slide. It's slick-surfaced up front, so it will slide in and out of a holster without hang-up.

What's not slick is the grip. It has a really nice stippled texture that will provide a good nonslip grip whether your fist is wet with mud, blood, or sweat.

In addition to being slim, grippy, and comfy, the grip is nice and high under the rear of the slide, enabling a high, recoil-controlling grasp on the pistol. The rear of the trigger guard is undercut to match. Not that the M&P 22 Magnum has much discernible recoil, but for shooters who understand the benefits of a good high clench on their pistol, its grip configuration is a definite plus.

A flat-faced trigger shoe with internal safety lever provides a distinct, clean feel beneath the trigger finger. Combined with the crisp single-action release of the internal hammer, it provides a very good feel, akin to that of a nice Model 1911 trigger.

Two 30-round magazines come with each M&P 22 Magnum pistol. For those interested, the pistol will fire with the magazine removed.

Disassembly for field cleaning and maintenance isn't quite as easy as with most centerfire polymer-framed pistols, but it isn't challenging. Simply remove the magazine, clear the chamber, rack the slide to cock the hammer, then press the slide rearward about 3/8 inch out of battery to align a half-moon cutout in the left side of the slide with the takedown pin. Use



Smith & Wesson's new full-size .22 Magnum pistol holds 30 rounds in the state-of-the-art polymer magazine, but the pistol weighs just 22 ounces. Two magazines come with each pistol.

a small punch to press the protected tip of the takedown pin. Push it right through and out of the pistol. Release the slide and pull it forward off the frame. Lift the captive recoil spring and guide rod out of the slide assembly, then the barrel shroud and barrel. Pull

the barrel out of the rear of the shroud and you're done. Assemble in reverse order.

Shootability

Some types of ammunition are still hard to come by, as supply hasn't quite caught up with demand post-COVID. But I was able to find two different .22 WMR loads to test through the M&P 22 Magnum. They were Federal's blue-box Game-Shok 50-grain JHPs and Hornady's Critical Defense 45-grain FTXs.

Resting the M&P 22 Magnum over a sandbag, I fired three consecutive five-shot groups at 25 yards with each loading. Impact elevation was either right on or a tad low, depending on how you use handgun sights. I use the top flat of the front sight, so groups were an inch or two low for me, but if you aim by plastering the glowing fiber optic right on your target, elevation would be perfect. Horizontal point of impact was a couple inches left, but that's easily solved by loosening the hex-head



The flat-faced trigger provides a distinct feel beneath the finger and helps enable consistent shooting. Note the low-profile magazine release.



M&P 22 Magnum pistols are optic-ready. Just remove the filler plate and install your choice of red-dot sight.



Good engineering kept the M&P 22 Magnum's grip narrow and comfortable. Here, the magazine is partially out, showing the minimal grip walls and the maximized width of the magazine that enabled the pistol's 30-round capacity. Note also that the magazine release is reversible for left-handed shooters.

SMITH & WESSON M&P 22 MAGNUM

locking screw and drifting the sight slightly in its dovetail.

Groups ran from less than an inch for the best—fired with the Hornady ammo—to about 1.75 inches. Accuracy honors went to the Hornady load, with an average of 1.15 inches, but both loads shot just fine for practical purposes—certainly within minute-of-fox vitals and probably even inside cottontail head-shot spec.

Velocity from the 4.35-inch barrel was considerably less than from a .22 WMR rifle barrel, as expected. Still, the M&P 22 Magnum pushed 45-grain bullets about 100 fps faster than a .22 LR rifle pushes 40-grainers and a good 300 to 400 fps faster than a .22 LR pistol pushes 40-grain bullets. That’s an impressive step up in terminal performance.

Reliability testing was interesting. It seemed that the long brass cases of the Federal ammo acted a bit rubbery, if that makes sense, as they entered the chamber at the angle presented by the magazine feed lips. About one in five cartridges would hang up slightly, half chambered, and needed a mild encouraging press on the rear of the slide to get them chambered. The nickel-plated Hornady cases, on the other hand, slid into the chamber as if greased. Presumably, the natural lubricity of the nickel provides a reliability benefit.

I wish I’d had several other loads to test through the M&P 22 Magnum in order to give it a more thorough functioning test; however, I can surely attest to the pistol’s extremely shootable nature. It points wonderfully. The sights are easy to see and line up. The trigger is light and releases cleanly. Recoil is negligible. Trigger reset is short, crisp, and tactile.

As for reloads, what reloads? You have 30 rounds on tap. I’ll go so far as to utilize the old saying about early Henry 1860 and Winchester ’73 rifles: You can load it on Sunday and shoot it all week.

What’s the M&P 22 Magnum good for? Well, first, pure plinking fun. Yes, it’s more expensive to shoot than a .22 LR, but it’s also much cooler, what with the huge magazine capacity and the visibly greater on-impact results.

More practically, the M&P 22 Magnum is a prime fur-trapping pistol (pun intended). It’s lightweight, accurate, easy to shoot precisely, and packs enough wallop to quickly dispatch foxes, beavers, coyotes, and even wolves and lynx with head shots. And you’ll never have to reload your pistol while trudging along on your snowshoes—you’d have to have a spectacular day indeed on the trapline to run through all 30 rounds.

Some folks will also press the M&P 22 Magnum into service as a self-defense gun. And why not, particularly for recoil-sensitive shooters? You have nearly double the rounds in the



When the gun is field-stripped for maintenance, the barrel and shroud are clearly visible. A vent hole near the muzzle of the barrel activates the delayed blowback system.

S&W M&P 22 MAGNUM ACCURACY & VELOCITY				
AMMUNITION	VEL. (F.P.S.)	E.S. (F.P.S.)	S.D. (F.P.S.)	25-YD. ACC. (IN.)
.22 WMR, 4.35-in. Barrel				
Hornady Critical Defense 45-gr. FTX	1313	108	35	1.15
Federal Game-Shok 50-gr. JHP	1103	106	27	1.65
NOTES: Accuracy is the average of three, five-shot groups fired from a sandbag benchrest. Velocity is the average of 15 rounds measured 10 feet from the gun’s muzzle.				

magazine as the average full-size polymer-framed 9mm pistol. Terminal authority isn’t great, but when loaded with purpose-built .22 WMR ammo, such as the Hornady Critical Defense this particular pistol likes, it is nothing to sneeze at.

Unlike some new pistol models, which don’t get adopted into various families of holsters until they’ve proved they have lasting power, the M&P 22 Magnum already boasts an impressive lineup of compatible holsters. Gunfighters Inc. alone offers four different types, ranging from concealable belt holsters to chest holsters and shoulder holsters. Craft Holsters has several models too, including a nice leather small-of-the-back holster and several concealable IWB and OWB hip holsters. Several other makers provide holsters appropriate for the M&P 22 Magnum, too.

There’s one other aspect of shooting the M&P 22 Magnum that’s worth mentioning: ammo cost. The online searches I did showed that most loads—when available—run from \$14 to \$23 per 50 rounds. That’s about on par with 9mm plinking ammo these days, so there’s no real “cheap rimfire” ammo cost advantage. However, the easy-to-shoot, easy-on-fur advantage is there. Plus, of course, that 30-round capacity benefit.

Do you need an M&P 22 Magnum? That, of course, is entirely dependent on personal taste and tasks. If you run a serious trapline or want a very low-recoil, high-capacity sidearm for personal protection, you should strongly consider the M&P 22 Magnum. It’s a beautifully engineered, uniquely useful handgun that’s superbly built by one of the most respected manufacturers in the world.

