KEN WATERS'

Pet Loads .44 Smith & Wesson Special

.44 Russian .44 Special .44 Magnum

The .44 Special equaled or exceeded the legendary accuracy of the .44 Russian. Handloaders pushed the .44 Special's ballistics beyond those of the factory loads, almost to magnum level. Now, some .44 Magnum handloaders load light, Special-level loads, and .44 Special revolvers are once again in production.

SOMEONE ONCE referred to the .44 Special as the *ne plus ultra* of revolver cartridges, and well that could be if the achievements of this venerated round over threescore and fourteen years are considered. Attempting to discourse on such a cartridge called for some temerity. Hopefully, I can find comfort in the thought that many if not most of today's pistoleers have little working knowledge of "The Special," as it was at one time known. For this reason, some background is necessary to a full appreciation of the cartridge and what it has to offer even yet.

Before the Special came along, there was the similar but shorter .44 Russian. Likewise associated with Smith & Wesson revolvers, the Russian cartridge — an American development despite its name — had helped inaugurate a change-over to an inside-lubricated sixgun cartridge wherein the case is larger in diameter than the bullet, allowing the lubricated base section of the bullet to be seated *inside* the case, where its lubricant was protected from an accumulation of dirt, lint, and grit.

Partly for this reason, as well as for its balanced loading, the .44 Russian quickly became recognized as the most accurate handgun round throughout the final quarter of the nineteenth century. Nearly all the famous revolver match shooters of the 1880s and 1890s, such as the Chevalier Ira Paine and the brothers F E and W W Bennett, chose the Smith & Wesson .44 Russian model revolver with six-inch barrel and three-pound trigger pull. Cartridges were loaded with black powder, requiring that they be cleaned after ten shots for the best accuracy, making all the more remarkable the records those men and others established.

Consider the phenomenal shooting performance on July 7, 1888, of Sergeant W C Johnston, Jr, of the Massachusetts National Guard. Using a revolver with fixed sights and factory black-powder cartridges, he succeeded in making a perfect score, firing all ten shots into the 3.36-inch-diameter center circle of the standard American target *at fifty yards!* Not many standard-issue revolvers could better or even equal that today, despite our infinitely better, cleaner-shooting ammunition.

So it was that when smokeless powder appeared on the market and a still better revolver cartridge was sought, designers took the Russian case and simply lengthened it 0.14 inch, keeping all other case dimensions the same and retaining the 246-grain

Ken's .44 Special test gun, a Colt single-action with 5½-inch barrel, is a standard gun with fixed sights — but look how it shoots! This group was made with regular 246-grain Remington factory loads, proving this Colt worthy of use in developing loads for the .44 Special.

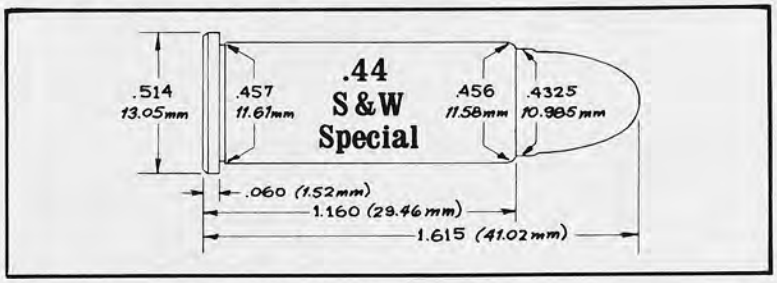
conical lead bullet that had proved so accurate. Thus was born, in 1907, the .44 S&W Special cartridge.

Now right here is where I feel obliged to take issue with the oft-repeated explanation — I don't know how many times I've seen it in print — that the Special's case was made longer because the .44 Russian case lacked the capacity to hold enough *smokeless* powder! That didn't make very much sense to me, so I did some research into loading conditions prevailing at that time. Remember, the .44 Russian had been a black-powder cartridge, regularly loaded with a compressed charge of twenty-three grains of the bulky black stuff. What sort of smokeless powders and charges could they have had in mind that would require *more* space than twenty-three grains of black powder?

My first finding was that nitro powders had been used in England before their adoption here, dating back to 1893. Their load was listed as being 4.5 grains of a smokeless identified as *SV*, a powder I'm not familiar with but one that couldn't have bulked large in that weight. Checking further, I

(Continued on page 46)

Federal's new .44 Special factory load uses this two-hundred-grain lead semiwadcutter hollow-point bullet. The familiar 246-grain lead round-noses are still loaded by W-W and R-P.



