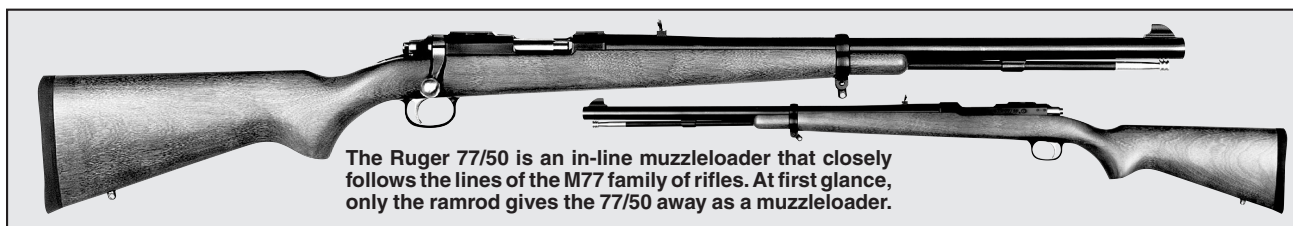


# DOPE BAG

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.

## RUGER MODEL 77/50 IN-LINE



The Ruger 77/50 is an in-line muzzleloader that closely follows the lines of the M77 family of rifles. At first glance, only the ramrod gives the 77/50 away as a muzzleloader.

**T**HE new Ruger Model 77/50 is another entry into the muzzleloading arena from a major center-fire rifle manufacturer. It is an in-line rifle with the look and feel of a modern center-fire sporter. The rifle's lines, as one would expect, closely follow those of Ruger's bolt-action Model 77 family, though the muzzleloading 77/50's ignition is from a percussion cap.



The heart of the 77/50 is an investment cast receiver that will be familiar to owner's of center- and rimfire M77 rifles. The recoil lug of the 77/50 is at the rear of the receiver.

Trim in both look and feel, the Model 77/50 is 41½" long and weighs 7 lbs. Ruger calls the stock American hardwood, which in reality means it's birch. Birch is adequately strong, but plain and on the 77/50 it is stained to resemble American walnut. The action and stock are retained by two screws at the trigger guard and by a band circling the barrel and stock at the fore-end tip. The butt features a 1/2"-thick, solid, black rubber recoil pad, and quick-detachable sling swivel studs are installed.

Measuring 22" from the muzzle to the face of the breech plug, the barrel is rifled with a one in 28" twist. The bore diameter is .500" with .0045" deep grooves that appear to be twice as wide as the lands. The narrow lands offer less resistance when loading hard-to-seat projectiles. Uniquely different,

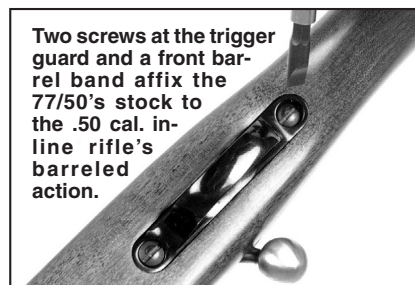
the recoil lug is moved to the rear four inches to allow the 24½" ramrod to be stored under the rifle's barrel and forward section of the receiver. This gives the rod a longer gripping area when loading and cleaning.

Like all Ruger M77s, the receiver is an investment casting and its appearance above the wood closely resembles that of the 77/22 rifle. The barrel is threaded into the receiver and in turn the stainless steel breech plug threads into the barrel. The nipple and breech plug are a single piece.

The bolt has the same handle, bolt sleeve, cocking piece and three-position safety as the Model 77/22 rifle. The conventional firing pin and bolt face are replaced with a 7/16" diameter striker that travels less than 1/4" to rest on the nipple or fire a No.

11 percussion cap. There are two locking lugs located approximately midway on the bolt which ride in conventional raceways and lock the bolt in the firing position.

There is a projection on the front end of the bolt designed to make sure the breech plug is fully seated. If the breech plug backs out, the bolt cannot turn to full lock. This serves to prevent a slam fire. However, care must be taken after firing to be sure the frag-



Two screws at the trigger guard and a front barrel band affix the 77/50's stock to the .50 cal. in-line rifle's barreled action.