ST



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U N P A R A L L E L E D





WILSON COMBAT

NULA MODEL 20

BOLT-ACTION RIFLE

AS OF 2023, WILSON COMBAT OWNS THE NEW ULTRA LIGHT ARMS COMPANY, AND THE RIFLES ARE EVERY BIT AS ACCURATE AND LIGHTWEIGHT AS THE ORIGINALS MADE BY MELVIN FORBES.

BY LAYNE SIMPSON

IN 1985 I DROVE TO THE SHOT SHOW IN Atlanta, Georgia. The most interesting new centerfire rifle was in a display so small and out of the way it could have been easily overlooked. The sign read “Ultra Light Arms,” and as I learned, the mild-mannered gentleman in charge was a West Virginia gunsmith by the name of Melvin Forbes. As he placed a rifle in my hands I was amazed at its lightness. Melvin called it the Model 20, with the number indicating the weight of the action in ounces. It was basically a scaled-down version of the Remington Model 700 short action (which weighs 35.2 ounces) but with a Winchester Model 70-style bolt release and a Sako-style extractor. A left-hand action was also available. Melvin made the Kevlar stock in his shop, and it weighed just 16 ounces. More ounces were trimmed away from the rifle by eliminating all bottom metal except for the trigger guard.

WILSON COMBAT NULA MODEL 20 BOLT-ACTION RIFLE



Wilson Combat now owns the New Ultra Light Arms company that Melvin Forbes founded in the 1980s. Rifles are being built in the Wilson facility in Arkansas, and they feature stainless-steel barrels and EDM-profiled chrome-moly receivers.

The safety lever of the Timney trigger had received a modification patented by Melvin and described by him as a three-stage design. The two-position lever was pushed forward to “Off” and pulled rearward to “On,” with the latter position blocking bolt rotation. Applying downward pressure on the lever while in its rearward position allowed the bolt to be rotated for loading or unloading the chamber with the safety still engaged. The modified trigger worked equally well on any Remington Model 700, and Melvin sold many to owners of those rifles. Available chamberings for the Model 20 ranged from .22-250 to .308 Winchester, with the .284 Winchester quickly becoming the best seller. I used to kid Melvin about building more rifles chambered for that cartridge than Winchester, and he may have done just that. The Model 20RF in .22 Long Rifle was added in 1992.

My report in the 1986 *Gun Digest* may have been the first published on the new Ultra Light Arms rifle. The one I received for testing had a 22-inch barrel in .284 Winchester, and it weighed a mere 5 pounds, 7.5 ounces with a Burris 6X Mini scope installed. Contrary to common practice, the barrel was fully bedded in the entire length of the fore-end. Prior to filing that write-up, the rifle was averaging just over an inch at 100 yards with several handloads. Months later I used it on a mule deer hunt in Wyoming, and by that time additional load development had shrunk groups inside an inch.

Longer actions were eventually introduced. The Model 24 for the .30-06 family of cartridges weighed 5.25 pounds without a scope, while the Model 28 chambered for medium-length cartridges, such as the 7mm Remington Magnum and the .338 Winchester Magnum, weighed 5.75 pounds. While hunting moose in Sweden with friends at Norma, I took two good bulls with a Model 28 in .358 Norma Magnum, and it may have been the only one Melvin built in that caliber.

The Ultra Light Arms design fell short of perfection by only one small detail. Shrinking various dimensions shortened and therefore steepened the cocking cam surface of the bolt,

and that increased the amount of effort required to rotate the bolt to full firing pin compression. Keeping the cam surface greased helped, and it became barely noticeable after I had shot the rifle a great deal.

Melvin’s decision to sell Ultra Light Arms to Colt Mfg. Co. in 1999 may have looked good on paper, but it ended up being a commercial and financial disaster. So, in late 2000, he took the company back, changed its name to New Ultra Light Arms (NULA), and once again began building rifles in his Granville, West Virginia, shop. As in the old days, each rifle was built to a customer’s specifications, so they were never inexpensive. When I first discovered the Model 20 back in 1985, it was priced at \$1,300 while the Remington Model 700 BDL was going for \$475.

In 2013 Melvin teamed up with Titan Machine Products of Westbrook, Maine, and formed Forbes Rifle LLC to build production versions of his hand-built rifles at more affordable prices. It appeared to be a simple and straightforward working arrangement. Melvin shared his design and manufacturing criteria and technology, and TMP would utilize the latest in CNC equipment to build the barreled actions and fit them to Kevlar-reinforced carbon-fiber stocks made by Forbes. The TMP rifle in .30-06 I shot was quite accurate, but that business arrangement was short-lived.

Melvin was no spring chicken when I met him 38 years ago, so when the time came for him to turn over his company to someone capable of building his rifles to his high standards, he hit a business home run in 2023 by selling his company to Bill Wilson, who founded Wilson Combat back in 1977 and has long been renowned for producing top-shelf 1911 pistols.



The trigger is Timney’s Elite Hunter adjustable model, and the sample rifle’s pull broke crisply and consistently at 3.5 pounds.



The precision-machined bolt has dual opposing locking lugs, a Sako-style extractor, and a spring-loaded plunger-style ejector.

The Wilson NULA Rifle

The NULA rifles will be produced at Wilson's plant in Arkansas with Melvin supplying technical assistance during the transition. The NULA Model 20, as it is now officially called, will be offered initially in .243 Winchester, 6.5 Creedmoor, 7mm-08 Remington, .308 Winchester, and .358 Winchester. I must admit to being surprised by the inclusion of the .358 Winchester and the absence of the .284 Winchester. On down the road apiece we may see the Model 24 in .270 Winchester and .30-06 and the Model 28 in 7mm Remington Magnum and .300 Winchester Magnum.

Button-rifled by Wilson, the Type 416R stainless-steel barrels are double stress relieved, and their bores are lapped. Barrel length options of 16, 18, 20, and 22 inches will vary among the various calibers. The extremely light 22-inch barrel on the test rifle measured 1.075 inches at the receiver and 0.595 inch at the muzzle, where it has a target-style crown. The muzzle is threaded 5/8x24, and opposing flats on the thread protector make it easy to tighten or remove with a wrench.

My Lyman Borecam revealed extremely smooth lands and grooves, which is no surprise since through the decades I have looked inside many 1911 barrels made by Wilson. The test rifle sent to me was chambered in 6.5 Creedmoor, and as all factory rifles should have, rifling twist rate is marked on the barrel.

The cylindrical receiver is EDM-profiled from Type 4140 chrome-moly bar stock, and it measures 7.75 inches long and 1.220 inches in diameter. It is drilled and tapped with 8x40 holes for Talley lightweight rings that add only 2.2 ounces to the weight of the rifle. A precision-ground, washer-style recoil lug is sandwiched between the face of the receiver and the barrel shoulder.

NULA MODEL 20

MANUFACTURER	Wilson Combat wilsoncombat.com
TYPE	Bolt-action repeater
CALIBER	6.5 Creedmoor
MAGAZINE CAPACITY	4 rounds
BARREL	22 in.
OVERALL LENGTH	41.25 in.
WEIGHT, EMPTY	5.29 lbs.
STOCK	AG Composites carbon fiber
LENGTH OF PULL	13.25 in.
FINISH	ArmorLube Diamond-Like Carbon bolt and receiver, Armor-Tuff barrel, black anodized aluminum bottom metal, Kodiak Rogue camo stock
SIGHTS	None
TRIGGER	3.5-lb. pull (as tested)
SAFETY	Two position
MSRP	\$4,200

The receiver is pillar-bedded in the stock, and the barrel floats freely, with clearance between the two about the same as the thickness of a sheet of copy machine paper. Finishes are ArmorLube Diamond-Like Carbon on the bolt and receiver and Armor-Tuff on the barrel.

