

# DOPE BAG

The American Rifleman has used the phrase "Dope Bag" at least since 1921, when Col. Townsend Whelen first titled his column with it. Even then, it had been in use for years, referring to a sack used by target shooters to hold ammunition and accessories on the firing line. "Sight dope" also was a traditional marksman's term for sight adjustment information, while judging wind speed and direction was called "doping the wind."

**CAUTION:** Technical data and information contained herein are intended to provide information based on the limited experience of individuals under specific conditions and circumstances. They do not detail the comprehensive training procedures, techniques and safety precautions absolutely necessary to properly carry on similar activity. Read the notice and disclaimer on the contents page. Always consult comprehensive reference manuals and bulletins for details of proper training requirements, procedures, techniques and safety precautions before attempting any similar activity.

## BERETTA .32 ACP TOMCAT

**T**HE venerable .32 ACP cartridge, once king of the pocket pistol rounds, has in recent years been dethroned by the .380 ACP, as many "authorities" scorn the .32's inferior paper ballistics—only 125-130 ft.-lbs. of energy, compared to 170-200 ft.-lbs. of energy for the various standard .380 loadings. Nonetheless, the .32 ACP seems to be having a bit of a resurgence. The spread of "shall issue" carry laws has sparked renewed interest in the diminutive guns chambered for the .32, and recoil-sensitive novices find the round more pleasant to shoot than the .380 ACP.

In late 1994 Beretta U.S.A. Corp. decided to take advantage of this trend and began development of the .32 pocket semi-automatic that was to become the Model 3032 Tomcat. Introduced in 1996 and made in Beretta's factory in Accokeek, Maryland, the Tomcat is a blow-back-operated pistol with an external hammer, tip-up barrel, manual sear-blocking safety and a single-stack seven-round magazine. Stocks are of black plastic, and both matte blue and polished blue finishes are available on the exposed metal parts. In looks and operation it is similar to Beretta's other tip-up double-action self-loaders, the Model 86 Cheetah and Model 21 Bobcat.

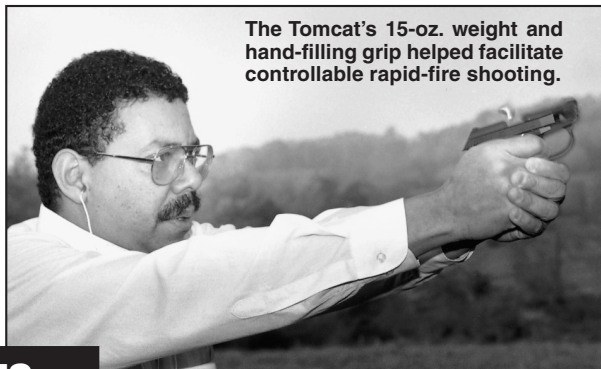
The Tomcat's slide is machined from bar stock cold-drawn to shape, while the barrel is made from a steel forging and button rifled in a six-groove, 1:9.8"-twist pattern. An aircraft-grade 7075 aluminum forging



The new .32 ACP Beretta Tomcat offers seven-round magazine capacity, double-action operation and an external hammer. It is similar in design and function to Beretta's other tip-up guns.



The Tomcat's 15-oz. weight and hand-filling grip helped facilitate controllable rapid-fire shooting.



Instead, a tab on the trigger bar engages a cutout in the slide. Slide motion cams the bar down out of contact with the sear and allows the hammer and sear to reset.

The Tomcat features a manual safety on the left side of the frame.

When the safety is in the upward "safe" position, an arm extending from the lever intercepts the sear, preventing both sear and trigger movement in both the double-action and single-action modes. Flicking the safety off clears the arm from the sear, allowing firing. In the "safe" position, the safety also locks into a recess in the slide. A red spot on the frame shows when the safety is off. Other safety features include a half-cock notch on the hammer and an inertial firing pin.

Lacking a firing pin block, it is theoretically possible for the pistol to discharge if dropped on its muzzle. For this reason,

is used for the frame, and black anodized to enhance surface hardness and corrosion resistance. All internal parts are of steel.

The trigger mechanism of the 3032 utilizes an external right-sided trigger bar that acts directly on the hammer in the double-action mode. During single-action functioning, the trigger bar pulls the sear out from under the hammer notch to effect firing. There is no separate discon-

### ACCURACY RESULTS

.32 ACP Cartridge	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Federal No. 32AP 71-gr. FMC	700 Avg. 10 Sd	2.09	3.51	2.82
Hdy. No. 9006C 60-gr. XTP JHP	706 Avg. 36 Sd	2.02	2.71	2.38
Speer No. 23604 60-gr. GDHP	708 Avg. 38 Sd	3.66	4.88	4.18
Average Extreme Spread				3.13
Five consecutive 5-shot groups from 50 ft., fired from sandbags. Abbreviations: Sd (standard deviation), FMC (full metal case), Hdy. (Hornady), XTP (Extreme Terminal Performance), JHP (jacketed hollow point), GDHP (Gold Dot Hollow Point)				

## BERETTA TOMCAT

**MANUFACTURER:** Beretta U.S.A. Corp., Dept. AR, 17601 Beretta Dr., Accokeek, MD 20607

**MECHANISM TYPE:** blowback-operated semi-automatic pistol

**CALIBER:** .32 ACP

**OVERALL LENGTH:** 5"

**BARREL LENGTH:** 2.4"

**WEIGHT:** 15 ozs.

**WIDTH:** 1.14"

**HEIGHT:** 4"

**MAGAZINE CAPACITY:** 7

**TRIGGER:** double-action pull, 11 lbs.; single-action pull, 3½ lbs.

**SIGHTS:** fixed, matte black, rear drift adjustable for windage

**STOCK:** checkered black plastic

**ACCESSORIES:** hard case

**PRICE:** \$270 matte blue; \$320 polished blue

Beretta cautions against carrying the pistol with a round in the chamber, even with the hammer down and the pistol in double-action mode. Under no circumstances should the tiny Beretta be carried in the "cocked and locked" condition (round chambered, hammer cocked and safety on), as it lacks the extra safety features of those pistols (such as the Colt M1911 Series 80 guns) designed to be carried in that fashion.

