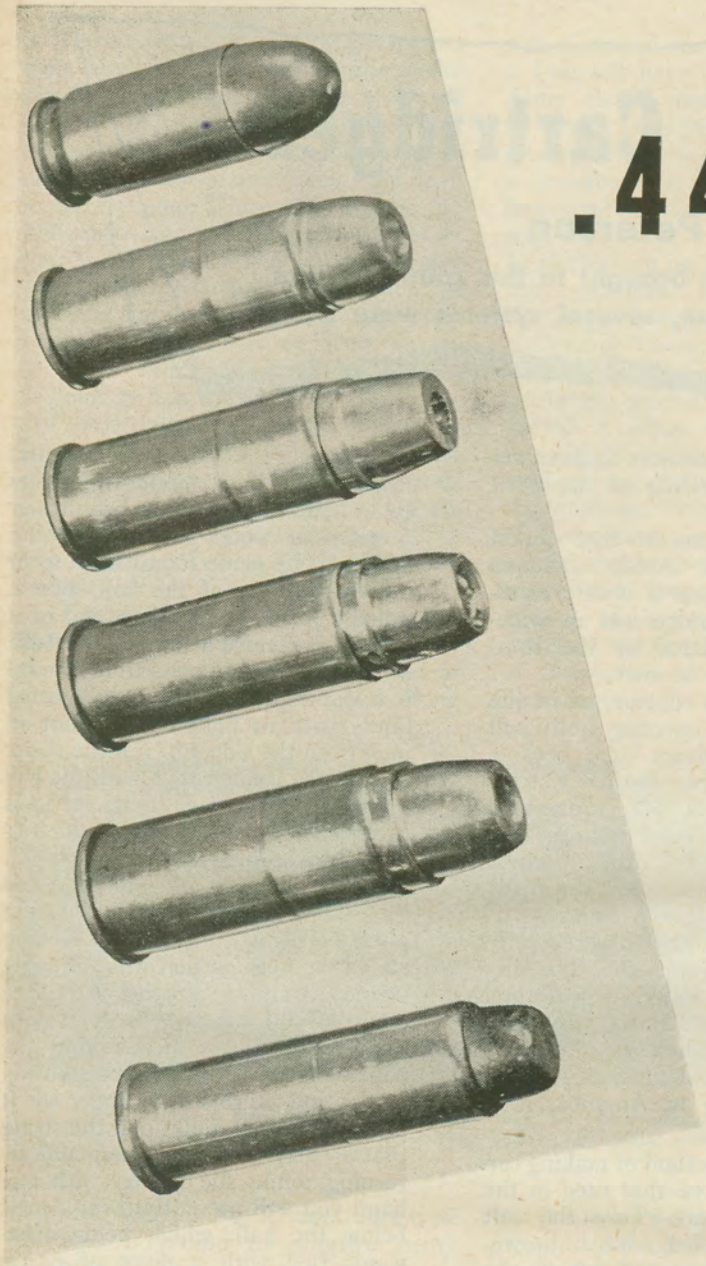
.44 Dynamite



Representative .44 Special handloads, flanked at the top by a .45 Colt auto cartridge and, below, a .357 Smith & Wesson Magnum load. All of the .44 Specials are loaded with hollow-point bullets

Most popular .44 Special revolver ever made is this Smith & Wesson Model 1926 military. Model 1950 arms are similar, except for improved hammer

By John W. Zlatich

Here's a revolver cartridge which can be loaded to out-perform the much-touted .357 and will deliver a bigger wallop than the .44-40 Winchester rifle!

THE .44 SMITH & WESSON SPECIAL, properly loaded, can be the deadliest handgun cartridge in the world. Modern smokeless rifle powders like Hercules Unique and 2400 boost the killing power and long-range accuracy of this cartridge into the low-powered rifle class and make the big .44 almost twice as deadly as its nearest competitor, the highly-praised .357 Smith & Wesson Magnum.

The Magnum factory load far outstrips its competitors in every respect. Compared with it, the factory-loaded

.44 Special with a 246-grain bullet at 770 feet per second is like a sneeze against a hurricane. But weight for weight of bullet, the handloaded .44 can be made to drive projectiles faster than the Magnum can, with about half the chamber pressure. Calculated muzzle energy is boosted in the .44 to a fabulous 1,000 foot pounds, using a 173-grain altered Keith-Ideal bullet driven at 1,600 feet per second. The Magnum's top factory load of 1,450 feet per second with a 158-grain bullet registers a foot-poundage of 690. Pressures of .44 handloads run from 18,000 to 20,000 pounds per square inch, against 35,000 plus for the Magnum.