The bolt is precision-machined from Type 4340 bar stock, and the handle is mechanically attached. The bolt weighs 7.5 ounces and is 6.25 inches long and 0.590 inch in diameter. When cycling the bolt with haste, the tactical-style knob with its rather aggressive surface treatment proved to be a bit uncomfortable in the palm of my hand. A round knob is preferred on a hunting rifle, and I was told it may be an option.

The bolt has dual-opposed locking lugs, a Sako-style extractor, and a spring-loaded plunger-style ejector. The counterbore wall at the face of the bolt encloses about 0.130 inch of the rear of a chambered cartridge, although it is slotted for passage of the extractor. A cocked firing pin is indicated by the exposure of a red-colored band on the cocking piece at the rear of the bolt sleeve. A Model 70-style bolt release is located at the left side of the receiver tang.

The Timney Elite Hunter trigger has an adjustment range of two to four pounds, and a 0.385-inch-wide finger lever makes it feel lighter than it actually is. The one on the test rifle pulled an average of 3.5 pounds with no detectable creep or overtravel, and it broke like an icicle on a cold December day. Bolt rotation is blocked when the two-position safety is in its engaged position.

WILSON COMBAT NULA MODEL 20 BOLT-ACTION RIFLE



The carbon-fiber stock is made by AG Composites. It weighs just 27.7 ounces and features machined inletting and Kodiak Rogue camo finish.

As to be expected on a featherweight rifle, the bottom metal is aluminum, and it has a black anodized finish. Pressing a button located at the front inner surface of the roomy trigger guard releases the hinged magazine cover for cartridge removal. The steel magazine box holds four rounds, and it has an interior length of 3.0 inches.

The carbon-fiber stock is made by AG Composites, and it weighs 27.7 ounces. Quite trim, its grip has a circumference of 4.75 inches, and the fore-end measures 4.0 inches around at its center point. The machined inletting is very precise, with no spaces or gaps between the stock and the receiver. The stock fit me quite nicely, and that along with a cushiony Pachmayr Decelerator recoil pad and mild 6.5 Creedmoor recoil made the rifle great fun to shoot. Standard length of pull is 13.25 inches, but other lengths are available for a \$50 charge. The dark camouflage finish on the test rifle is described by AG Composites as Kodiak Rogue.

Range Results

The Wilson NULA Model 20 comes with a sub-MOA accuracy guarantee, and the one I shot lived up to its billing with two of five factory test loads. As has long been my policy when testing a repeating rifle for accuracy, all cartridges were fed from the magazine. To see how the extremely thin barrel would handle the heat, I fired a 10-shot group with cartridges from Choice Ammunition, and it measured 0.72 inch. With group-shooting behind me, I rapid-fired the rifle offhand with five rounds each of the five test loads, and feeding was totally reliable. Single-loading to simulate an emptied magazine and the target still moving was no more difficult than tossing a cartridge through the port, slamming home the bolt, and tapping the trigger.

The trim little rifle weighed 5 pounds, 4.7 ounces. Making it hunt-ready with a Swarovski Z3 3-10X 42mm scope in a Talley lightweight two-piece mount, four 6.5 Creedmoor cartridges in the magazine, and a nylon sling increased the weight to 6 pounds, 14.7 ounces. No sheep mountain will be too steep or too tall.

ST



Layne found the Wilson NULA Model 20 to achieve sub-MOA accuracy with loads it likes best, and he says no sheep mountain will be too steep or too tall for a hunter armed with the lightweight and accurate rifle.

WILSON NULA MODEL 20 ACCURACY & VELOCITY					
AMMUNITION	COL (IN.)	BULLET JUMP (IN.)	VEL. (F.P.S.)	ENERGY (FT-LBS)	100-YD. ACC. (IN.)
6.5 Creedmoor, 22-in. Barrel, 1:8 Twist					
Hornady Superformance 129-gr. SST	2.685	0.130	2876	2369	0.84
Choice Ammunition 130-gr. VLD Hunting	2.775	0.015	2783	2236	0.62
Berger Match Grade 135-gr. Classic Hunter	2.815	0.080	2612	2045	1.11
Berger Match Grade 140-gr. Hybrid Target	2.815	0.090	2616	2127	1.45
Black Hills Gold 147-gr. ELD Match	2.800	0.060	2453	1964	1.32
NOTES: Accuracy is the average of three, three-shot groups fired from a sandbag benchrest with the barrel cooled after each group. Velocity is the average of five rounds measured 15 feet from the gun's muzzle.					

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THE TRP GETS

REVAMPED

SPRINGFIELD'S TACTICAL RESPONSE PISTOL (TRP) MODEL 1911 HAS BEEN GIVEN A MAKEOVER, AND IT'S NOW AVAILABLE IN SIX OFFERINGS.

BY JOEL J. HUTCHCROFT

SPRINGFIELD ARMORY SAYS THE TACTICAL RESPONSE Pistol (TRP) Model 1911s are perhaps the most “well-known” and “celebrated” family of the company’s many 1911s because they are inspired by the Professional 1911 that was used by the FBI’s Hostage Rescue Team. For 2024 the TRP line has been updated with new features and new finishes, and these pistols are now offered in full-size and Commander-size versions. In fact, at present, there are six offerings.

The New TRP Classic

Shooting Times received a sample of the new TRP Classic, and it is a very clean-looking pistol. It weighs 41.3 ounces unloaded (according to my digital scale) and is 8.63 inches long, 5.67 inches tall from the bottom of the magazine to the top of the rear sight, and 1.42 inches thick at the ambidextrous thumb safety. The slide is 0.91 inch thick, and the magazine well at the bottom of the grip is 1.27 inches thick. The pistol has a 5.0-inch barrel (outside diameter of 0.579 inch at the muzzle), and it employs a typical barrel bushing and a full-length recoil spring guide rod.

The TRP Classic’s forged, National Match steel slide has 11 forward-angled cocking serrations at the rear and nine up front. The skeletonized hammer, grip and thumb safeties, slide stop, flat mainspring housing, and magazine catch button are finished in black. The top of the slide has full-length striations that provide an enhanced sighting plane and optimal light diffusion.



THE TRP GETS REVAMPED



The new TRP Classic weighs 41.3 ounces unloaded and measures 8.63 inches long, 5.67 inches tall, and 1.42 inches thick. All new TRPs are finished in Cerakote.

TRP CLASSIC	
MANUFACTURER	Springfield Armory springfield-armory.com
TYPE	Recoil-operated autoloader
CALIBER	.45 ACP
MAGAZINE CAPACITY	8 rounds
BARREL	5.0 in.
OVERALL LENGTH	8.63 in.
WIDTH	1.42 in. (at ambidextrous safety)
HEIGHT	5.67 in. (bottom of magazine to top of rear sight)
WEIGHT, EMPTY	41.3 oz.
GRIPS	VZ Hydra G10
FINISH	Black Cerakote
SIGHTS	Tactical Rack rear with two tritium dots, tritium-dot front
TRIGGER	4.7-lb. pull (as tested)
SAFETY	Ambidextrous extended thumb safety; beavertail grip safety
MSRP	\$1,999

The rear sight is Springfield’s Tactical Rack sight that has two tritium dots, horizontal striations, and a square notch. The notch is 0.123 inch wide, and the outside corners of the rear sight are beveled. The front sight is 0.120 inch thick and 0.177 inch tall, and it has a single tritium dot. The rear surface of the front sight is forward-angled for a snag-free draw and striated to help reduce glare.