The Tomcat's recoil mechanism mirrors that of other Beretta tip-up pistols. A conventional in-line recoil spring is replaced by two spring-loaded recoil spring levers whose upper arms engage cutouts in the slide. Rearward slide motion causes the levers to rotate around their pivot points in the frame, compressing dual coil springs in stamped-steel, frame-mounted tunnels.

A serrated lever on the left-hand side of the frame is rotated forward to cause the barrel to pop up; pushing the barrel down until a click is heard re-locks the barrel in the firing position. With the barrel tipped up, not only is the bore easily accessible for cleaning from the chamber end, but even to the inexperienced it is clear that the pistol is in a safe, non-firing condition. More importantly, many will find it easier to load

the first round in the chamber by simply tipping the barrel up than by racking the slide.

No extractor is used with the tip-up barrel design. Upon firing, an empty .32 ACP case is blown rearward out of the chamber until it contacts the ejector and spins out of the gun. The absence of an extractor, however, requires that a round in the chamber be unloaded by tipping the barrel up rather than by retracting the slide.

In the left-side grip panel is a round magazine release button, which is positioned and recessed to prevent inadvertent magazine release by either hand. There is no magazine disconnect; a round in the chamber may be fired with the magazine removed from the pistol.

The Tomcat's front sight is a short .080"-wide post integral with the barrel; the drift-adjustable rear sight has an .088" notch and is dovetailed into the slide. Both sights are black with no dots or colored inserts.

To disassemble the Tomcat, first ensure that the pistol is unloaded. Remove the



Anticipating the Tomcat's popularity, many aftermarket manufacturers have produced accessories for the pistol, including the two-piece rubber stocks by Pearce Grip and the belt slide holster by Don Hume.

and the new Hornady XTP and Speer Gold Dot loads. Ball ammunition functioned flawlessly, but there were several jams with the hollowpoint rounds. Occasionally, firing the next-to-last round in a magazine would cause ejection of both an empty case and the last live round in the magazine. Our pistol shot slightly low and about 3" left of the point of aim at 50 ft.

We found the Tomcat's double action trigger pull smooth but long, and the forward position of the trigger initially felt awkward. Both characteristics are a result of the pistol's trigger bar and hammer geometry. The single-action pull was surprisingly light, breaking at just slightly over three pounds, but creepy.

The Tomcat's short grip accommo-



**To disassemble, first ensure the Tomcat is unloaded, then press the barrel lever forward to tip up the barrel (above). Rotate the barrel forward over its hinge, cock the hammer, retract the slide 1/8" and lift its front end clear of the recoil levers (right). The Tomcat's slide may then be removed forward off the frame.**

magazine, push the barrel lever forward and rotate the barrel all the way up and over its hinge until it stops. Cock the hammer, retract the slide about 1/8", and lift the front end of the slide above the barrel hinge to disengage the recoil levers from the slide. Pull the slide forward to clear the guide lugs in the frame. The grips may be removed if necessary for cleaning; further disassembly is not recommended. Reassembly is in the reverse order.

The matte blue Tomcat we received for testing impressed us as being small and concealable, but its 1.1"-wide grip—required to cover the recoil spring tunnels on both sides of the frame—was perhaps a bit bulkier than we'd prefer. We fired the Tomcat for accuracy with the results listed in the accompanying table, and function-fired it with more than 125 rounds of Federal, Winchester and Remington ball ammunition,



dated only the middle and third fingers, leaving the little finger free to rest beneath the magazine base pad. A forward lip in the base pad provided a finger rest for the third finger. In spite of the short grip, the Tomcat felt substantial in the hand, thanks to its grip width and its 15-oz. weight. These two factors also made the Tomcat pleasant to shoot, with minimal recoil and quick second shots.

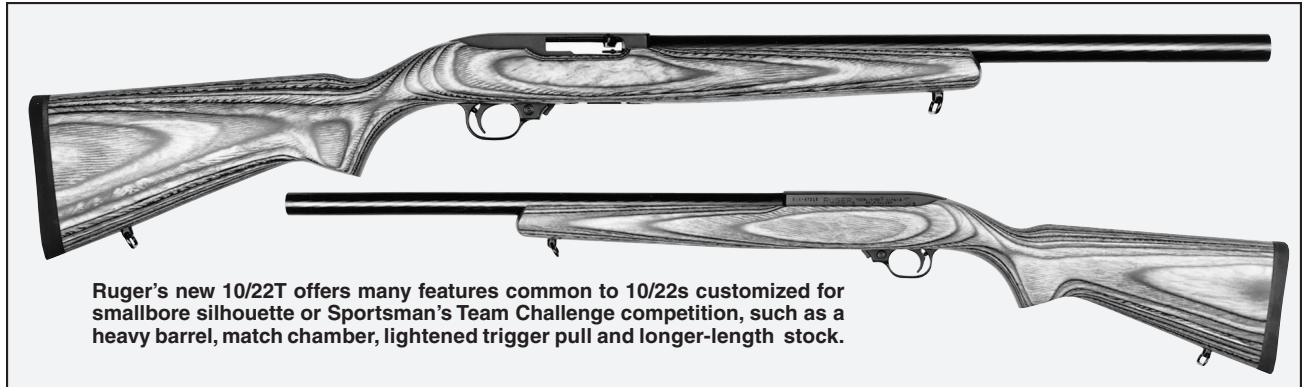
Many gunmakers try to stake a claim to having the smallest, lightest or most powerful pocket pistol available. In designing the Tomcat, Beretta engineers instead chose to balance its attributes to provide a concealable, low-recoiling defensive handgun at an affordable price.