.44 S&W Special

LEAD BULLETS

bullet	charge (gr)	powder	velocity (fps)	case	primer	length (in.)	expansion	
238-grain	5.3	Bullseye	797	R-P	R 2½	1.59	normal +	
Lyman	5.3	700-X	772				normal	
429421	7.3	Unique	851	W-W		1.58	normal +	
	10.0	SR-4756	953	R-P			maximum	poor accuracy
	10.5	Blue Dot	788	W-W			normal	
	10.5	WW-630	755				normal	accurate; good in short barrels
	13.5	2400	868		CCI 350		normal +	second best accuracy; most accurate cast-bullet load
	15.0	IMR-4227	801				normal	better suited to long barrels
	15.0	H-4227	824				normal	better suited to long barrels
230-grain	7.5	Unique	858	W-W	R 2½	1.58	near max	bullets sized to 0.4275 inch and relubed with
Taurus	8.0	Unique	937				maximum	Imperial wax. Accuracy improved with
semiwadcutter								both loads
hollow-point	10.0	SR-4756	991				maximum	uniform velocities
	12.0	Blue Dot	802				near max	good load
	11.0	WW-630	758		CCI 350		normal	
	14.5	2400	956				maximum	
240-grain	5.0	Bullseye	733	R-P	R 2½	1.56	normal	original-size bullets (0.4295 in.)
Taurus	5.0	Bullseye	744	W-W			normal	bullets sized to 0.4275 inch, not relubed
semiwadcutter								Accuracy fair
	5.0	Bullseye	768				normal	bullets sized to 0.4275 inch and relubed with Imperial wax; accurate
	5.0	Bullseye	777	R-P		1.43	normal	bullets 0.4295 inch, seated deeper. Accuracy poorer
	7.5	Unique	847	W-W		1.56	near max	
	10.0	SR-4756	954				maximum	bullets sized to 0.4275 inch; very accurate
	13.5	2400	857		CCI 350		near max	
240-grain	4.5	Bullseye	702	R-P	R 2½	1.60	normal	very accurate target load
Hornady	5.5	WW-231	651	W-W			moderate	
semiwadcutter	7.0	Unique	826				normal +	insufficient accuracy
	9.0	SR-4756	866	R-P			near max	
	10.0	Blue Dot	742	W-W			normal +	
	13.0	2400	775		CCI 350		normal +	

These pages in two of Ken's old gun catalogs show two of the better .44 Special revolvers once available. These are strong guns, especially the big Colt New Service. The S&W shown is known as the second model, the one S&W .44 Special with the small barrel lug. Not all the old .44 Specials are as strong as these two are, so it is wise to keep hot handloads out of them, using factory-level loads only.

Colt New Service Target Revolver

SIX SHOTS, DOUBLE ACTION

Price $50.00

General Specifications

CALIBERS: .44 Special, .45 Colt, .45 Automatic, .455 Eley (English).

LENGTHS OF BARREL: 6 or 7½ inches.
LENGTH OVER ALL: With 7½ inch barrel, 12¾ inches.
STOCKS: Checked Walnut.
TRIGGER: Checked.
STRAPS: Both Front and Back Straps deeply checked.
ACTION: Hand finished.
SIGHTS: "Patridge" (regularly furnished) or "Bead." Both non-reflecting; Front Sight adjustable for elevation; Rear Sight adjustable for windage.
FINISH: Full Blued, top of frame stippled to eliminate reflection and glare.
WEIGHT: 7.45 Caliber, 42 ounces.

Deep Checked "New Service" Straps

A superb Target Model of heavy caliber in which every detail of construction is given the most minute and careful attention. Parts are hand finished, inspected and assembled by skilled craftsmen familiar with the particular requirements of accurate shooting. The New Service Target is a de luxe model, each Arm being practically custom built, receiving special attention from first to last and is expertly targeted. A test target initialed by the Colt Pistol range expert who proves the Arm, accompanies each New Service Target Revolver. Personal safety is insured by the COLT POSITIVE LOCK which eliminates all danger of accidental discharge.

THE .44 TARGET

NO matter how many medium or small bore revolvers you may own or how well you shoot with them — eventually you will want the satisfaction that a revolver shooter obtains only with a big bore. Whether you use it in the field or at regulation paper targets — there's a pleasure in placing a big bullet accurately that you never get in shooting a small calibre gun.

Of the big guns the .44 Special is, in our opinion, the finest of them all — its big 246 grain bullet develops an energy of 341 ft. pounds and it is accurate up to a full 500 yards. For target shooting the sharp shoulder bullet is ideal and cuts a clean hole that is easily seen at 25 yards.

The S. & W. .44 Caliber Target Model is the big bore shooter's pet — its action is wonderfully smooth — its sights are strong and easily adjusted and the grip gives one a feeling of confidence.