The match-grade, stainless-steel barrel’s chamber is throated and polished. A notch at the rear of the barrel hood serves as a visual loaded chamber indicator.

All of the new TRP pistols wear Cerakote finishes on their slides and frames. The Classic model is black Cerakote, but Springfield has two versions with a Coyote Brown Cerakote finish. One is a Commander-sized pistol with a 4.25-inch-long barrel, an integral frame rail, and a bobbed grip frame that is called the TRP CC. (CC stands for Carry Contour.) The other Coyote Brown TRP is a full-size model with an integral frame rail.

As long as we’re talking about all the TRP models, I should mention that the TRP CC also is offered in black Cerakote, and so is the 5.0-inch-barreled TRP with integral frame rail. And just to be thorough, the TRP Classic is also offered in a Commander size with a 4.25-inch barrel.

The full-size black Cerakote TRP Classic that I’m reporting on here comes with VZ Hydra textured G10 grip panels, and they are held in place by hex-head screws. I’d describe them as being sort of a greenish-gray color, and I’d point out that the left-side grip panel has a sculpted area for the shooter’s thumb. I must say the texturing on our review pistol is very aggressive, allowing for a super secure grip. I wouldn’t say the texturing is too sharp, but it is much more aggressive than many other G10 grips I’ve handled.

The TRP Classic grip frame’s frontstrap and the flat mainspring housing are checkered 20 lines per inch, and the bottom of the grip frame has a flared magazine well that’s bolted to the mainspring housing.

The Gen 2 skeletonized trigger is lightweight aluminum with a grooved



The TRP Classic has a 5.0-inch match-grade barrel with a barrel bushing, and it employs a full-length recoil spring guide rod.

surface. The fingerpiece is 0.181 inch wide. The trigger pull of the *Shooting Times* pistol averaged 4 pounds, 11 ounces over 10 measurements with an RCBS trigger pull scale, with just four ounces of variation. There is a slight amount of take-up, which is expected with any Model 1911, but there is no detectable overtravel, and the trigger breaks crisply and consistently.

The pistol's high-sweep beavertail-style grip safety has a smooth memory bump that helps ensure a positive grip for proper function every time it's gripped. The beavertail prevents hammerbite.

All parts of the TRP Classic are precision fitted, and the fit and finish of our test gun are nicely done. There's absolutely no detectable wiggle between the slide and the frame, there's no slop between the barrel hood and the slide, and the barrel doesn't move at all when pressed on while in battery.

Our sample came with three magazines made by Mec-Gar. The magazines have flat followers and removable polymer baseplates. They hold eight rounds of .45 ACP ammunition each.

Flawless Functioning & Excellent Accuracy

I can't say it enough, shooting a well-built full-size .45 ACP Model 1911 is one of my most pleasurable shooting chores. To me, it really isn't even a chore! I spent a thoroughly enjoyable winter day shooting the new TRP Classic at my personal



The front sight has a tritium dot and fine horizontal striations to reduce glare. Note the top of the slide features full-length striations, again to reduce glare.



The Tactical Rack rear sight has two tritium dots, fine horizontal striations, and a square notch. It is drift adjustable for windage.

shooting range, and it went like clockwork. As per my usual shooting protocol, I fired the pistol for accuracy from a sand-bag benchrest at a distance of 25 yards with seven different factory loads. Bullet weights ranged from 185 grains through 200 grains to 230 grains. Bullet styles included FTXs, SJFNs, SWCs, JHPs, and FMJs. All loads functioned perfectly, ejecting well clear of the firing line. I didn't have even one failure to feed, extract, or eject, and the accuracy was excellent.

As you can see from the accompanying chart, the 5.0-inch-barreled TRP Classic averaged between 2.00 and 3.25 inches. Those averages are based on three, five-shot groups with each load. Overall average accuracy was 2.66 inches.

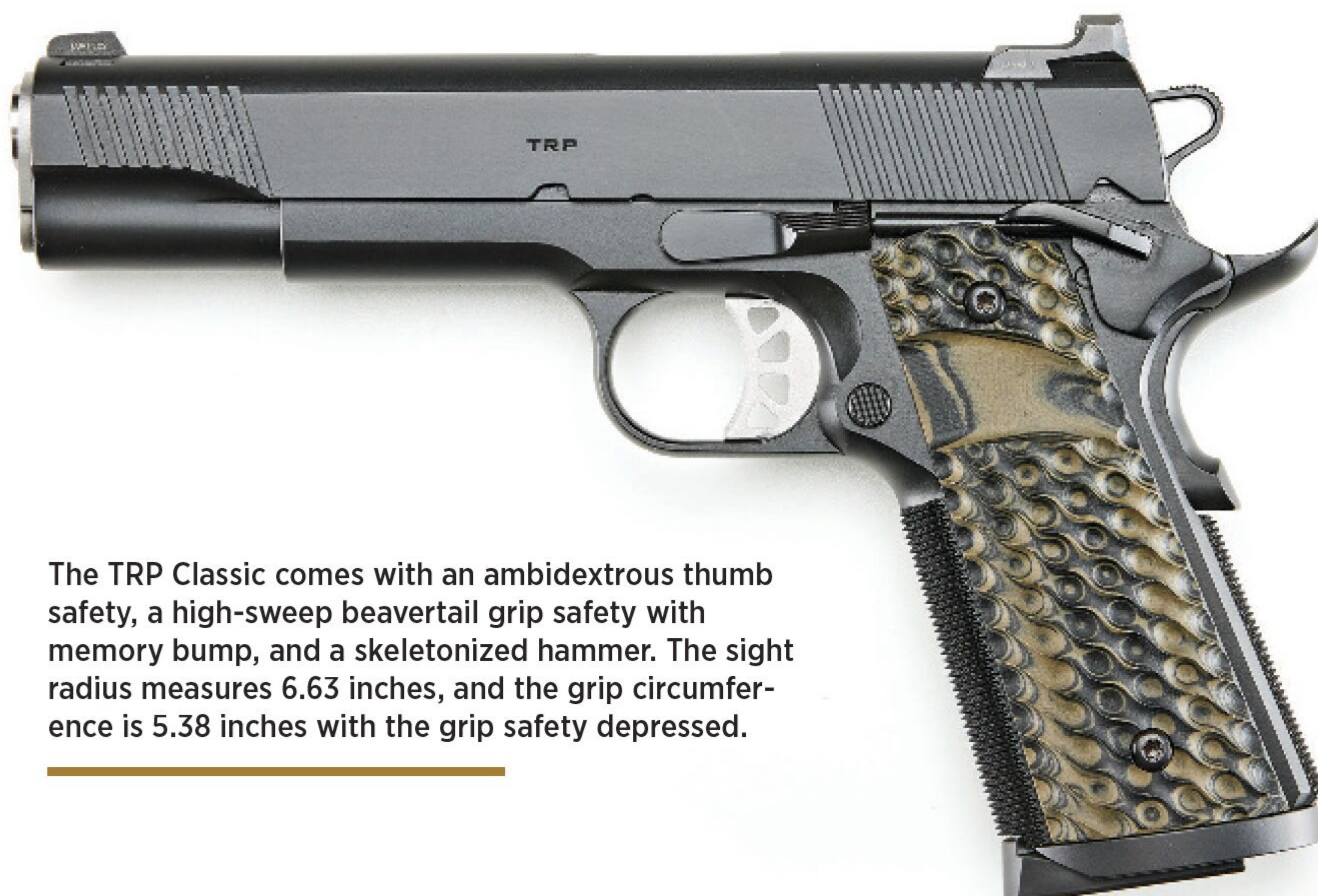
My best accuracy came with the Federal Gold Medal 230-grain FMJ ammunition. It averaged 2.00 inches. Its velocity averaged 845 fps (measured 12 feet from the gun's muzzle with a Competition Electronics Pro Digital Chronograph), with an extreme spread of 34 fps and a standard deviation of 14 fps.