### RUGER 77/50

**MANUFACTURER:** Sturm, Ruger & Company, Inc., Dept AR, Lacey Place, Southport, CT 06490

**MECHANISM TYPE:** percussion, in-line, muzzleloading rifle

**CALIBER:** .50

**OVERALL LENGTH:** 41½"

**BARREL LENGTH:** 22"

**WEIGHT:** 7 lbs.

**RIFLING:** eight-grooves, 1:28" RH twist

**TRIGGER:** Non-adjustable, single-stage, 5-lbs. pull

**SIGHTS:** folding leaf rear adjustable for windage and elevation, front gold bead

**STOCK:** straight-grained birch: length of pull, 13½"; drop at comb, 2"; drop at heel, 2½"

**ACCESSORIES:** ramrod, breech plug wrench, cleaning tube, bolt disassembly tool, set of Ruger 1" scope rings

**PRICE:** \$399

mented cap is dumped out as a fragment can clog the space between the prong of the bolt and the breech plug under the nipple. The trigger housing is an integral part of the receiver and is the same as used on the current M77s. The trigger is non-adjustable and, on our test rifle, was factory set to let off at a rather heavy 4½ to 5 lbs.

Located on the right side of the bolt sleeve, the safety is off or ready to fire in the forward position. When swung to the middle position, the sear is blocked, but the bolt can be opened. With the safety is moved all the way to the rear, the sear is blocked, the bolt locked closed and the striker is also blocked in the cocked position. The location of the safety on the right side of the receiver makes it fine for right-hand operation, but does present a problem for southpaw shooters.

A 3/8"-diameter, 24½" long black fiber

## ACCURACY RESULTS

Load	Vel. @ 15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Barnes 300-gr. Expander MZ all copper bullet with Sabot, two 50-gr. Pyrodex Pellets CCI No. 11 Magnum percussion cap	1634 Avg. 20 Sd	1.60	4.90	2.90
Knight 260-gr. HP swaged lead bullet with Sabot 90-grs. Clean Shot powder* CCI No. 11 Magnum percussion cap	1454 Avg. 30 Sd	1.92	4.16	3.45
Lyman 420-gr. Shocker cast lead bullet 70-grs. Clean Shot Powder* CCI No. 11 Magnum percussion cap	1069 Avg. 17 Sd	2.53	5.20	4.67
Average Extreme Spread				3.67
Five consecutive five-shot groups from 100 yds., fired from sandbag rest. Abbreviations: Sd (Standard Deviation), HP (hollow point), *by volume blackpowder equivalent				

ramrod is retained in the fore-end, and a single ramrod thimble is dovetailed into the bottom of the barrel approximately 6" from the muzzle. A brass cleaning jag with a concave face for ball seating is at one end, while a metal ferrule tapped 10x32 to accept cleaning accessories is at the other. Other accessories include a breech plug wrench with handle; the small end of which is used as a disassembly tool to hold the cocking piece while disassembling the bolt. The cleaning tube is a plastic cylinder that threads into the breech plug recess to keep cleaning solution out of the trigger mechanism. However, even with the tube removed it is still necessary to clean the fouling from the nipple area, and care must be exercised to protect the trigger mechanism from debris and cleaning solvent. Complete instructions are enclosed in the included 48-page manual, which is well illustrated with information on safety, loading, firing, sight adjustment, disassembly, reassembly, cleaning, accessories and general care.

Sights on the 77/50 consist of a folding

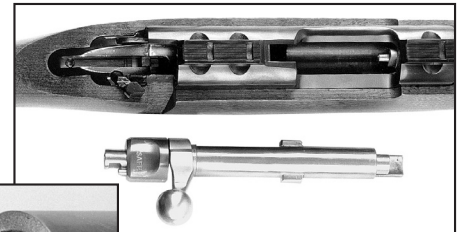
leaf rear adjustable for windage and elevation and a brass bead front both dovetailed to the barrel. The receiver is also drilled and tapped to accept a receiver sight and its top will accept the included Ruger scope rings.