Like the .38 Special it has a heat treated alloy steel cylinder, locked in perfect permanent alignment with the barrel, and is turned to and locked in the correct position, well before the hammer reaches full cock.

AMMUNITION

ACTION

SPECIFICATIONS

JACKETED BULLETS

bullet	charge (gr)	powder	velocity (fps)	case	primer	length (in.)	expansion	
180-grain Sierra hollow-point	8.0	Green Dot	1,029	W-W	R 2½	1.47	near max	clean-burning; uniform velocities but insufficient accuracy
	9.5	Unique	1,132				maximum	
	10.0	Herco	1,086				near max	
	12.0	SR-4756	1,173				maximum	high velocity; accurate; light recoil
	13.5	AL-7	1,150	R-P		1.54	maximum	
	14.0	WW-630	1,001	W-W	CCI 350	1.47	near max	velocities vary widely; accuracy only fair
	15.0	WW-630	1,056				maximum	very accurate
	14.0	Blue Dot	1,109		R 2½		near max	very accurate
	14.5	Blue Dot	1,168				maximum	second highest velocity; sharp recoil
	17.0	2400	1,194		CCI 350		maximum	highest velocity; large muzzle flash
200-grain Speer hollow-point	6.0	Bullseye	877	W-W	R 2½	1.46	normal	
	8.0	Unique	871				normal	
	9.5	SR-4756	833				normal	good load in short barrels
	11.0	SR-4756	1,083				maximum	
	12.5	Blue Dot	890				normal +	most accurate load; may be best load for light-frame guns
	13.5	Blue Dot	1,052				near max	erratic
	13.0	AL-7	1,114	R-P			maximum	fourth-place accuracy
	13.5	WW-630	973		CCI 350		near max	accuracy only fair
	15.0	2400	972	W-W			near max	very accurate; large muzzle flash
	16.0	2400	1,079				maximum	very accurate; large muzzle flash
240-grain Speer magnum hollow-point	10.2	SR-4756	1,074	W-W	R 2½	1.56	maximum	
	11.0	AL-7	961				maximum	accurate
	13.0	Blue Dot	1,055				maximum	third most accurate; best all-around load in strong guns
240-grain Sierra hollow-point	7.5	Unique	848			1.60	near max	
	8.5	Herco	814				normal	
	10.0	SR-4756	1,081			1.58	near max	fifth-place accuracy; highest velocity with heavy bullets
	12.0	Blue Dot	866				near max	unburned powder; poor accuracy
	12.0	WW-630	881		CCI 350		near max	
	14.5	2400	1,022				near max	accurate
240-grain Hornady hollow-point	7.0	Unique	749	W-W	R 2½	1.60	normal	good, accurate load

Loads designated *maximum* or *near max must not be used in old or light-frame revolvers!*

were used to see whether one was superior to the other in any way. Both came through with flying colors. Stretching was minimal. Trimming was required after the first firing, but only at long intervals after that. Not one hull, Remington or Winchester, failed or had to be discarded for any reason during the tests.

There was a difference in volume between them, of course. For that reason, they couldn't be used interchangeably. Once a powder, bullet, and particular brand of case were combined, they were used in that same combination with all variations in charge weight.

The 8x57mm itself may be hard to fault, but the same can't be said of all the rifles chambered for it. The quality of wartime military models varied from maker to maker. Some, produced toward the end of the war, when the Nazi empire was tottering, are downright dangerous. Many of those actions are so soft that they must have been heat-treated by passing them over a lighted candle — once. Sporters aren't above suspicion, either. A distressing number of between-wars gunmakers in Germany and Austria lavished far more skill and care on their products' exteriors than on their interiors. Exquisitely engraved actions, delicately carved stocks, and lustrous bluing were frequently married to outsized bores and eccentric and sometimes misaligned chambers. Although those I've encountered have been safe enough, they were rough on brass. Accuracy wasn't much to brag about, either.

The point of all this is to underscore the necessity for extra caution when developing loads for an eight-millimeter — *any* eight-millimeter. Although each of the loads in the table appeared safe in both test rifles, anyone intending to duplicate them in his own 8x57mm should reduce charges by at least fifteen percent. Increases should be very gradual, and a wary eye should be maintained for signs of excessive pressures.