**The right side of the Tomcat with stocks removed, shows the trigger bar and its camming recess in the slide (upper arrow). Slide recoil is absorbed by spring-loaded levers (lower arrow).**



## RUGER MODEL 10/22T RIFLE



Ruger's new 10/22T offers many features common to 10/22s customized for smallbore silhouette or Sportsman's Team Challenge competition, such as a heavy barrel, match chamber, lightened trigger pull and longer-length stock.

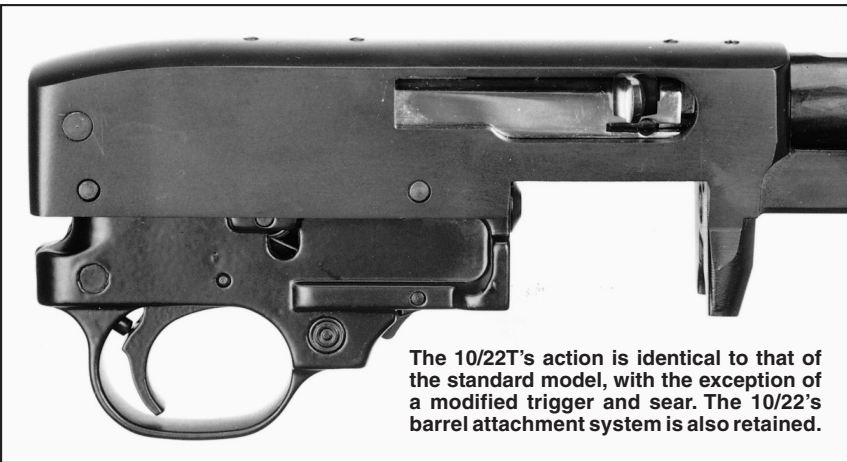
It would be difficult to argue against the proposition that the Ruger 10/22 is currently the most accessorized rifle on the planet, with dozens of firms offering a dazzling variety of aftermarket parts and custom modifications (July 1996, p. 34).

By far the most popular modifications are a lightened trigger pull, a heavy match-grade barrel and a replacement stock better suited for scope use. Ruger's 10/22T, new in late 1996, offers these custom modifications and more in a factory package.

The design, function and disassembly of the 10/22T are the same as for the standard

its Newport, New Hampshire, facility, with the exception of those for the standard 10/22, the Mini-14 and the Ranch Rifle, which are button rifled. The forging spirals visible on the 10/22T barrel are machined off the company's other hammer-forged tubes. Hammer forging is believed to give both better accuracy and longer barrel life than other rifling methods.

Bore dimensions are fairly tight at .217" land and .222" minimum groove diameter. Accuracy is also augmented by the barrel's match chamber and throat, designed to give reliable functioning with any .22LR ammu-



The 10/22T's action is identical to that of the standard model, with the exception of a modified trigger and sear. The 10/22's barrel attachment system is also retained.

10/22 (September 1964, p. 64). In fact, all action parts are identical (with the exception of the modified hammer, sear and trigger spring, described below). Immediately noticeable is the new autoloader's heavy 20" long, .920" diameter straight-tube barrel, which sports the spiral hammer-forging marks so familiar to owners of Steyr rifles. The 10/22T barrel is unusual in that it is one of only a very few barrels made for this semi-auto rifle that are hammer-forged rather than cut- or button-rifled.

Since about 1994, Ruger has been hammer-forging all its rifle barrels in-house at

niton, and its recessed target-style crown.

Although the 10/22T barrel can easily be installed on any 10/22 receiver, Ruger has decided not to market this heavy barrel as an aftermarket upgrade for owners of standard 10/22s. We suspect that the company may rethink this, as virtually all the 10/22 owners we spoke with showed considerable enthusiasm for an aftermarket, Ruger-made accessory heavy barrel—

A recessed target-style crown protects the rifling and preserves accuracy. Note the spiral hammer-forging marks on the barrel.

### RUGER 10/22T

**MANUFACTURER:** Sturm, Ruger & Co., Dept. AR, 200 Ruger Rd, Prescott, AZ 86301-6181

**MECHANISM TYPE:** blowback-operated semi-automatic rifle

**CALIBER:** .22 Long Rifle

**OVERALL LENGTH:** 38<sup>3</sup>/<sub>8</sub>"

**BARREL LENGTH:** 20"

**RIFLING:** 6 groove, 1:16" RH twist

**WEIGHT:** 7 lbs. 8<sup>1</sup>/<sub>2</sub> ozs.

**MAGAZINE CAPACITY:** 10

**TRIGGER:** two-stage, 3<sup>3</sup>/<sub>4</sub> lbs.

**SIGHTS:** none supplied; receiver drilled and tapped for scope mounts

**STOCK:** laminated birch; length of pull, 13<sup>5</sup>/<sub>8</sub>"; drop at heel, 1<sup>1</sup>/<sub>8</sub>"; drop at comb, 1<sup>1</sup>/<sub>4</sub>"

**ACCESSORIES:** scope mount base for "tip-off" rings

**PRICE:** \$392.50

especially if it was priced competitively with similar tubes from other makers. Both stainless steel and fluted barrels may be offered on 10/22Ts in the future.

The 10/22T's laminated birch stock has about a 3/8" longer pull for better handling and eye relief with a telescopic sight. Also notable are the stock's flatter fore-end (for more stability on sandbags), front and rear sling swivels, 1/2"-thick rubber recoil pad, and 1"-long "bump pad" at the fore-end tip that supports the rifle's heavy bull barrel.





The Model 10/22T rifle's lighter trigger, higher comb and flatter fore-end helped improve accuracy results from the bench. The scope is a 6-18X from Redfield and the tripod rest is by Wagner.

tion shot flawlessly, several standard-velocity rounds failed to extract.