The load producing the highest velocity was the Hornady Critical Defense 185-grain FTX, which averaged 991 fps for five rounds measured 12 feet from the muzzle. The load with the lowest extreme spread (17 fps) was the Black Hills 200-grain lead SWC, and that load also had the lowest standard deviation (9 fps).

The second most accurate load was the Black Hills 200-grain lead SWC ammo, and it averaged 2.25 inches for its three, five-shot groups. This ammo produced an average velocity of 862 fps.

The third most accurate load was the Winchester 230-grain FMJ loading. It averaged 2.50 inches and produced an average velocity of 747 fps with an extreme spread of 30 fps and a standard deviation of 11 fps.

After shooting from the bench for accuracy and velocity, I spent a considerable amount of time putting the TRP Classic through my usual modified El Presidente action-shooting drill (at seven yards); the FBI drill (at five yards); and a close-up



The TRP Classic comes with an ambidextrous thumb safety, a high-sweep beavertail grip safety with memory bump, and a skeletonized hammer. The sight radius measures 6.63 inches, and the grip circumference is 5.38 inches with the grip safety depressed.

THE TRP GETS REVAMPED



The grips are VZ Hydra G10 grips, and they feature an aggressive texturing pattern and a deep contour for the shooter’s thumb. The grip frame has 20-LPI checkering on the front-strap and the flat mainspring housing. Note the bolt-on magazine well.



The aluminum match-grade trigger is skeletonized and striated. Our sample’s trigger pull averaged 4 pounds, 11 ounces over a series of 10 measurements with an RCBS trigger pull gauge.



The TRP Classic came with three Mec-Gar magazines that feature flat followers and removable baseplates/bumper pads. Each one holds eight rounds of .45 ACP ammunition.

one-handed, rapid-fire drill (at three yards). Also, taking a cue from *Shooting Times* writer Layne Simpson, I fired the pistol right side up, left side up, and upside down. During all that shooting, the TRP Classic functioned flawlessly.

I’ll mention here that I used a DeSantis Wild Hog Hybrid holster (MSRP: \$53.99) with the TRP Classic, and it is shown in some of the photos. I really like this holster because it evolved from the original 1970s DeSantis Hunter holster. The current Wild Hog Hybrid is made of 1060D Senior Ballistic Nylon with a smooth pack-cloth lining and a core of closed-cell foam. The upper portion is premium saddle leather.

This holster is ambidextrous without any adjustments for hand preference, and it’s offered for most 4.0-inch-barreled and 6.0-inch-barreled hunting revolvers, as well as standard 5.0-inch-barreled Model 1911s with or without frame rails. The TRP Classic fits well and is securely held by the retaining strap, yet the pistol draws easily. The holster’s belt slots fit my 1.75-inch-wide belt perfectly, and the rig rides my hip comfortably.

I’ve said it before, but it remains true, the Model 1911 might be America’s favorite pistol because you can do so much with

it. It’s great for duty and defense, competition shooting, hunting, and plain old fun shooting. And while I prefer carrying mine in outside-the-waistband holsters and across-the-chest rigs, a lot of people legally carry full-size 1911s concealed in inside-the-waistband (IWB) holsters for personal protection. Inspired by the Professional 1911, Springfield Armory’s hand-fitted TRP Classic is perfect for all those tasks, and if you prefer the shorter Commander-size 1911, well, the TRP is available in that size with a more concealable bobbed grip frame, too. **ST**

SPRINGFIELD TRP CLASSIC ACCURACY & VELOCITY				
AMMUNITION	VEL. (FPS)	E.S. (FPS)	S.D. (FPS)	25-YD. ACC. (IN.)
.45 ACP, 5.0-in. Barrel				
Hornady Critical Defense 185-gr. FTX	991	29	11	2.90
Black Hills 200-gr. Lead SWC	862	17	9	2.25
SIG SAUER 200-gr. JHP	914	27	13	3.25
Federal Gold Medal 230-gr. FMJ	845	34	14	2.00
Federal Syntech Range 230-gr. SJFN	779	35	12	3.00
Remington 230-gr. Golden Saber	790	60	29	2.75
Winchester 230-gr. FMJ	747	30	11	2.50
NOTES: Accuracy is the average of three, five-shot groups fired from a sandbag benchrest. Velocity is the average of five rounds measured 12 feet from the gun’s muzzle.				

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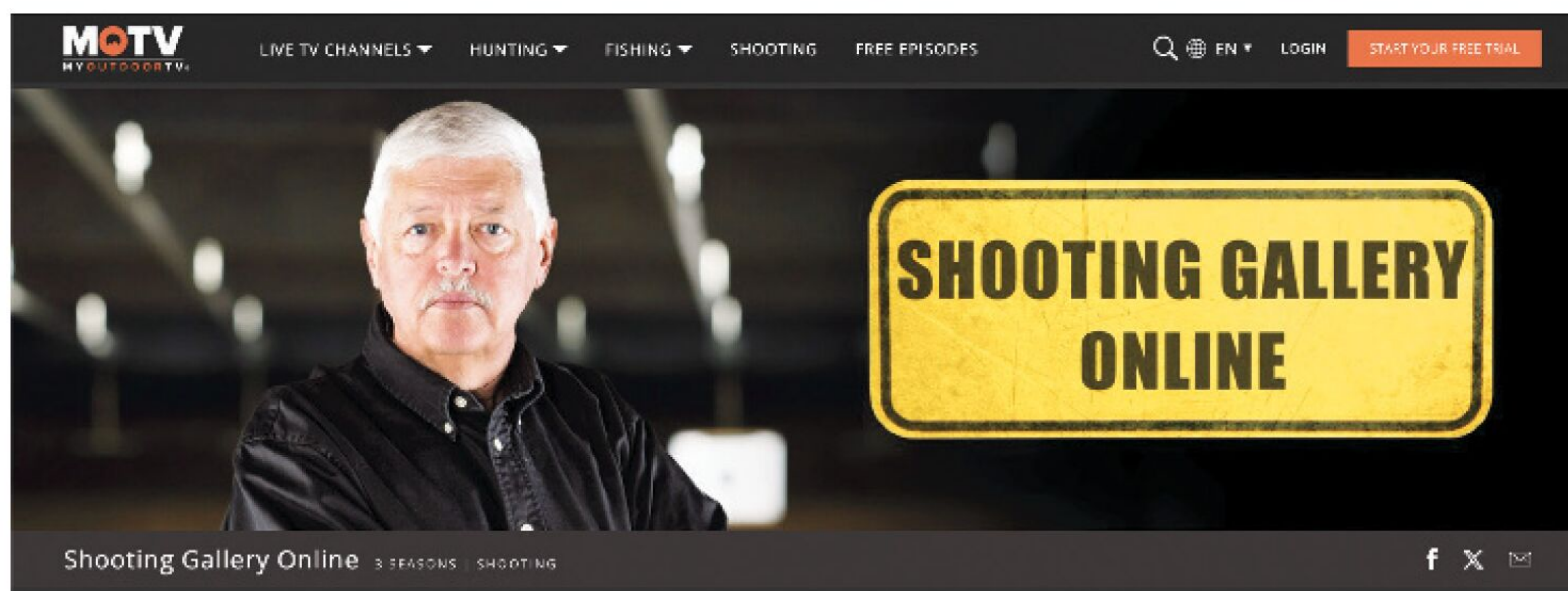
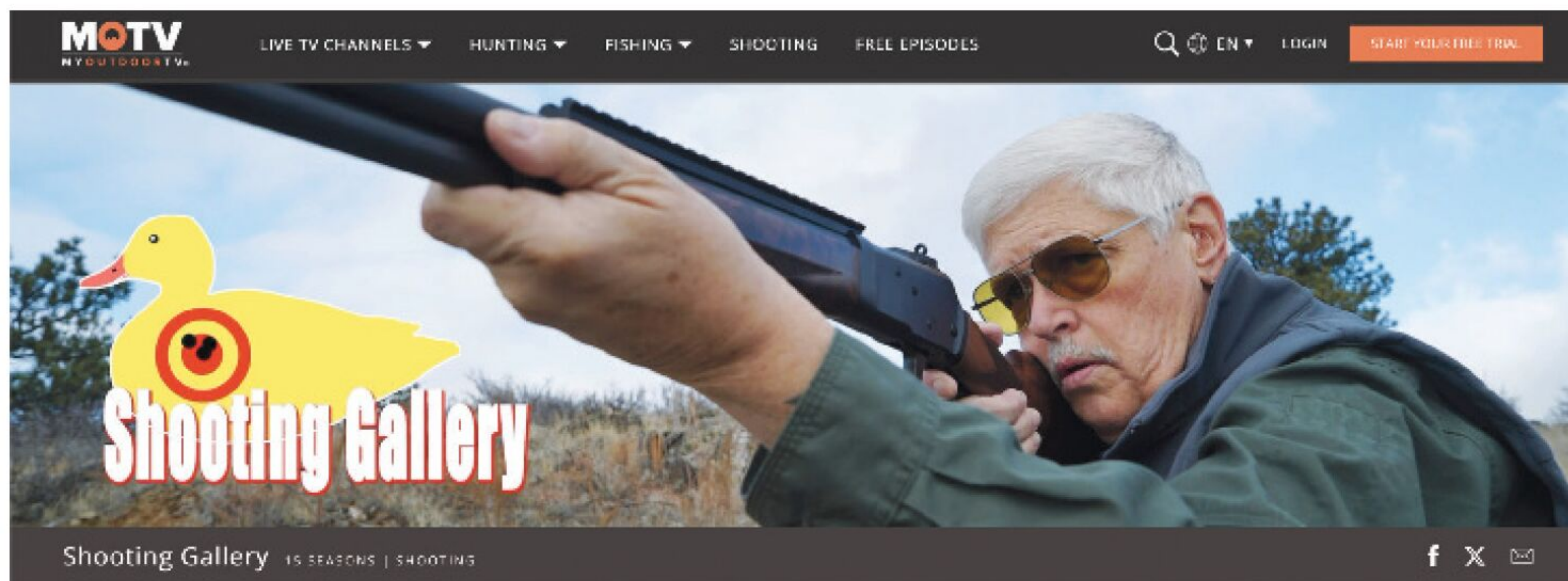