At the conclusion of each range session, I recommend rechambering one or two fired cases before they're resized. If any are reluctant about sliding home, if they have to be resized full-length before they'll chamber again, if they stretch too much or bulge inordinately anywhere, there's probably something amiss with the chamber dimensions or its alignment with the bore axis. And if you haven't already done so, it's also a prudent idea to have headspace and bore examined carefully by a competent gunsmith — just in case. ●

.44 Special

(Continued from page 34)

found that two of our earliest American smokeless powders suitable for use in pistol and revolver cartridges were — guess what — Bullseye, introduced in 1898, and Unique, dating from 1900. For the .44 Russian cartridge when adapted to smokeless loading, 5.5 grains Bullseye appears to have been the accepted charge. A bulkier powder known as Du Pont Smokeless Rifle #2, brought out in 1894, was also listed with a load of seven grains for the .44 Russian.

As all of these early smokeless-powder loads gave ballistics similar to the standard black-powder charges while not occupying as much space as twenty-three grains of black powder would, it is difficult to reconcile that claim about the larger .44 Special case being needed to contain smokeless loads.

Original (or at least *old* data) called for a muzzle velocity of 750 feet per second from the .44 Russian with six-inch barrel, whereas the .44 Special was expected to produce 780 feet per second with same bullet and barrel length — a pretty small difference. The Special, though primarily intended as a smokeless cartridge, was also offered with factory loadings of twenty-six grains of compressed black powder. It seems evident, therefore, that with the smokeless powders available in 1907, the Russian case had ample capacity and the .44 Special more than enough. Further proof of this is manifested by the fact that many of the old match shooters continued to use smokeless-loaded .44 Russian cartridges in revolvers chambered for the Special because of the smaller air space remaining over the light powder charges.

In any event, the .44 Special soon proved to be an even better cartridge than the .44 Russian. Perhaps it would be more correct to say that it offered a greater potential because of its increased flexibility in the choice of powders. Simultaneously with the new cartridge, Smith & Wesson had introduced the superior New Century revolver, popularly known as the Triple-Lock, and later added the military and target models. Colt lost no time in chambering their New Service and Bisley revolvers as well as the famed single-action for the .44 Special also, and its use spread, establishing itself as a field cartridge as well.

Ballistics of factory-loaded .44 Special cartridges have remained unusually consistent down through the years. A 1925 Winchester catalog lists velocity at 755 feet per second, as does the 1980 Winchester and 1981 Remington. This ultra-conservative loading, which fails to utilize the Special's spacious case capacity, together with its round-nosed bullet reputed to slip through flesh with minimal tissue disruption, has been the source of much criticism, no doubt adversely affecting its popularity as a hunting and defense round.

What I think hasn't been generally recognized is that (1) the .44 Special as a descendent of the .44 Russian was, at least originally, thought of as first and foremost a cartridge for match shooting; (2) seventy years ago, popularly accepted requirements for a man-stopper cartridge were far less demanding than they are today, especially as to velocity, and for those desiring more power, there were the .44-40 Winchester and .45 Colt cartridges; and (3) finally, reluctance to alter the .44 Special's bullet shape was understandable, it being widely thought of for many years as *the* most accurate sixgun bullet.

So it went along pretty much as before except for a coterie of experimenters working with heavy handloads and more-effective bullet shapes in a determined and generally successful attempt (despite a number of blown-up guns) to transform the .44 Special into a service sidearm of greatly increased power. Happily, that phase seems to have ended with the appearance of the .44 Magnum and the discontinuance of manufacture of large-frame guns in .44 Special (except for the Colt Single-Action Army and New Frontier).

Now the .44 Special has just received its biggest boost in years with the introduction by the Federal Cartridge Corporation of a brand-new factory loading comprising a two-hundred-grain lead hollow-point bullet of semiwadcutter shape. The lighter bullet has enabled an increase in muzzle velocity to an advertised nine hundred feet per second from 6½-inch barrels, and at the same time, bullet effectiveness is abetted by the semiwadcutter shoulder and hollow-point construction. Match shooters always liked the scoring advantage provided by the larger bullets, and now the square shoulder of the new Federal bullet confers a bonus in the form of clean-cut full-diameter holes in targets.

These new cartridges were included in my test program, in which actual velocities were recorded as averaging 830 feet per second from a Colt Single-Action Army .44 Special with 5½-inch

barrel, and nine-hundred feet per second from a Ruger Redhawk with 7½-inch barrel. As these velocities were taken at ten feet from the guns, they are instrumental rather than muzzle velocities, hence are reasonably close to manufacturer's claims. For the nonreloader, this is the most effective .44 Special factory ammo. Handloaders who use these cartridges will appreciate their improved performance, after which they'll have a nice supply of fresh new brass for reloading.