The port—the ejection port on a conventional rifle—to the nipple is 1 3/4" long with the bolt open which would seem to make capping or decapping easy. We found capping with your fingers to be nearly impossible, especially with a scope mounted. However with a capping tool there is not a problem. A heavy main spring and the short hammer fall make for a very fast lock time.

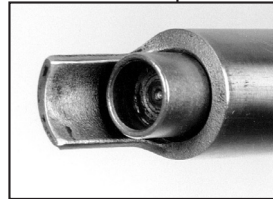
For range testing we installed a Bausch & Lomb 2.5-10X Elite 4000 scope. This is certainly more scope, both in size and power, than is practical for hunting, but the extra magnification limited human error to show the full accuracy potential of this rifle. The fast twist and shallow rifling are certainly not suited for round ball, and we found the rifle finicky with lead bullets. Performance was best with lead or jacketed bullets in sabots. For these tests we fired the new Barnes .45-cal., 300-gr. Expander MZ solid copper bullet with sabot driven by two Pyrodex pellets each equivalent to 50 gr. of blackpowder. We also fired the Knight .45-cal., 260-gr. swaged lead bullet with sabot ahead of 90 grs. of the new Clean Shot black-

powder alternative measured by volume. We also tried cast lead bullets from Buffalo Bullets, Hornady, Lyman and T/C using 70-grs. by volume of Clean Shot powder. As results were similar with these bullets, we listed the new Lyman Shocker in the accompanying table.


Clean Shot powder is a new replacement for blackpowder intended for use on a volume to volume basis with blackpowder. Similar velocity and pressures should be expected, but Clean Shot will weigh approximately 10% less than blackpowder. We found it measured well and gave excellent



The 77/50's bolt (above) has two locking lugs, and the bolt face is replaced with a 7/16" diameter striker (l.) which falls less than 1/4" to rest on the nipple or fire a No. 11 cap.



accuracy with little fouling, but the maker recommends cleaning as with blackpowder after shooting. At this time we have done minimal testing of this product, but will have more information in the future. A second new product used in this test was the CCI No. 11 Magnum percussion cap. Claimed to be 23% hotter than the standard CCI No. 11, it gave very positive ignition with all loads.

The new Ruger Model 77/50 is an accurate contemporary muzzleloader. The modern muzzleloading hunter will find it an easy to carry rifle suited for deer-sized game. 

## S&W MODEL 4553 TACTICAL



The S&W Tactical Series is a new line of compact carry guns from the Springfield, Massachusetts, maker. The Model 4553 Tactical is a .45 ACP cal. double-action-only "slick slide."

**S**TEPPING into the semi-custom carry market, Smith & Wesson has added the new Tactical Series to its Third Generation line of semi-automatic pistols. They are designed as carry guns but retain many proven features of previous S&W compact semi-automatics.

The Tactical Series guns are recoil-operated semi-automatics with matte stainless steel slides, lightweight, aluminum alloy frames and black, one-piece, Delrin stocks with molded-in checkering. Two trigger-operation choices are available; conventional decocking double-action and double-action-only. Calibers offered are 9 mm Luger, .40 S&W and .45 ACP.

The double-action-only (DAO) .45 ACP variant we received for testing, the Model



The Tactical Series field strips in the same manner as its Third Generation counterparts. On the .45 ACP versions a compound recoil spring helps manage recoil.

4553 Tactical, is designed without the ambidextrous decocking safety lever of S&W's conventional double-actions. Its counterpart in S&W's currently-offered standard pistol line is the compact .45 ACP Model 4516. The most obvious change in the 4553's appearance is in the grip frame. Where the 4516 has a recurved magazine extension, the magazine well of the 4553 has been recessed so the magazine's bumper pad seats flush with the grip. This decreases the overall height of the gun to 5". When compared to standard S&Ws, the surface area of the Tactical's grip is diminished and the magazine capacity is reduced from seven to six rounds. The barrel has also been shortened by 1/4" to 3 1/2".

Like the 4516, the 4553 disposes of the recurved trigger guard found on most full-sized S&W semi-automatics in favor of a more conventional rounded shape. The trigger guard opening is large enough to allow firing with a gloved hand.