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TWO OF THE MOST POPULAR SHOOTING-RELATED SHOWS ON MyOutdoorTV (MOTV) are *Shooting Gallery* and *Shooting Gallery Online*. Both are hosted by my friend Michael Bane. Michael is a successful journalist, writer, constant adventure seeker, and recognized expert on firearms. He is a colorful character, and he has an entertaining personality. I've been on several hunts and attended many new-product seminars with him, and he has a lively way of relating his experiences. He has decades of experience and knows an awful lot about hunting, shooting, self-defense, and related topics. He has traveled throughout the world, and he has received numerous broadcasting awards, including seven "Tellys," multiple "Golden

Moose" awards, an Outdoor Channel Lifetime Achievement Award, and a Communicator of the Year Award from the Professional Outdoor Media Association and the National Shooting Sports Foundation.

Shooting Gallery is television for real shooters, whether they are collectors, competitors, hunters, or carry for self-defense. Unlike traditional shooting shows, *Shooting Gallery* focuses an entire episode on a single topic, giving the viewer an increased understanding and feel for what is being covered. Fifteen seasons of *Shooting Gallery* (Season 8 through Season 22) are currently available on MOTV.

Shooting Gallery Online is an MOTV original series that provides in-depth coverage of topics and new shooting products. In these episodes, Michael and producer Marshal Halloway give the audience what they have asked for because the content is based on feedback from fans of Outdoor Channel shows like *Shooting Gallery*, *Gun Stories*, and *The Best Defense*. Three seasons of *Shooting Gallery Online* are currently available on MOTV.

If you haven't seen *Shooting Gallery* and *Shooting Gallery Online*, I encourage you to check them out. Use the promo code SHOOTING30 and get a 30-day free trial of MyOutdoorTV. Offer valid for a limited time. Cannot be combined with other offers. **ST**



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Swiftly, Swiftly

No cartridge was ever more aptly named than the .220 Swift. It was, and largely still is, the all-time velocity champion among factory cartridges—the swiftest of the swift. **BY TERRY WIELAND**

At almost 90 years old, the .220 Swift still enjoys a cult-like following, and factory-loaded ammunition is still offered. Terry's Pre-'64 Winchester Model 70 rifle in .220 Swift (manufactured in 1953) is a masterpiece of riflemaking.

IN ITS INITIAL FACTORY LOADING, THE .220 SWIFT launched a 48-grain bullet at a velocity of 4,110 fps and had a trajectory like a stretched banjo string. It was introduced in 1935 by Winchester Repeating Arms, into a world that thought the .219 Zipper was pretty hot stuff. It left them in the dust.

If velocity were everything, the Swift's career would have been stellar. But velocity, it turned out, could take you only so far. A cartridge also needed a supporting cast of gunmakers, ammunition companies,

and—above all—influential supporters. Alas, many of the influential men of the 1930s, men who wrote about rifles in magazines like *American Rifleman*, had reason to hate the Swift.

Several, such as Jerry Gebby and Grosvenor Wotkins, had been involved in early development of the cartridge Winchester wanted to set the world on fire. Their recommendation, the .250-3000 necked down to .22 caliber, was rejected in favor of the 6mm Lee Navy case, and like rejected suitors, they took their

revenge, in print, with all kinds of accusations—some valid, some not.

Early rifles from Winchester were barreled with soft steel, which could not withstand the Swift's pressures, and this gave rise to several semivalid beliefs, mainly excessive barrel wear. The anti-Swift bandwagon gathered speed, with more clambering aboard and condemning the Swift as difficult, and even dangerous, to load and having limited versatility. I don't think anyone ever questioned its accuracy, but I could be wrong.

When Winchester resumed civilian production after 1945, the Model 70 was given a modern steel-alloy barrel, and later stainless steel, and this largely solved the erosion problem. Unfortunately, the Swift's bad reputation was established, seemingly, for all time.

Last year, during a visit to the headquarters of a prominent German rifle company that provides barrels in dozens of calibers, big and small, I asked about adding the Swift. The response?

"But doesn't it burn out barrels?" The answer is, no more than any other high-intensity cartridge. But that's not enough.

In *The Modern Rifle* (1975), Jim Carmichel, an unreconstructed Swift fan, offered several explanations for the accusation of barrel wear, and since he had been around to see it, we can take him at his word. Many times, he wrote, custom riflemakers, commissioned to build Swifts, rechambered barrels intended for .22 Hornets and the like. These were made of softer steel and didn't stand up.

Another factor, which we can probably take as a given, is that it was accepted wisdom that the most accurate barrels, with the finest, smoothest rifling, were made from relatively soft carbon steel. Even into the 1970s, it was agreed that stainless steel could not be as accurate as carbon steel. They believed you can have accuracy, or you can have durability, but not both.