Let's see now what the .44 Special has to offer handloaders in the way of physical properties, dimensions, and ballistic realities. This is a rimmed, straight-sided case 1.16 inches long, tapering only slightly from base to mouth. Diameters taken from unfired factory cartridges are as follows (in inches):

make	rims	bases	mouths
Winchester	0.506	0.4540-0.4545	0.4540
Remington	0.508	0.4550-0.4555	0.4530
Federal	0.509-0.510	0.4540-0.4545	0.4530

Overall loaded-cartridge length with 246-grain round-nose bullet allows a tolerance of from 1.560 to a maximum of 1.615 inches, enough latitude to accommodate a wide variety of bullets. In some instances, cartridge length is considerably less than 1.56 inches, such as when the shorter 180 and 200-grain bullets are used. This is perfectly acceptable, because it *doesn't* result from deeper seating of bullets.

All three available makes of empty, fired .44 Special cases were weighed, then filled with water to the base of a 240-grain bullet seated to an overall cartridge length of 1.56 inches, and then reweighed. Subtracting the empty-case weight from that of the water-filled case gave us the real capacity in grains of water. This is *not* a charge weight or even a powder-capacity weight, but it does indicate comparative internal capacities of the various cases, from which we are better able to judge powder and load potentials.

Empty Remington R-P cases (still containing fired primers so as to hold water) weighed an average 93.7 grains with a net water weight of 18.3 grains. Winchester brass was heavier, weighing 111.5 grains with a resultant decrease in capacity to 17.8 grains. Heaviest of all, the new Federal cases weighed an average 116.0 grains, holding 16.0 grains of water. These were all modern solid-head cases, about which I'll have more to say further along.

A few details now concerning the

gun barrels and cylinders in which these cartridges will be fired: it's interesting to note that whereas references from the early 1900s listed the groove diameter of .44 Special (and Russian) revolvers as 0.429, by the year 1929, the Lyman *Ideal Handbook* was showing it as 0.427 inch, and this continued for many years. Then we find the first *Lyman Cast Bullet Handbook* listing 0.429 inch, as does the more recent *Lyman Pistol and Revolver Handbook*. The *NRA Handloader's Guide*, in listing loads for the .44 Special, states that an S&W pressure barrel with groove diameter of 0.4308 inch was used, along with a 1950 Model S&W revolver having a groove diameter of 0.4292 inch. Colts have long held to a 0.427-inch groove diameter.

From all this, it becomes apparent that groove diameters of .44 Special barrels have varied with both the make of gun and period of manufacture. Currently, it is my understanding that the official standard for the caliber is 0.4290 inch, except for Colts, whose specifications are said to call for 0.4270 ± 0.001 inch. I've slugged and miked my .44 Special Colt single-action's barrel, obtaining an actual reading of 0.4265 inch. Diameters of chamber mouths measure 0.432 inch on this gun.

Similarly, rifling twist appears to have varied from sixteen inches to twenty inches with different makes in the past but seems now to have been standardized at twenty inches. The Colt barrel has six grooves with left-hand twist, one turn in twenty inches.

These variations point up the importance of finding out what you are working with before getting down to the actual reloading. Most particularly, the .44 Special handloader should determine what his gun's actual groove and chamber-mouth diameters are. The latter should be at least as large as the barrel groove diameter and any bullets it is planned to use.

A *most* important variable in this caliber, of which handloaders should be aware, is gun strength. In warning that we must tread lightly with old or top-break revolvers and those foreign-made replicas produced before World War Two, I regret that I'm unable to draw any positive lines of demarcation separating the strong and not-so-strong guns, either by serial numbers or dates of manufacture. Hence, it behooves handloaders to exercise the utmost caution.

Dealing wholly in generalities, I consider the Colt New Service, Shooting Master, and Single-Action Army, including Bisleys, to be among the stronger models, as are Smith & Wesson 1926 and 1950 Models. While the fine old S&W New Century Triple-Locks and military and target guns probably have adequate strength for all my loads, except possibly those labeled *maximum*, their value is such that it would be foolhardy to risk the use of heavy loads in them.

Today's little Charter Arms Bulldogs of modern steels will most likely be limited by the recoil of heavy loads rather than strength factor *per se*. As noted in the accompanying table, loads designated *maximum* or *near maximum* should *not* be used in old or light-frame guns! In this connection, I'd like to point out that my use of descriptive terms such as *maximum* and *near maximum* have reference to my findings of suitability, including pressure indications based upon micrometer measurements of fired cases, but are not limited solely to such observations, other considerations — such as ease of fired-case extraction, primer appearance, tendency toward bore leading, and disproportionately small gains in velocity — having been assessed as well.

On the plus side, large-frame .44 Special revolvers possess an advantage over similar guns in .45 Colt by virtue of the fact that cylinders of equal diameter have less steel removed in boring, leaving thicker chamber walls. Best consider this as a safety margin, however, rather than a license to increase loads.