Accuracy equal to hitting a ham at 250 yards is easily possible, with a trajectory comparable with that of the old Winchester .44-40 rifle. Hand-fired groups are on record measuring two inches, center-to-center, at 50 yards, and four inches, center-to-center, at 100 yards. The .44 Special has a reputation for short-range target work that is unsurpassed. Many record groups, some of them still standing, have been shot with it. Germany's Hermann Goering once had a matched pair of .44 Special Smith & Wesson revolvers which he fired a great deal and counted among his most prized possessions.

All the power inherent in the .44 Special cartridge can be harnessed and put to work in any good revolver manufactured since World War I. There is nothing mysterious or magic in nearly doubling the power of this cartridge. Any intelligent handloader can do it easily and with safety if he watches a few things carefully as he goes along.

Pressures in .44 high-power handloads range higher than normal, and extreme care must be taken to avoid going over the safety limit of one's revolver. Colt and Smith & Wesson guarantee their .44 revolvers only with factory loads, making them comfortably safe with ammunition which is loaded to around 12,000 pounds per square inch or less. Actually, both makes of revolver are safe with pressures well in excess of 16,000 pounds, but neither manufacturer will state how much higher. They are afraid someone will load up to the actual rupturing point just to eke a few extra foot-seconds out of their loads. This is quite a logical fear considering some of the things uninformed handloaders have been known to do.

Higher velocity handloads will develop pressures approaching 20,000 pounds. Many thousands of rounds at this level have been fired in both makes of revolver without the least difficulty —provided all conditions were perfectly under control! But slip in a variable like an oversize bullet and a revolver will end up with no cylinder or top strap on it and the shooter minus a finger or two.

Not all revolvers chambered for the .44 Special cartridge are safe with high-power loads, even when extreme care has been taken to get everything in the reloading process just right. The metal itself is too weak. No Colt single-action numbered below 160,000 should be fired with hot handloads under any circumstances. These arms were designed to hold blackpowder pressures only. Frontiers numbering between 160,000 and 340,000 can be souped up a little, but not to exceed 15,000 pounds, at which pressure a good charge of Hercules Unique or 2400 powder will give appreciably better than standard ballistic performance. Smith & Wessons numbered below 16,500 must also be restricted to a diet not to exceed 15,000 pounds.

The only propellants widely used for 'magnumizing' the .44 are Hercules Unique and 2400. Both were designed for mid-range rifle ammunition firing cast bullets at medium velocity, and have a burning speed/pressure ratio about halfway between the conventional pistol powders and coarse-grained rifle powders like HiVel and Dupont Improved Military Rifle 3031 and 4320.

Unique is a bit more economical than 2400, as lighter charges may be used for much the same results. Though absolute peak performance cannot be achieved with Unique, it will give all the power and recoil the average man wants. If maximum performance is not desired, but merely a substantial increase over factory ammunition, Unique is the powder to use. It will drive a factory bullet up to 1,000 feet per second or better with normal pressures, compared with a 'standard' 770 feet.

Hercules 2400 powder is the one for maximum performance. Much heavier charges are required than with Unique, sometimes double for a velocity gain of 100 feet per second. But—wasteful though it is—it gives us the velocity we are after, the very highest consistent with safety. Pressures are seldom erratic with 2400 and can be calculated with a reasonable degree of accuracy. This is the powder experienced .44 handloaders use for squeezing the last available foot-second out of their guns. It is almost tailor-made for the purpose. Being a rifle powder, it requires higher pressures than a revolver develops to burn cleanly, and unburned grains are left in the bore, indicating incomplete combustion. What does burn, however, does the job well. Count on 2400. It will deliver the goods.

Never, never, use pistol powders to raise velocities above normal. Bullseye and Numbers 6 and 5066 increase pressures alarmingly when the standard 15,000-pound level is exceeded, and without a material gain in performance. On the other hand, 'heavy' rifle powders like HiVel, 4064, and 4895 won't burn at revolver pressures at all. The bore is left choked with unburned powder grains and the bullet barely clears the muzzle, even when compressed charges are used.