Although the Model 10/22T showed a tendency to throw the first round out of a magazine high, accuracy was good with an overall

average extreme spread of .75" for all the 10-shot groups fired. Dividing this figure by the conversion factor of 1.3 to give the approximate expected five-shot group average yields .57", or about 1.14 m.o.a.

The 10/22T's greater weight and improved stock appeared to offer greater

The rifle also lacks the standard 10/22's barrel band.

While the basic 10/22 trigger pull may be as high as five to six lbs., the 10/22T's trigger is specified to break at under four lbs., thanks to a hammer and sear having redesigned geometry and hand polished engagement surfaces, and a lighter trigger spring.


The 10/22T we received displayed a polished blued barrel, satin finished black-anodized receiver, and laminated birch stock. Also included were a 3/8" scope rail and four mounting screws. The 10/22T was fired for accuracy with the results reported in the accompanying table, and function-fired with Eley, Federal, Remington and Winchester ammunition. While high-velocity ammuni-



The 10/22T's laminated birch stock offers greater resistance to warpage than the standard 10/22's solid birch stock, and terminates in a 1/2" soft rubber recoil pad.

offhand steadiness. Shootability was also enhanced by its lighter trigger, which evinced only a slight degree of creep.

Complaints about the 10/22T were few and of relatively minor consequence. Several shooters felt that the stock's comb could have been higher—an issue that Ruger will likely address in the future—and all would have preferred a somewhat lighter, totally creep-free trigger.

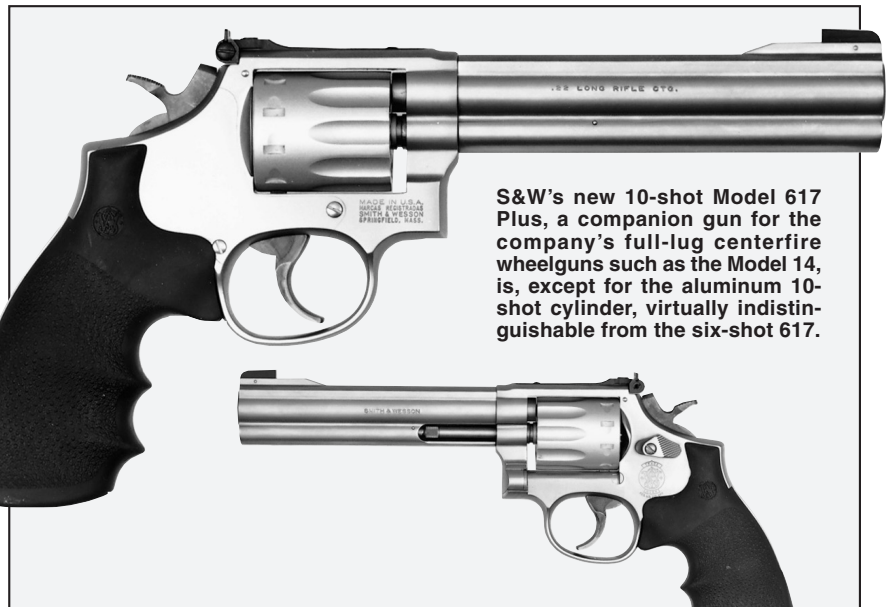
Custom 10/22s modified for STC or other competition offering m.o.a. accuracy and modified stocks and triggers typically cost \$700 to \$1,000 and more. Ruger's 10/22T offers comparable performance and features at considerably less cost. 

ACCURACY RESULTS					
.22 LR Cartridge	Vel. @ 15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)	
Eley No. LM271 Club	1063 Avg. 17 Sd	0.42	1.00	0.69	
Federal No. CR113 Gold Medal Target	1164 Avg. 17 Sd	0.64	1.08	0.82	
Win. No. XS22LR1 Super Silhouette	1214 Avg. 17 Sd	0.51	1.14	0.75	
Average Extreme Spread				0.75	
Five consecutive 10-shot groups from 50 yds., fired from sandbags. Abbreviations: Sd (standard deviation), Win. (Winchester)					

## SMITH & WESSON 617 PLUS .22

SMITH & WESSON's K-frame 617 .22 LR revolver, introduced in 1989, followed in the tradition of the company's past full-size rimfire wheelguns, such as the K-22 Masterpiece. But while the K-22 was modeled on the Model K-38, the 617 was intended as a companion gun to S&W's other full-lug revolvers, such as the L-frame .357 Magnum Models 586 and 686 or the K-frame Model 14.

In the early 1990s, Smith & Wesson engineers, perhaps eyeing all the metal between the six chambers of the 617's 1.45"-diameter cylinder, realized there was space for a few more rounds. The production methods used to make cylinders at the time, however, made such a change economically unfeasible. It wasn't until 1992, when the company began a \$40 million changeover to modern CNC (computer numeric controlled) machining stations that production technology allowed a modification in the revolver's design. A ten-shot cylinder was finally settled upon, and S&W's new "high



S&W's new 10-shot Model 617 Plus, a companion gun for the company's full-lug centerfire wheelguns such as the Model 14, is, except for the aluminum 10-shot cylinder, virtually indistinguishable from the six-shot 617.

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capacity" 617 Plus was released in Spring 1996. A blued version, the Model 17, was also brought out in early 1996, filling the gap left by the discontinuation of the six-shot Model 17 some years earlier.

While the original six-shot 617 was offered in three barrel lengths (4", 6" and 8 $\frac{3}{8}$ ") and a variety of trigger and hammer options, the new Plus is available only with a 6" barrel, .312"-wide smooth trigger and .375" semi-target hammer. It features the original 617's fully underlugged barrel, black undercut Patridge front sight and adjustable rear sight, as well as S&W's redesigned cylinder latch. Introduced in 1996, the new latch gives a more ergonomic contact surface as well as greater speed-loader clearance.