Earlier, I promised to go into the matter of case design. Write-ups on the .44 Special of not so many years ago, when balloon-head cases were still rather common, usually went to some lengths to point out the difference between that now-outdated construction and the solid-head cases now standard. Today, unless you have a stock of old ammunition on hand, it's doubtful that the old-style cases will be encountered. Still, it's good to recognize and understand the difference.

A balloon-head case is easily recognized by looking down the inside of an empty hull, at the base of which will be seen a protruding lump around the flash hole. Solid-head cases appear flat on the inner bottom because of their thicker base construction. The significance of this is that while the old balloon-head cases have a larger interior capacity and thus produce lower chamber pressures with a given load, modern solid-head cases with their thicker brass bases are stronger. In actual practice, the handloader working with modern cases should reduce loads from one to one and a half

grains if he's using loading data from old sources.

My recommendation to anyone starting out to load for the .44 Special would be to pass up any of the old-style cases and obtain fresh modern brass. Powder capacity of the new cases is greater than necessary. With our current powders, there is no longer any need for the extra capacity of the old balloon-head brass. As a further suggestion, in view of the considerable difference in case capacity between the three makes, I'd settle on a single brand for all loads. At the very least, they should be kept separate and not mixed.

Following my standard procedure for judging relative pressures of handloads by comparing micrometer-measured base diameters of fired handloaded cases to those of fired factory rounds, a policy decision was reached whereby loads that produced 0.001 inch additional case expansion (that is, beyond factory-case expansion) were considered *near maximum,* and above that *maximum.* At 0.0015 inch additional, a halt was called to load increases. The effectiveness of this system of monitoring pressure increases is evidenced by the twin facts that at no time was it necessary to use force in extracting fired cases, nor was even so much as a single case lost throughout the entire series of trials.

Powder selection for the .44 Special proved to be fully as important in obtaining the finest possible accuracy and controlling pressures as it has long been thought to be when seeking higher velocities. Although a full dozen powders were found acceptable in at least some applications, a number of others were tried and discontinued, either as inefficient or for some reason objectionable.

Bullseye and Du Pont 700-X were the fastest-burning powders used, IMR-4227 and H-4227 the slowest. AL-8 was erratic, and when loads of H-110 were increased to where burning was uniform, indications of too high pressures appeared. Neither powder gave acceptable accuracy, and both were accordingly dropped. In fact, if there was a lesson that grew out of my experiments with the slower-burning powders, it was that velocities fall off quickly as loads are reduced. Below about 800 to 850 feet per second, they lacked accuracy as well, and were in no case satisfactory when paired with the lighter 180-grain bullets.

On the other hand, powders with faster burning rates than Unique didn't seem suited for use with jacketed bullets. As expected, such powders as Bullseye, 700-X, and WW-231 were at their best with lead bullets, but even so were sometimes disappointing.

Of course, old reliable Unique did its duty and rather well with a few exceptions; Herco somewhat less so. Neither was outstanding in any particular way, but both showed themselves adaptable to either jacketed or lead-bullet loads.

Notice that we're approaching the "middle ground" of burning rates from both extremes, and that is precisely where I obtained my best results. Whether judged from the standpoint of accuracy or velocity, powders of medium burning rates, including some shotgun powders, appeared most satisfactory, burning cleaner than slower powders and giving less muzzle flash and lighter recoil.

Blue Dot and 2400 gave me my smallest groups, followed by AL-7 and SR-4756. My choices for developing higher velocities without sacrificing accuracy would be 2400, SR-4756, Blue Dot, and AL-7, in that order, with Unique close behind with the lighter bullets.

Admittedly, all wasn't gravy. Blue Dot seems inefficient as to velocity in loads below eleven grains, requiring either the added resistance of heavier bullets or better-balanced charges. Note, for example, the superior velocity developed with thirteen grains of Blue Dot and 240-grain Speer bullets as compared with 12.5 grains with 200-grain Speers. At the same time, 12.5 grains clearly demonstrates a better balance with 200-grain bullets than does a load with one more grain.

SR-4756 produces large gains in velocity as loads are increased, along with readily noticeable indications of higher pressures, as does AL-7. My primary objections to 2400 are its large muzzle flash and increased recoil effect. I don't wish to use anything slower-burning in this cartridge.

Although I am aware that WW-630 has been discontinued by Winchester, it was my thinking that considerable quantities of it must still be on handloaders' shelves, and it has shown itself to be such a fine powder generally for the .44 Special that I decided to include it.

Target shooters sticking with cast or swaged lead bullets and desiring to use light loads can't do much better than 4.5 grains of Bullseye, in my experience. This is also a good powder choice for light, short-barrel guns.