Today, with modern steels and hammer-forged barrels, the Swift could probably be made to equal anything.

In 1961 Winchester gave in and relegated the Swift to custom orders only, then abandoned it completely two years later. Two years after that, in 1965, and a year after Winchester's fateful 1964 reworking at the hands of some executives from Ford Motor Co., it introduced the .225 Winchester. Not a bad cartridge in itself—essentially a .219 Zipper Improved—but completely out of step with the times. It was to cartridges what the Edsel was to Ford, which is ironically appropriate when you think about it.

Gebby, Wotkyns, and company had the last laugh when, in 1965, Remington legitimized the .22-250, launching one of the all-time .22-caliber success stories.

Oddly, however, the .220 Swift refused to die. Companies continued to make ammunition and brass. Obviously, there was demand, and a cult grew up around it.

This was due, in part, to the wonderful quality of Pre-'64 Model 70s, chambered for the Swift in 26-inch barrels of high-quality steel. Some writers have specified 1953 as the absolute sweet spot of Pre-'64 production, and a 1953 .220 Swift is a masterpiece of riflemaking.

They don't come cheap. Winchester collectors covet them, especially those in good condition. Expect to part with \$2,000 at least.

Could be, though, you'll cover the expense by getting rid of every other .22 centerfire you own, saving maybe a .22 Hornet for squirrels and a .222 Remington because they're so cute. As it nears 90 years of age, the .220 Swift is still attracting converts to the cult. That tells you something.

ST

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Popular CoQ10 Pills Leave Millions Suffering

Could this newly-discovered brain fuel solve America's worsening memory crisis?

PALM BEACH, FLORIDA — Millions of Americans take the supplement known as CoQ10. It's the coenzyme that supercharges the "energy factories" in your cells known as *mitochondria*. But there's a serious flaw that's leaving millions unsatisfied.

As you age, your mitochondria break down and fail to produce energy. In a revealing study, a team of researchers showed that 95 percent of the mitochondria in a 90-year-old man were damaged, compared to almost no damage in the mitochondria of a 5-year-old.

Taking CoQ10 alone is not enough to solve this problem. Because as powerful as CoQ10 is, there's one critical thing it fails to do: it can't create new mitochondria to replace the ones you lost.

And that's bad news for Americans all over the country. The loss of cellular energy is a problem for the memory concerns people face as they get older.

"We had no way of replacing lost mitochondria until a recent discovery changed everything," says Dr. Al Sears, founder and medical director of the Sears Institute for Anti-Aging Medicine in Palm Beach, Florida. "Researchers discovered the only nutrient known to modern science that has the power to trigger the growth of new mitochondria."

Why Taking CoQ10 is Not Enough

Dr. Sears explains, "This new discovery is so powerful, it can multiply your mitochondria by 55 percent in just a few weeks. That's the equivalent of restoring decades of lost brain power."

This exciting nutrient — called PQQ (*pyrroloquinoline quinone*) — is the driving force behind a revolution in aging. When paired with CoQ10, this dynamic duo has the power to reverse the age-related memory losses you may have thought were beyond your control.

Dr. Sears pioneered a new formula — called **Ultra Accel II** — that combines both CoQ10 and PQQ to support maximum cellular energy and the normal growth of new mitochondria. **Ultra Accel II** is the first of its kind to address both problems and is already creating huge demand.

Over 47 million doses have been shipped to men and women across the country and sales continue to climb for this much sought-after brain fuel. In fact, demand has been so overwhelming that inventories repeatedly sell out. But a closer look at **Ultra Accel II** reveals there are good reasons why sales are booming.

Science Confirms the Many Benefits of PQQ

The medical journal *Biochemical Pharmacology* reports that PQQ is up to 5,000 times more efficient in sustaining energy production than common antioxidants. With the ability to keep every cell in your body operating at full strength, **Ultra Accel II** delivers more than just added brain power and a faster memory.

People feel more energetic, more alert, and don't need naps in the afternoon. The boost in cellular energy generates more power to your heart, lungs, muscles, and more.

"With the PQQ in Ultra Accel, I have energy I never thought possible at my age," says Colleen R., one of Dr. Sears's patients. "I'm in my 70s but feel 40 again. I think clearly, move with real energy and sleep like a baby."

The response has been overwhelmingly positive, and Dr. Sears receives countless emails from his patients and readers. "My patients tell me they feel better than they have in years. This is ideal for people who are feeling old and run down, or for those who feel more forgetful. It surprises many that you can add healthy and productive years to your life simply by taking **Ultra Accel II** every day."

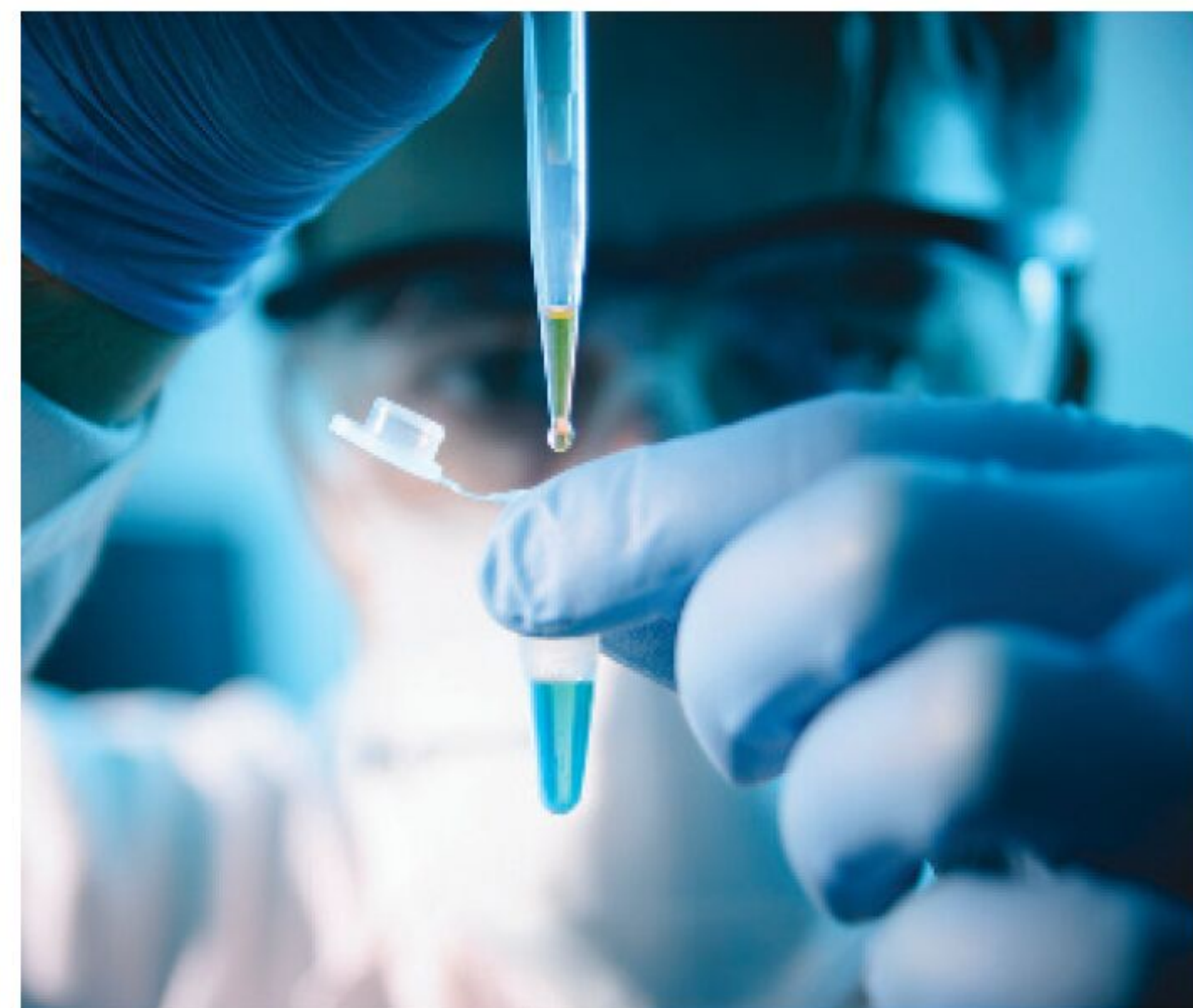
You may have seen Dr. Sears on television or read one of his 12 best-selling books. Or you may have seen him speak at the 2016 WPBF 25 Health and Wellness Festival in South Florida, featuring Dr. Oz and special guest Suzanne Somers. Thousands of people attended Dr. Sears's lecture on anti-aging breakthroughs and waited in line for hours during his book signing at the event.