By far the most salient external feature of the new 617, however, is its 10-shot cylinder. Not only does it seem to have too many flutes and cylinder stop notches; it is also a different color from the rest of the revolver. As well it should be, for the cylinder is not made from stainless steel, but from aluminum.

We initially questioned the suitability of aluminum for the 10-shooter's cylinder. The cylinder, after all, must withstand not only the 20,000+ p.s.i. chamber pressure of the .22 LR cartridge, but also the battering of its notches against the cylinder stop. S&W engineers stated that an aluminum cylinder was chosen because it is easier to machine than a steel one—and with ten chambers, cylinder stop notches and flutes, any saving in machining time or cutter life is significant. They also assured us that any



The 10-shot cylinder is made of tough 7075-T6 aluminum. The steel ejector star features a ratchet that rotates the cylinder 36° with each trigger pull, rather than the 60° rotation needed by the six-shot cylinder.

fears about the strength or durability of the aluminum cylinder are unfounded. The particular grade of aluminum chosen—7075-T6—has an ultimate tensile strength of over 80,000 pounds per square inch, which rivals that of some steels. Furthermore, the 10-shot 617 passes all SAAMI (Sporting Arms and Ammunition Manufacturer's Institute) proofs, and meets all SAAMI specifica-

tions, for .22 LR ammunition, including high-velocity and hyper-velocity loads.

Prototypes of the 617 Plus were put through a 5,000-round torture test, with cleaning every 100 rounds. At the conclusion of testing, the cylinders showed no appreciable wear either from the firing test or from the 50 cleanings given each gun.



The Model 617 Plus features the same lockwork as its six-shot brother, with the exception of a modified hand and ratchet.

The 10-shot aluminum cylinder also allows a substantial weight reduction. The six-shot, steel-cylindere 617 (still available) weighs six ounces more than its 10-round aluminum-cylindere sibling, with the same barrel lengths. The internals of the Plus offer no strong surprises for those familiar with S&W lockwork, but some changes were made to accommodate the 10-shot cylinder. Unlike a six-shot wheelgun, in which the cylinder rotates 60° for each shot, the new 617's chambers are spaced only 36° apart. Proper cylinder rotation was accomplished simply by shortening the hand and redesigning the steel cylinder ratchet so that the normal motion of the hand would produce less rotation.

Since no revamping of the hammer, trigger or other internal parts was required, this bit of engineering not only simplified manufacturing and parts inventory, but also retained the K-frame trigger feel.

Our test 617 10-shot revolver had a 6" barrel, smooth trigger, semi-target hammer and pebble-grained rubber Hogue-style

## S&W 617 PLUS

**MANUFACTURER:** Smith & Wesson, Dept. AR, 2100 Roosevelt Ave., P.O. Box 2208, Springfield, MA 01102-2208

**MECHANISM TYPE:** double-action revolver

**CALIBER:** .22 Long Rifle

**OVERALL LENGTH:** 11 $\frac{1}{16}$ "

**BARREL LENGTH:** 5 $\frac{5}{16}$ "

**RIFLING:** 6 groove, RH twist

**WEIGHT:** 2 lbs., 8 ozs.

**WIDTH:** 1 $\frac{1}{16}$ "

**HEIGHT:** 5 $\frac{13}{16}$ "

**CYLINDER CAPACITY:** 10

**TRIGGER:** single-action pull, 3 $\frac{3}{4}$  lbs.; double-action pull, 11 $\frac{1}{4}$  lbs.

**SIGHTS:** black Patridge front, black rear adjustable for windage and elevation; drilled and tapped for scope mount

**STOCK:** one-piece black rubber with finger grooves

**ACCESSORIES:** hard plastic case

**PRICE:** \$514

combat grips with an S&W monogram. We fired the revolver for accuracy with the results shown in the accompanying table, and function-fired it with CCI, Federal, PMC, Remington and Winchester ammunition. Accuracy, though not outstanding, was generally good, except with some



The 617 Plus showed good accuracy, particularly with the target loads we tested.

hyper-velocity, light-bullet loads which showed signs of keyholing.

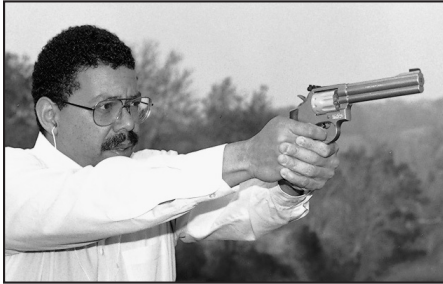
The barrel/cylinder gap of our test revolver measured .005", which was within the .004"- .006" range generally considered acceptable for a stock revolver.

Though there were no malfunctions and firing pin indentations were healthy, there was some initial roughness when unlatching and latching the cylinder, and, early in our test fire session, the trigger failed to fully return two or three times. These phenomena vanished as the gun wore in.

## ACCURACY RESULTS

.22 LR Cartridge	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
CCI No. 00051 Pistol Match	915 Avg. 23 Sd	2.12	2.23	2.18
Federal No. 711 Gold Medal Target	982 Avg. 17 Sd	1.07	1.95	1.43
Winchester Super Silhouette	900 Avg. 47 Sd	2.05	2.63	2.37
Average Extreme Spread				1.99
Five consecutive 5-shot groups from 25 yds., fired from Ransom Rest. Abbreviations: Sd (standard deviation)				





The 617 Plus was exceptionally steady in offhand shooting, making possible off-hand hits on a gallon milk jug at 100 yds.

We also noted that, with some ammunition, the cylinder seemed to bind during rotation. Inspection revealed that the firing pin bushing in the frame projected forward from the recoil plate some .006", leaving a gap of only .002" to the cylinder. The cylinder is counterbored .042" for the cartridge rims; thus, on our test gun, any .22 LR round with a rim greater than .044"—or one that did not seat fully into its chamber, due to dirt or an out-of-round condition—had the potential to drag against the bushing.