The weak link in the chain of .44 components is the cartridge case. Constructed with a semi-balloon type head, it is thin and relatively weak. Such a case is not at all adapted to high pressures, and will occasionally fail under continued firing with heavy loads. Most often this failure takes the form of an enlarged primer pocket, detected by the old primer being very easily punched out or by a new one seating with almost no resistance at all. Once in a great while the head itself will split, letting out a wisp of smoke. This won't hurt

Do hollow-point bullets expand? Comparison with a ten-cent piece shows that they do. The bullet on the left is the 235-grain Thompson, shown in front and back views. The bullet at right is the Saeco No. 7 hollow point. Both were fired into bales of soaking wet newspapers at velocities of approximately 1,200 feet per second

you but it will announce the retirement of another hard-to-get case.

After every firing with full-power loads, decap your cases and examine the primer pockets carefully. Scrape out the gritty primer residue so you can see bare brass all around. Look for cracks in the web or small bits of metal broken from this thin partition of brass surrounding the flash hole. Sometimes part of the web is blown away, enlarging the flash hole greatly. The following loading in such a case would permit a much hotter primer explosion to strike the powder charge, causing over-ignition and high pressures. This has been known to burst revolver cylinders.

It is bullet design as much as high velocity that makes the .44 such a deadly arm. No other revolver, and that includes the .357 Magnum, has had as much bullet research and development done on it as has the big .44. Slugs weighing from 173 to 280 grains, to be driven at velocities of 1,600 feet per second down to 600, are to be had from various mold makers. And development is still going on.

In choosing a bullet for one's own .44, he should first decide on what type of shooting he wants to do and then send to the mold companies for sample bullets. All mold makers gladly send cast bullets, unsized and unlubricated, upon receipt of six cents in stamps to cover cost of mailing.

At striking velocities of 1,000 to 1,200 feet per second, some hollow-point bullets will expand to as much as .8 or .9 inch in diameter, almost quadrupling their wound-producing areas and will penetrate deeply after flattening into leaden pancakes. On the other hand, solid bullets in sharp shoulder wadcutter and flat-nosed semi-wadcutter forms will penetrate to an astounding degree in large game animals with great shocking power. One instance on record reports a Keith-Ideal 250-grain solid slug penetrating the chest cavity of a 775-pound elk the long way, entering in the center of the chest and coming out at the left rear of the rib cage, cutting two ribs on the way out.

Flat-nosed bullets, coupled with sharp shoulders, cut as clean a hole in animal hide as they do in target paper and deliver a short-range shocking punch just as hard for most game animals to withstand. Hollow-point bullets tear large, lacerating, surface wounds of ghastly proportions, while the same bullet cast solid will penetrate to and beyond the vital organs of any thin-skinned game animal alive.

One big black mark against .44 Special revolvers is the bore-diameter variance in guns of different ages. It wasn't until recent years that diameters were standardized. Some Colt barrels manufactured between 1873 and 1942 vary from .424 to .429 inch, while Smith & Wessons from 1907 to date range from .427 to .431 inch. Veteran .44 shooters agree that sizing bullets to not over .001-inch over groove diameter is the best practice. Before this can be done you've got to make certain of the diameter of your particular arm.

Smith & Wessons manufactured prior to World War I, the New Century Triple-Lock models, have been found to mike to as little as .427 inch. Bullets for these must be sized accordingly.

Later Smith & Wessons, particularly the M1926 Military and Target models, and the 1950 models, mike a uniform .430 inch. Accepted sizing diameter for these is .431 inch.

In this 'family portrait' are shown four .44-caliber hollow-point bullets and a few expanded slugs, comparing relative sizes before and after impact. More accuracy and hitting power can be packed into the .44 Special than any other hand-gun cartridge. Killing power and trajectory are better than with .44-40 rifle

Colts dating back to the 1920's, the New Service and Shooting Master line, will mike a uniform .4265 to .4275. Bullets for these are customarily sized to .429 inch. The same applies to Frontier single-actions manufactured during the same period.

Older Frontiers must be individually measured to find the right sizing diameter.

Most .44 Special bullets simply won't size down to .425 inch without being slugged out of shape or having the crimping and lubricating grooves smeared off. If your revolver has one of these tight bores and cylinders, write to your favorite mold maker and ask for a mold casting sub-diameter bullets that can be sized properly for your gun. These can sometimes be supplied out of stock.

Many revolvers firing the .44-40 Winchester cartridge have been and are being converted to .44 Special by the simple expedient of exchanging cylinders. Modern revolvers in both calibers have identical bore diameters, and no harm will result from the switch. But frequently very old guns, particularly Colt Frontiers, have been so converted —with an occasional burst cylinder being the result. The root of the trouble is usually traceable to an undersized bore. Many old .44-40's were bored to as little as .424 inch, and will offer just too much resistance to a slug sized a full .429 or .431 inch. Such a gun, while it may not be seriously damaged by such ammunition, will be incapable of really good accuracy because the bullet will often be too deformed in the squeezing-down process to fly true.