Will Ultra Accel II Multiply Your Energy?

Ultra Accel II is turning everything we thought we knew about youthful energy on its head. Especially for people over age 50. In less than 30 seconds every morning, you can harness the power of this breakthrough discovery to restore peak energy and your "spark for life."

So, if you've noticed less energy as you've gotten older, and you want an easy way to reclaim your youthful edge, this new opportunity will feel like blessed relief.

The secret is the "energy multiplying" molecule that activates a dormant gene in your body that declines with age, which then instructs your cells to pump out fresh energy from the inside-out. This growth



MEMORY-BUILDING SENSATION: Top doctors are now recommending new Ultra Accel II because it restores decades of lost brain power without a doctor's visit.

of new "energy factories" in your cells is called mitochondrial biogenesis.

Instead of falling victim to that afternoon slump, you enjoy sharp-as-a-tack focus, memory, and concentration from sunup to sundown. And you get more done in a day than most do in a week. Regardless of how exhausting the world is now.

Dr. Sears reports, "The most rewarding aspect of practicing medicine is watching my patients get the joy back in their lives. **Ultra Accel II** sends a wake-up call to every cell in their bodies... And they actually feel young again."

And his patients agree. "I noticed a difference within a few days," says Jerry from Ft. Pierce, Florida. "My endurance has almost doubled, and I feel it mentally, too. There's a clarity and sense of well-being in my life that I've never experienced before."

How To Get Ultra Accel II

This is the official nationwide release of **Ultra Accel II** in the United States. And so, the company is offering a special discount supply to anyone who calls during the official launch.

An Order Hotline has been set up for local readers to call. This gives everyone an equal chance to try **Ultra Accel II**. And your order is backed up by a no-hassle, 90-day money back guarantee. No questions asked.

Starting at 7:00 AM today, the discount offer will be available for a limited time only. All you have to do is call TOLL FREE **1-800-836-5126** right now and use promo code **UAST224** to secure your own supply.

Important: Due to **Ultra Accel II** recent media exposure, phone lines are often busy. If you call and do not immediately get through, please be patient and call back.

the hammer while the revolver was in recoil and get off the second shot faster than any man Elmer had seen.

His success in the fast-draw world allowed Reed entry into Hollywood and the movie industry. Gene Autry, the famous singer, actor, and rodeo star, took Reed under his wing and made him part of Autry's Wild West tours. As an exhibition shooter, Reed performed in front of Hollywood royalty and the British crown. He also toured throughout Japan, performing in the Casey Tibbs Rodeo Show. His fancy gunhandling "tricks" included the border shift (flipping an empty revolver from the right hand to the left hand and at the same time flipping a loaded gun from the left hand to the right hand), spinning guns on his fingers, gun juggling, and the classic road agent spin (passing a handgun to someone butt-first and then instantly reversing the gun and shooting).

Reed transitioned from performer to armorer and instructor. Since 1955, starting out as a consultant on the set of *Gunsmoke*, Reed has trained top actors and others in the fine art of using firearms. Steve McQueen, Russell Crowe, Gene Hackman, Brad Pitt, Bruce Willis, Leonardo DiCaprio, Val Kilmer, Jeff Bridges, Edward

Norton, Don Cheadle, Michael Biehn, Sam Elliott, and Sharon Stone are just a few of the stars he has worked with, and his movie credits include popular films like *Tombstone*, *L.A. Confidential*, *The Quick and the Dead*, *Proof of Life*, *Flags of Our Fathers*, *3:10 to Yuma*, *Once Upon a Time...in Hollywood*, *Django Unchained*, *Cowboys & Aliens*, *State of Play*, *Mr. & Mrs. Smith*, and *The Assassination of Jesse James by the Coward Robert Ford*. He's been involved in at least 45 films. The most recent film I was able to find that he worked on was in 2020; it was called *Unhinged*.

Other colorful achievements worth mentioning are Reed worked as Evel Knievel's bodyguard, and he once made \$50,000 in a one-on-one Texas shootout. Elmer reported that Reed was more than good at just about any shooting endeavor, including trap shooting with shotguns; 50-yard slow fire with target handguns; and hunting small, medium, and big game with rifles as well as handguns.

Thell Reed Jr. maintains a low profile these days, but he has certainly achieved much during his long and successful career. He definitely fulfilled his father's directive.

ST



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The Fastest Gun Alive

Exhibition shooter, armorer, stuntman, and movie consultant Thell Reed Jr. was a champion quick-draw shootist and one of the most accurate speed shooters in the game. **BY JOEL J. HUTCHCROFT**

LONGTIME READERS OF *SHOOTING TIMES* MAY recall that I've referred to myself as a gun acquirer rather than a gun collector. The difference is subtle, and I won't go into it here. But in addition to acquiring guns, I also have acquired a lot of gun "stuff." Recently, while going through some of that stuff, I came across a photocopy of an old *Guns & Ammo* article that I had made sometime in the 1990s. Dated February 1964, the article was about three decades old when I originally photocopied it. It was written by Elmer Keith, and it was about a 20-year-old shooting phenom named Thell Reed Jr. As I reread the article recently, I thought Reed would be a great character for this column.

Born in Downey, California, on February 11, 1943, Thell Reed Jr. learned to shoot at a young age. His father started him out with a .22 rimfire rifle at age seven. By age nine he was shooting .45-caliber revolvers. As the story goes, at some point in his early life, his father gave him a pair of .45 Colt revolvers and told him to "go make a living with them." He did just that.

By the time he was a teenager, Reed was competing in Jeff Cooper's Big Bear "Leatherslap" shooting competitions. And he was so successful that he typically ranked up there with the likes of Cooper, Jack Weaver, John Plähn, Ray Chapman, and Elden Carl.

Reed went on to compete in fast-draw/speed-shooting competitions, and that's where he gained his early fame. He mostly used single-action revolvers, but he also did a lot of quick-draw work with Government Model 1911s, too. And he didn't use blanks or wax-bullet loads; he used live ammunition loaded with real powder and 250-grain bullets. In fact, as Elmer's article pointed out, Reed handloaded his own ammunition. He also did his own gunsmithing. Reed holds the United States quick-draw record, and he was dubbed the "Fastest Gun Alive" by Colt after winning the title in a live-ammo quick-draw competition. Elmer called him the "all-time wizard with a sixgun." Reed used the hammer draw technique exclusively, and according to Elmer, he could thumb back



Thell Reed Jr. holds the U.S. quick-draw record and was dubbed the "Fastest Gun Alive." He went on to enjoy a long and successful career training A-list actors in the use of firearms.

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