Our sample, it should be stressed, was an anomaly. Guns with the normal flush-

mounted firing pin bushing would doubtless not show this behavior.

Firing many .22 Short cartridges in the revolver could also cause incomplete cartridge insertion in the chamber, as powder residues that accumulate just forward of the mouth of this shorter case may interfere with the seating of the longer .22 LR cartridge.

The aluminum cylinder of the 617 Plus is claimed to be as impervious to normal gun cleaning solvents and lubricants as any steel cylinder. Nylon brushes are recommended for the bores and chambers of all S&W guns.

After our accuracy firing and field testing, during which we expended a total of more than 200 rounds, we observed some minor peening around the cylinder stop notches. This occurred only on the side of the notch that slaps against the cylinder stop when the revolver is fired rapidly in the double-action mode. In fairness, similar peening is also frequently observed on steel cylinders. It should also be remembered that steel, though stronger than aluminum, is also much heavier, causing its notches to hit the cylinder stop with more force.

Though our Plus was reliable and pleas-

ant to shoot, we still found it difficult to warm to its aluminum cylinder (although its accuracy did thaw us about the edges a bit). Our feelings, however, we based more on tradition and esthetics than on any concern about durability or functionality. For those not sharing our biases, the 617 Plus combines the economy of .22 LR ammunition with the feel, looks and accuracy of its bigger-bore brothers.



Adjustable sights, a grooved backstrap and Smith & Wesson's new cylinder latch are standard features of the new gun. Note the semi-target style rimfire-only hammer.

## CABELA'S PERCUSSION SHOTGUN



Davide Pedersoli is making these black-powder shotguns exclusively for Cabela's. The guns are available in 10-, 12- and 20-ga.

In its 35 years Cabela's has grown into one of the world's foremost suppliers of hunting, shooting and outdoor gear. Though it is perhaps best-known for its mail-order clothing, Cabela's also provides consulting services to sportsmen and women on worldwide big game, wing-shooting and fishing expeditions. Most-recently, Cabela's is sponsoring the outdoor show *Cabela's Under Wild Skies* hosted by Tony Makris and aired Saturday mornings on ESPN.

Also available from Cabela's is a line of blackpowder arms and accessories. Many are from well-known major U.S. manufacturers, while others, like the Cabela's Blackpowder Shotgun reviewed here, are made primarily overseas and private-branded with the Cabela's name.

Davide Pedersoli is making these shot-

### CABELA'S SHOTGUN

**MANUFACTURER:** Davide Pedersoli & C, Via Artigiani 57, Gardone V.T., Brescia, Italy 25063

**IMPORTER:** Cabela's, Dept. AR, 812 13th Ave., Sidney, NE 69160

**MECHANISM TYPE:** muzzleloading percussion side-by-side shotgun

**GAUGE:** 10, 12 (tested), 20

**OVERALL LENGTH:** 44<sup>3</sup>/<sub>4</sub>"

**BARREL LENGTH:** 27"

**WEIGHT:** 7 lbs., 1 oz.

**TRIGGER:** single stage double, 8<sup>1</sup>/<sub>4</sub> lbs. pull front, 7<sup>3</sup>/<sub>4</sub> lbs. pull rear

**STOCK:** American walnut: length of pull, 14<sup>1</sup>/<sub>8</sub>"; drop at heel, 2<sup>1</sup>/<sub>2</sub>"; drop at comb, 1<sup>1</sup>/<sub>4</sub>"

**ACCESSORIES:** choke tubes, spanner

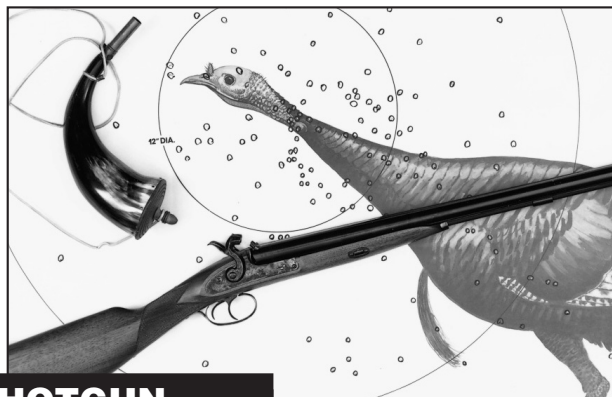
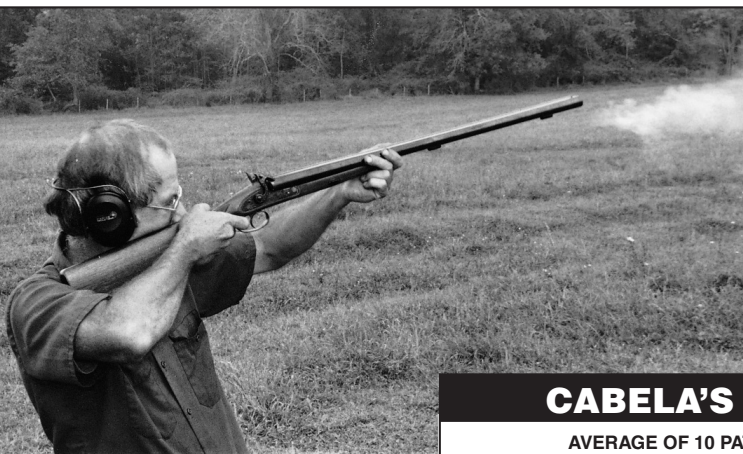
**PRICE:** \$429.99 (\$479.99 10-ga., \$399.99 20-ga.)

guns exclusively for Cabela's, which are available in 10-, 12- and 20-ga. The 10- and 12-ga. come with X-full, modified and improved cylinder choke tubes, and 12-ga. full and 10-ga. cylinder tubes are available. The 20-ga. has improved cylinder and modified choke tubes. Barrels are made to handle lead or steel shot.