A single all-purpose powder for the .44 Special? I'm afraid I'd have to

pick Unique. But no, thanks; I'd rather have at least two, and now I'm pretty sure my choices would be Unique and Blue Dot.

Powder economies are both possible and practicable if the reloader will forgo all thoughts of maximum velocities. Seven and a half grains of Unique drives a 240-grain lead bullet at about the same velocity as 13.5 grains of 2400, while giving the shooter 415 more loads out of a one-pound canister.

Primers: note from the accompanying table that only two kinds of primers were used in this test series: Remington 2½ standard Large Pistol for the readily ignited powders and CCI 350 Magnums for the slow-burners and ball powders. This is not to say other makes wouldn't do just as well. In all probability, they would, maybe even better in some guns and with some powders. Repeated trials with an expenditure of several hundred more rounds (and too much more time) would be needed, however, to establish that, besides which I'm well satisfied that my choices were good ones. Not once did I have a misfire or hangfire, and even in the experimental loads where WW-630 ball powder was paired with standard Remington primers, there was no indication of inadequate ignition. Nor can I fairly blame the primers for any of the poorer test results.

Bullet selection for the .44 Special is likely to be controversial. All too often, load-data sheets — especially the older ones — listed mostly lead-bullet loads to the virtual exclusion of jacketed bullets. I consider that misleading and have given jacketed bullets equal time in this study, because although it is ideally suited for use with cast or swaged lead bullets, this cartridge is versatile enough to handle both types well, with the proper powder charges.

Becoming more specific, low to medium-velocity loads are the province of lubricated lead bullets. Note that my lead-bullet loads cover a velocity range from 650 to 1,000 feet per second. These are all plain-base bullets of varying tempers, the cast Lyman bullets having greater hardness than the swaged Taurus and Hornadys. Accuracy deteriorated rapidly when velocities exceeded a thousand feet per second with these bullets, and barrel leading occurred. If speeds above a thousand are sought with lead bullets, they should be cast fairly hard and better still, a gas-check design.

My own preference would be for jacketed hollow-points and soft-points in loads with velocities above about

950 feet per second, as they can be driven at the higher speeds without loss of accuracy and with no concern for barrel fouling. Only increasing pressures and gun strength determine their upper velocity limits.

On the other hand, jacketed bullets should *not* be used at speeds below those of factory cartridges. I consider my load of seven grains of Unique with 240-grain Hornady JHP to be the absolute minimum. The best accuracy was achieved at velocities of from 850 to 1,050 feet per second. The lighter 200-grain Speer hollow-points can be loaded to higher velocities and with less recoil than heavier bullets, and they would be my choice for hunting bullets in the .44 Special. But for target work and practice shooting, I'll take the lead bullets.

The Lyman 429421 Keith-style semiwadcutters weighed 238 grains, denoting somewhat more than usual hardness, and were sized to 0.4275 inch. In all but two loads with these bullets, accuracy ran from acceptable to excellent.

Initially, the softer swaged lead Taurus bullets, which measure 0.4295 inch in diameter, refused to group as well as the cast bullets. Then, thinking about the Colt's groove diameter of 0.4265 inch and the good results turned in by those 0.4275-inch cast bullets, I decided to make an experiment. One part of a box of Taurus 240-grain semiwadcutters was sized down 0.002 inch to 0.4275 inch in a Lyman 450 sizer *without* lubricant. A second portion was similarly sized down and then relubricated by hand, applying a light coat of Imperial case-sizing wax. The third group was left exactly as received; that is, 0.4295 inch in diameter, coated with Taurus lubricant. Bullets of all three groups were then loaded with the same five-grain charge of Bullseye, Remington 2½ primers, and the same crimp at 1.56 inches overall length.

While group size with the sized-down but *not* relubricated bullets wasn't substantially better than that with "as issued" Taurus bullets, those that had been sized down to 0.4275 inch *and* relubed cut group size in half! This same experiment was then tried with 230-grain Taurus hollow-point bullets using both 7.5 and 8.0 grains of Unique. Again, groups tightened significantly, leading me to conclude that in the smaller-bore Colts at least, bullets should be no larger than 0.4275 inch. Smith & Wessons, with their larger bores, should have no trouble with 0.4295-inch bullets.

When this same procedure was tried with the Hornady swaged lead bullets, results were poorer rather than better. I believe this can be explained by the fact that in sizing down the Hornady bullets, their lubricant-retaining knurled surface is removed.

A final test involved seating Taurus bullets deeper in cases without making any other changes. While velocity increased slightly, accuracy grouping was poorer, and there were indications of greater pressure, hence this should *not* be tried. Bullets more than about 0.001 inch oversize also produced evidence of increased pressures.