A double-action-only semi-automatic offers a long, heavy trigger pull that is the same weight and length shot-to-shot. The 4553 has no second-strike capability in the event of a misfire and the slide must be man-



Recessing the magazine well so the bumper pad seats flush with the grip helps reduce the 4553's overall height by 1/4" from that of its full-size cousin, the 4516.

ually retracted to reset the pistol's hammer.

The external hammer lies flush with the back of the slide when in its full-down uncocked position. When the hammer is ready to fire, it rests in a position similar to half-cock on a single-action pistol. The action of the slide returns the hammer to this position for each subsequent shot. Only dry-firing or a misfire will leave the hammer in its fully-down position. There is no half-cock function. Because the double-action-only

models cannot be cocked with the thumb, the bobbed hammer is neither checkered nor knurled. However, the Model 4553 Tactical does have a magazine safety and a passive, trigger-actuated firing pin safety.



Like other S&W compacts, the Model 4553 Tactical features a three-dot Novak "LoMount" fixed sight set.

Technical changes in the Tactical Series may not be obvious to the casual observer, but S&W claims

more durability in the new line than in its standard pistols. In the Tactical Series, the slide rails run the entire length of the pistol frame. Other S&W's have a single set of slide rails that end just in front of the slide stop. On the Tactical models, a second pair of rails is machined into the top of the recoil spring well where they extend to the end of the frame, thereby increasing stability and support for the slide. According to S&W, these full-length slide rails have also been machined to tighter tolerances.

Further changes focused on reducing felt recoil by improving the pistol's lockup. Angled surfaces on both sides of the barrel's locking lug draw the barrel downward and to the rear as the pistol recoils. This increases the distance

## S&W MODEL 4553

**MANUFACTURER:** Smith & Wesson, Inc., Dept. AR, 2100 Roosevelt Ave., Springfield, MA 01102

**MECHANISM TYPE:** recoil-operated, double-action-only, semi-automatic pistol

**CALIBER:** .45 ACP (tested), 9x19 mm, .40 S&W

**OVERALL LENGTH:** 6 1/8"

**BARREL LENGTH:** 3 1/2"

**WEIGHT:** 29 oz.

**WIDTH:** 1 1/8"

**HEIGHT:** 5"

**MAGAZINE CAPACITY:** six

**RIFLING:** five-groove, RH twist

**TRIGGER:** 13 lbs., double-action pull

**SIGHTS:** three-dot Novak, fixed

**ACCESSORIES:** spare magazine, trigger lock

**PRICE:** \$758

the barrel travels during recoil, allowing chamber pressure more time to drop before the slide completes its rearward travel. Delayed unlocking cannot reduce true, measurable recoil, but S&W believes this system will dampen any sharpness or bite that the shooter may perceive in recoil. The 4553 Tactical retains the compound recoil spring placed over a single guide rod below the barrel to help manage the heavy recoil of stout loads. The pistol also keeps S&W's current fixed barrel bushing and flared muzzle crown design.

Like other S&W compacts, the 4553 Tactical employs a Novak LoMount fixed rear sight. This unit provides a good sight picture and, like the rest of the gun, is smoothly contoured to avoid snagging on clothing when drawing from a holster. The long-standard three white dot arrangement is also retained.

The Model 4553 Tactical was fired for accuracy with the results found in the accompanying table, and function-fired with a variety of factory ammunition from Black Hills, CCI, Federal and Winchester—including ball, hollow-point and semi-wad-cutter bullet types. Five-shot groups fired from a sandbag rest averaged about four inches at 25 yards, which is adequate accu-

## ACCURACY RESULTS

.45 ACP Cartridge	Vel. @ 15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
CCI Blazer No. 3568 200-gr TMJ	790 Avg. 10 Sd	2.34	4.11	3.63
Winchester SXT No. 545 230-gr JHP	683 Avg. 8 Sd	3.61	4.92	4.08
Federal H-S No. GM45A 185-gr JHP	838 Avg. 6 Sd	3.04	5.38	4.48
Average Extreme Spread				4.06
Five consecutive five-shot groups from 25 yds., fired from sandbags. Abbreviations: Sd (standard deviation), H-S (Hydra-Shok), TMJ (total metal jacket), JHP (jacketed hollow point)				



cy for a compact carry pistol of this type.