All come with a one-piece American walnut stock with cut checkering at 20 lines per inch on the wrist (the 10-ga. has a checkered pistol grip stock). Our 12-ga. sample had a few minor overruns and flat points but was otherwise well-executed.

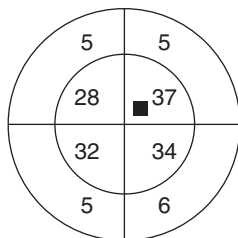
The barrels are deep blue with a light rope pattern stamped around each just forward of the nipples effecting attractive concealment of the barrel-to-breechlug seam. The side-by-side barrels are soldered together with a bottom rib on which three

# DOPE BAG

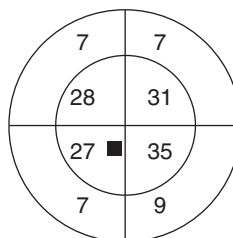


## CABELA'S SHOTGUN

AVERAGE OF 10 PATTERNS AT 35 YDS.



X Full Barrel



Modified Barrel

■ = Point of Hold

1/4 ozs. No. 4 shot, 90.0 gr. Goex FFg by volume  
Pellet count—182

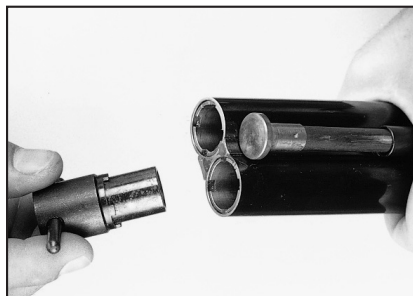
Total Hits	154 (85%)	Total Hits	151 (83%)
21.2" Inner Circle	131 (72%)	21.2" Inner Circle	121 (66%)
30" Outer Ring	23 (13%)	30" Outer Ring	30 (17%)

The velocity of our load (90.0-grs. by volume of Goex FFg and 1 1/4 ozs. of No. 4 nickel-plated lead shot) in the Cabela's shotgun was measured with an Oehler Model 71 inductance sensor and a Model 35 chronograph.

blued steel thimbles are soldered to retain the ramrod, and a plain top rib sporting a single gold bead.

Barrels are connected to the stock with a captive steel wedge pin and hooked breech plugs that engage recesses in the tang.

All stock furniture, hammers, locks and buttplate are color case-hardened steel. A scroll pattern is stamped on the locks, top



Extra-full, modified and improved cylinder tubes are included with the 12-ga. smooth-bore. Tubes are easily changed using the choke tube wrench supplied with the gun.

tang, trigger plate and hammers, and the hammer spurs are checkered.

A half-cock position is provided for capping or uncapping the nipples. The front trigger fires the right barrel while the rear fires the left.

We found the easiest method for disassembly was to begin by first ensuring the gun was unloaded and no percussion cap or priming residue was on the nipples. Pull both hammers back to full-cock, drive out the wedge pin and lift the barrels from the stock. Turn out the rear-most machine

screw from the right lock, followed by the forward-most wood screw from each lock. The locks can now be lifted straight off for thorough cleaning in hot soapy water and lubrication. Nipples are turned out using a standard No. 11 nipple wrench.

Reassembly is in the reverse order, though when returning the locks to the stock, push their respective triggers all the way forward so they clear the sear as that piece re-enters its cut-out in the stock. Nipples should be lightly greased and hand-tightened only.

Loading data that comes with the 12-ga. Cabela's blackpowder shotgun includes 1 1/8 oz. and 1 1/4 oz. lead shot loads and a 1 1/8 oz. steel load.

Reasoning that this gun will most likely see hunting use on spring gobblers, we patterned it using 1/4 ozs. of No. 4 nickel plated lead shot from Ballistic Products, Inc., 90.0 grs. by volume of Goex FFg, and a combination of cardboard and felt overpowder cards and a .022" cardboard overshot card.

Before loading, we used the conversion

Reasoning that this gun will most likely see hunting use on spring gobblers, we patterned it at 35 yds. using No. 4 nickel-plated lead shot from Ballistic Products, Inc. Pellet hits are indicated with a black marker.

factor of (X ozs.)(437.5) = grains found in the *NRA Firearms Fact Book* and measured out the shot charge of 547 grs. on our powder scale. And since weighing out each charge would be impractical, we used a .458 Win. Mag. case as a volumetric measure as it was found to hold exactly the amount of shot needed.

At first we underestimated the ability of the Cabela's blackpowder shotgun by setting up the patterning board at only 25 yds. Patterns were pretty much 100% in only a 24" circle, so we moved the patterning board back to 35 yds., the distance for which this double barrel was regulated, with the results shown in the accompanying chart. Loads were chronographed using an Oehler Model 71 and were found to have a muzzle velocity of 1047 f.p.s. The opening of Virginia's dove season corresponded with the testing of the Cabela's blackpowder shotgun so function firing was per-



The 27" blued barrels are connected to the stock by way of a captive steel wedge pin and hooked breech plugs that engage recesses in the color case-hardened tang.



formed in the dove field with 1¼ ozs. of No. 7½ shot and 90.0 grs. by volume of Goex FFg. There were no malfunctions of any kind, and though the birds weren't flying as much as we would have liked, the hunt was successful and the muzzleloader proved a fun gun to take afield.

We did have some complaints, though. At first the front and rear trigger pulls were 12½ lbs. and 12¼ lbs., respectively. A drop of Tetra Gun Grease on the sears and some function firing almost halved the pull weight, stabilizing it at the poundage stated in the accompanying specification box.