Handloading practices with the .44 Special are much like those one would use with the smaller but similarly shaped .38 Special. A set of the new RCBS dies adjustable for either .44 Special or .44 Magnum cartridges functioned flawlessly, sizing cases down to where neck tension played a major role in holding bullets securely with less dependence on the crimp.

All cases should be of the same length to ensure a uniform crimp. And in this connection, I was interested to note that no case trimming was necessary, despite reuse of cases up to fifteen times. As a matter of fact, all cases were shorter than the standard listed trim-to length of 1.16 inches.

At least some crimp is needed, both to ensure bullet retention in cases against the force of recoil and to provide more-complete and uniform powder burning. My practice was to apply a firm but not overly hard crimp, which could be turned in at almost any desired point on the bullet. It was no trick to adjust the RCBS seater die to accomplish this, and no problem was encountered in seating and crimping bullets in a single die of this three-die set. Bullets have been fully seated to depth before crimping takes place.

Because excessive belling and crimping of cases were avoided, not even a single case was lost with a split neck. There was *no* case failure, period! Nor was there any trouble with bullets working forward out of cases because of recoil inertia, putting to rest some of the old complaints of years past.

Maximum overall loaded-cartridge length for the .44 Special has been listed as 1.615 inches, but for most 240-grain bullets, I've found a length of from 1.56 to 1.58 inches to be best. Incidentally, most factory-loaded .44 Special cartridges also have an overall length of 1.58 inches.

Before Federal's new cartridge, .44 Special factory loads have always been notoriously underpowered. From my 5½-inch Colt barrel, 246-grain R-P rounds chronographed an easy-going

732 feet per second at ten feet from the muzzle, and Winchesters a mere 707 feet per second. As previously noted, the new Federals averaged 830 feet per second.

But while these velocities are easily exceeded with reasonable handloads, any temptation to try to "magnumize" a .44 Special should be sternly repressed. Magnum loads must rightfully be reserved for magnum sixguns, many more of which are available than are good .44 Specials.

The Special, both gun and load, is easy to shoot and shoot well. Unlike the hard-kicking .44 Magnum, it is a cartridge that most all handgunners of some experience can handle. Even though .44 Special cartridges can be fired in .44 Magnum revolvers and single-shot pistols, I believe there is a need for more guns chambered specifically for the Special. I know I wouldn't want to give up mine.

All models of the Colt New Service are strong enough for Ken's maximum loads. Colt Bisleys, particularly Bisley target models in .44 Special, are rare. Though strong enough, they should be shot, if you must, with milder loads. Parts are virtually unobtainable. Older Colt Single Action Army models are all in the smokeless-powder serial range, therefore safe. Note, however, that some current-model parts do not fit old models. It is probably best to use milder loads in prewar guns for this reason. Bisley and old SAA models are sought-after collectors' items.

Four distinct models of Smith & Wesson were built for the .44 Special: the first model, or Triple-Lock, had the full ejector-rod shroud on the barrel and the famous third locking point in the yoke. These models are not judged strong enough for Ken's top loads. There are a number of parts unique to this model, almost impossible to find. Elmer Keith used heavy loads in these guns, but parts were available then! The Second Model has the small lug on the barrel; see Ken's catalog picture over the load table. Up to serial number 16,600, the cylinders were not heat-treated, and the same load cautions apply as for the Triple-Lock. Over 16,600, all Second Models are safe for Ken's top loads.

The Third Model (or Model 1926) reintroduced the full ejector-rod shroud but not the yoke lock — it is safe for top loads. The last S&W .44 Special was the 1950 Model, also having the full ejector-rod shroud like the 1926 but a ribbed barrel and low-spur hammer; it is safe with top loads. All these models are "collectible," especially the ones with original target sights. Prewar models after the Triple-Lock have some parts that are hard to find. Some gunsmiths have made up .44 Specials by rechambering and rebarreling .38-.44 models. It does have the big .44 frame and cylinder, but I do not know that those cylinders were heat-treated. I therefore suggest using milder loads in these rebored Smiths.

There is a Spanish copy of the Triple-Lock, the TAC. It is nicely finished, but because of its unknown metallurgical qualities and value as a collectible, the TAC should not be used as a shooter. The Charter Arms, with its light frame, is tolerable only with milder loads. Any gun chambered for the .44 Magnum is safe with top .44 Special loads, although the somewhat greater case-mouth-to-rifling distance may slightly detract from performance.

The .44 Russian cartridge chambers in Special and Magnum guns. To my knowledge, all *Russian cases were balloon-head, and it would be prudent not to try to shoot them in any gun. Such ammunition is at least forty years old and may be unsound for a variety of reasons. — Dave LeGate* ●