With heavy defense loads the 4553 Tactical performed well with no malfunctions related to feeding or ejection. The test gun fed the fattest hollow points and most semi-wadcutters without complaint. However, it consistently short-cycled with target ammunition. These light loads brought on classic stovepipe jams and some

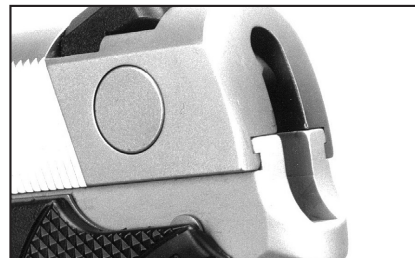
**A second set of guide rails are machined into the recoil spring well. They end in front of the 4553's slide stop recess.**



failed to eject at all. This is no great concern, considering that the gun was not intended for such ammunition. The manual warns against using +P+ loads, so these were naturally avoided. Recoil, while heavy, was manageable, even when fired with some of the heaviest commercial defensive loads available.

In any double-action-only pistol, the quality of the trigger pull is a key factor in accuracy. The test gun had a 13-lb. trigger pull, which is heavy, but typical, for most double-action-only semi-automatics today. Our sample's trigger broke cleanly with no stacking.

Clearly, the 4553 is not meant for a long day at the range. The flush magazine of the 4553 shortens the length of the grip so much that some found it difficult to maintain a good shooting hold on the gun. While this change cleans up the lines of the pistol, and



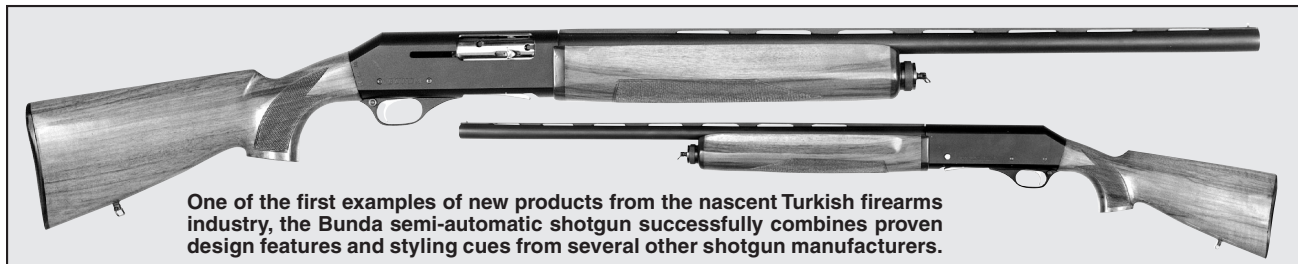
**In its full-down, uncocked position the pistol's external hammer lies flush with the back of the slide. There is no half-cock.**

makes it more comfortable to carry, it has its drawbacks on the firing line.

While the exterior finish of the slide and frame is rather ordinary, the fit of the working parts is a cut above most factory pistols. The Model 4553 will likely be favorably received by law enforcement professionals and other experienced shooters who can appreciate the enhanced durability and small size offered by Tactical Series pistols.

NR

## EAA BUNDA SHOTGUN



**One of the first examples of new products from the nascent Turkish firearms industry, the Bunda semi-automatic shotgun successfully combines proven design features and styling cues from several other shotgun manufacturers.**

**U**NTIL recently, most firearms made in Turkey were military arms license-manufactured in government arsenals. As a result, Turkey is not known as a center for firearms manufacture. However, new modernization and industrialization programs have changed this by encouraging new companies to develop guns for civilian markets. The Bunda semi-automatic shotgun is one of the first products of this effort.



**The Bunda's bolt locks directly to a notch in the barrel extension by means of a single locking lug on the bolt's upper surface.**

By combining proven design concepts with skilled, low-cost, Turkish labor, Seritsan (the manufacturer) reduced development and manufacturing costs while giving the buyer solid value. Therefore, the market goal of the Bunda is to offer a safe shotgun of good quality and solid value at a competitive price. They succeeded, and used only 66 parts to do so.