The ramrod is typical of imported muzzleloaders in that it is light and flimsy and should be replaced with a synthetic one. Additionally the choke tubes are very sharp at the muzzle so loading the .135" cardboard overpowder wad was difficult as the tube tended to cut into and grab the wad. This problem was even more pronounced when loading the X-full tube. Had the choke tubes been slightly chamfered, loading would have been easier without affecting patterns. Also, our modified tube had a con-



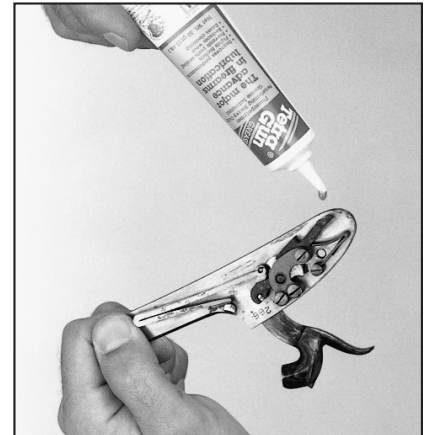
**To remove the locks, fully cock the hammers, turn out the rear machine screw, then the front wood screw. The lock may then be lifted off for cleaning or maintenance.**

striction of .025", making it closer to improved modified and thus yielded a tighter pattern.

At first the external hammers were a distraction, but after a firing a few shots, they easily faded out of conscious vision and tended to help center the shooter's eye.

So do you need a muzzleloading double barrel shotgun? Probably not. But for shoot-

**A drop of Tetra Gun Grease on the sears of each lock cut the trigger pull in half after firing a few shots to work in the grease.**



ers who like something a little different, and who are looking for a gun that is fun to shoot, the Cabela's blackpowder shotgun may be the ticket.

**NRA**

## WAGNER RIFLE REST

**M**AXIMUM accuracy from the bench demands a rock-steady front rest, preferably with a top adjustable for windage and bag tension. A new rest from AMT Custom Shop offers these features and more.

The heart of the Wagner rest (named for its designer, master machinist and AMT production manager Joe Wagner) is a 7 lb., 13 oz. cast-iron black-painted base having three 7½" legs, all with threaded, pointed leveling screws. The base's hub is bored .729" to accept the threaded center post, threaded 10 T.P.I., attached to the rest top. A T-handled locking screw in the hub engages a vertical cut in the post, preventing turning and eliminating play between the base and post. Elevation is by a six-spoke star which threads onto the post and sits atop the hub.

Depending upon the top chosen, bag tension is regulated by either sliding aluminum angle plates secured by set screws, or by hinged, thumbscrew-adjusted steel side plates. Both versions are available with or without windage adjustment, for a total of four different tops.

The windage top comprises a steel upper assembly supporting the bag, attached to an aluminum block riding on steel rods inside a U-shaped aluminum base screwed onto the center post. Springs push the inner block against the finely-threaded windage adjustment screw.

All Wagner Rest tops feature a for-

ward stop, which consists of a plastic-topped threaded rod running inside a slotted steel bar welded to the top. Opposed locking nuts secure the stop at the desired position within the slot.

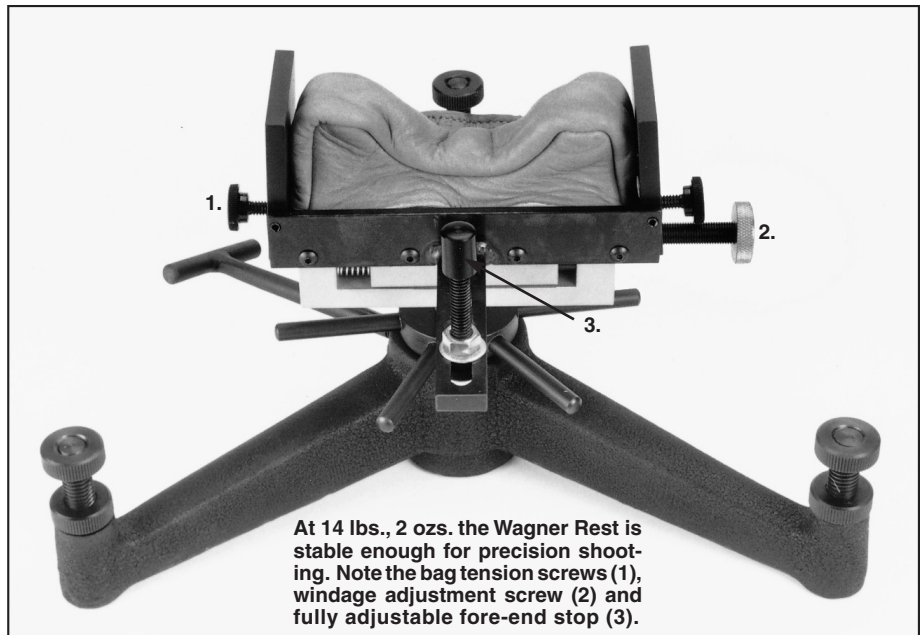
In use, the 14 lb., 2 oz. Wagner rest was solid and stable, with smooth windage adjustments. Bag pressure was also easily regulated. Approximately ¾" of horizontal (windage) and ¾" of vertical (height) adjustment was available—a range amply

broad without compromising stability.

The Wagner Rest is a well-made, no-nonsense unit offering the features desired by accuracy shooters at a competitive price.

Available from: AMT Custom Shop, Dept. AR, 6125 Enterprise Dr., #8, Diamond Springs, CA 95619. Price: standard top, \$165; windage adjustable top, \$225. Specify bag size: #1 (sporter fore-end), #2 (Anschutz-style target fore-end), or #3 (bench-rest fore-end).

**NRA**



**At 14 lbs., 2 ozs. the Wagner Rest is stable enough for precision shooting. Note the bag tension screws (1), windage adjustment screw (2) and fully adjustable fore-end stop (3).**