Styling and design of the Bunda follow successful models from other makers. For example, the checkering and finish on the wood as well as the shape of the buttstock remind one of a Remington Model 1100, while the styling of the fore-end resembles the Beretta 300 series. The lines of the receiver show a strong Franchi influence. Elements from Beretta, Remington and others can also be seen in the gas system and locking arrangements. While not innovative, these proven concepts take out much of the guesswork.

As a field gun with a 12-ga., 3" cham-

### EAA BUNDA

**MANUFACTURER:** Seritsan, Ucler AV. IC. VE. DIS., Ticaret Sanayi Ltd. STI, 902 Sokak N. 52, 35250-Bisaronu/Izmir, Turkey

**IMPORTER:** European American Armory, Inc., Dept. AR, Box 1299, Sharpes, FL 32959

**MECHANISM TYPE:** gas-operated, semi-automatic shotgun

**GAUGE:** 12, 3"

**OVERALL LENGTH:** 47 3/4"

**BARREL LENGTHS:** 19", 24", 26", 28" (tested), 30"

**WEIGHT:** 7 lbs., 4 oz.

**TRIGGER:** single-stage, 6-lb. pull

**SIGHTS:** brass bead front

**STOCK:** black polymer synthetic or Turkish walnut: length of pull, 14"; drop at heel, 2 5/8"; drop at comb, 1 3/8"

**ACCESSORIES:** five choke tubes, choke tube wrench

**PRICE:** \$405.60 (polymer stock), \$413.40 (Walnut)

ber, the Bunda is offered with the following barrel lengths: 19" (slug), 24", 26", 28" and 30". All barrels are equipped with chrome-lined bores and internal, screw-in chokes that are compatible with steel shot. Most models will be supplied with five choke tubes (full, improved modified, modified, improved cylinder and cylinder) and a choke tube wrench. The ends of the tubes are marked with notches to identify the constriction even when inserted in the barrel.

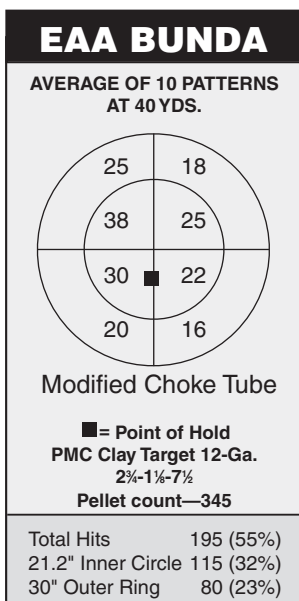
Two stock materials are offered: Turkish walnut and black synthetic polymer. On the model tested, both fore-end and buttstock were of fine-grained, Turkish walnut with a high-gloss finish and cut checkering in a flat diamond pattern with double border. The fluted buttstock has a full pistol grip, no grip cap and a ribbed, black plastic buttplate. Black synthetic end caps on the fore-end double as reinforcements for the weak ends. As a concession to continental tastes, non-detachable, blued steel sling swivels for a 3/4" diameter sling are standard.

The hammer-forged, carbon steel barrel has a matte blue finish and a full-length, ventilated rib with a knurled upper surface to reduce glare. Sights consist of only a brass bead front.

The aluminum alloy receiver and trigger guard have a hard anodized, black, matte finish that highlights the brightly polished steel bolt, shell carrier and trigger. The carrier release button is brass plated. Unlike many other modern, repeating shotguns, the receiver is refreshingly devoid of roll marked scenes and logos.

Magazine capacity of the Bunda is five rounds of 2 3/4" or four rounds of 3" ammunition. An additional round may be loaded in the chamber.

Gas to operate the Bunda's action is bled from two holes in the bottom of the



unloaded Bunda for routine maintenance and cleaning is simple. After unscrewing the end cap on the magazine tube, remove the fore-end by sliding it forward and off. With the bolt forward, pull the barrel out of the receiver and off the magazine tube. Next, pull the operating handle off the bolt. This allows the operating rod assembly and bolt to be pulled forward and out of the receiver. Driving out two steel pins in the receiver allows the trigger assembly to drop out the bottom. Reassembly is in the reverse order. The Bunda comes with a well-illustrated, 18-page manual explaining this procedure.

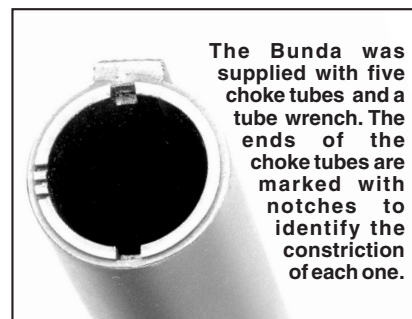
A limited, lifetime warranty will be offered on all Bunda shotguns by the manufacturer through European American Armory, the importer, who will perform all service and repair functions. However, the buttstock, fore-end and rubber O-ring in the gas system are not included. These items are covered by a manufactured and material defects warranty of 60 days (wood parts) and 30 days (rubber O-ring).

The Bunda was pattern-tested using the modified choke tube with the results on the accompanying table. Pattern coverage was good with above average density for modified chokes. Balance and handling of the Bunda were rated as good by all test shooters. Special praise was offered for the excellent sighting plane that was a significant factor in enabling fast, accurate second shots.

Approximately

barrel about 12" from the breech face. This gas impinges on a floating, short-stroke, chrome-plated piston that slides on the magazine tube. This piston pushes on the chrome-plated action bar sleeve connected to dual action bars. The bolt locks directly to the barrel with a single locking lug that cams upward to engage a notch in the barrel extension. There is a single large extractor on the left of the bolt. Ejection is by means of a button on the barrel extension that travels in a groove cut into the left side of the bolt.

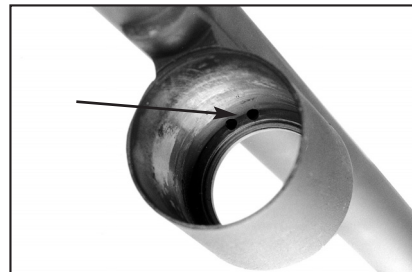
Disassembly of the



The Bunda was supplied with five choke tubes and a tube wrench. The ends of the choke tubes are marked with notches to identify the constriction of each one.

200 rounds of 2 3/4" and 3" target, field, high-velocity and magnum shotshells were fired through the Bunda with three failures to eject.

Perceived recoil was judged heavy with all loads which leads us to suggest that the Bunda be equipped with a recoil pad and/or ports in the barrel as standard equipment. A slightly lower comb should also be considered to reduce recoil on the shooter's cheek when firing heavy loads. The wood-to-metal fit at the wrist where the receiver joins the stock needs improvement. The lower portion of the stock stuck out enough that it grazed the shooter's trig-



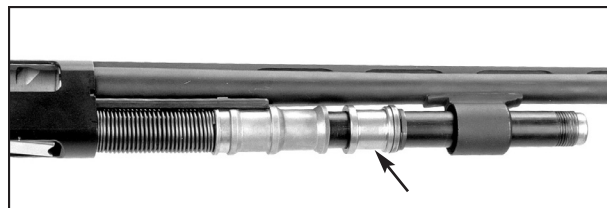
Gas to operate the Bunda's system is taken from two holes (arrow) in the barrel's bottom about 12" in front of the breech face.

ger finger. Although hand-cut, the checkering exhibited a fair number of overruns that indicate the need for a bit more attention to quality control in that area as well.

With its sound basic mechanism, other models beside a field gun come readily to mind—for example an inexpensive sporting clays, trap or skeet gun. Or, perhaps a heavier weight model with a long barrel for waterfowl hunting. A slug model is already offered.

In all, the Bunda shotgun succeeds in delivering high perceived value and quality at an attractive price. With a few minor fixes in the product and its quality control, the Bunda could move from a good buy to a great buy. The operational mechanism is sound and the design features proven. We will undoubtedly see more products in the future from the nascent Turkish gun industry. The Bunda is only the beginning.

RRP



Operation of the Bunda is by gas acting on a floating, short stroke piston (arrow) sliding on the magazine tube. Dual steel operating rods connect the bolt carrier to the action bar sleeve.