Another interior dimension to check before touching off a 1,200-foot per second load is the diameter of each chamber mouth in the cylinder. In older guns they will sometimes be quite a bit larger than the groove diameter of the barrel, which can increase pressures of any given load fired in them. Most soft bullets will upset to the full diameter of the chamber mouth before the bullet moves forward into the rifling, and if the chamber mouth is materially oversize the bullet will have to be squeezed down to bore diameter ahead of 15,000 to 20,000 pounds of rapidly mounting gas pressure, a process that has wrecked more than one good revolver.

If chamber mouths are too large, get a new cylinder before firing anything but factory ammunition. If they are too small, which occasionally is the case, they can be reamed to proper diameter with little difficulty. Test your cylinder by trying to push a sized and lubricated bullet through each chamber mouth by

(Continued on page 68)

.44 Dynamite

(Continued from page 36)

hand. If a push with a finger will slide it through with fairly stiff resistance, the dimensions are all right. But if the bullet won't enter the mouth at all, or if it falls through of its own weight, an alteration of some sort will have to be made. Better yet, cast a bullet of pure lead and upset it in the cylinder, and measure it with a micrometer the same as you do when measuring the diameter of the rifled bore. It should be not more than .002-inch larger than groove diameter.

Leaded bores often crop up in revolvers firing high-velocity ammunition, due in part to greatly increased friction and higher temperatures developed by larger powder charges. Some bullets perfect for normal-velocity firing will lead badly when their acceleration is doubled, while others will actually have their bases melted by the hot blast of powder gases and solder parts of themselves to the bore.

Most of the time the trouble can be traced to oversized bullets, rough bores, too hot a load of pistol powder, or improper lubrication.

If the leading is due to the lubricant, powdered graphite added to normal bullet lubricant may do the trick. This can be mixed at home over a fire, or already mixed lubricant can be purchased from a number of producers. All are good.

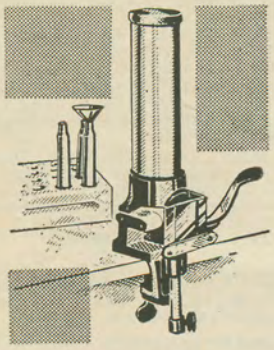
If the bore is rough, lapping will have to be resorted to. This, too, can easily be done at home. The bore must be polished to mirror smoothness, removing all traces of pitting or machining to afford the bullet free passage with a minimum of abrasion. One to five thousandths inch of bore surface is removed by this process, and a recheck of diameters for sizing will have to be made. The cylinder-groove relationship may be disturbed, and the new diameter may be greater than the diameter of the bullet as it leaves the mold. All sorts of complications can arise from this, so resort to it only when all else has failed.

All bullets intended for high-velocity shooting should be cast hard. Straight unsoftened type metal is fine, as is lead-tin 10 to 1 and lead-tin-antimony 15-1-1. Unless bullets are quite hard, they will expand greatly under gas pressure when they bridge the gap between cylinder mouth and bore throat, raising pressures excessively. This means the throat of the barrel has to squeeze these widened bullets back down to proper shape for passage through the bore, and this can delay the bullet enough to cause pressures to skyrocket.

Hollow-point bullets, however, must

be cast soft if they are to expand at any distance from the muzzle. A good mixture for these is lead and tin twenty-to-one. This alloy will enable bullets to expand at velocities as low as 900 feet per second, corresponding to a hit at about 200 yards range, yet will hold together perfectly at striking speeds of 1,200 feet per second. Because of cylinder-barrel expansion, hollow-point bullets cast this soft are definitely harmful to a good revolver, and their use should be restricted to hunting or defense only.

One final item remains in this discussion of magnumizing the .44 Special: it's fierce recoil. Normally, the kick is about that of a .45 auto rim cartridge, a little less than that of the .44-40, and the .45 Colt. But when a 250-grain bullet is dispatched at 1,100 feet per second, the kick is about double that of the two latter cartridges.



Most shooters will have special hand-filling grips made that distribute the recoil through the whole hand and arm, and not to the palm and thumb alone. If you have these, recoil is a strong push felt all the way to the shoulder; if ordinary factory stocks are used, it is a sharp, tearing jab at the web of flesh between the thumb and heel of the hand. Some shooters find this so painful they have to give up after a half-dozen shots. The author and several of his associates can fire fifty at one session with normal grips, but no more than that. With special grips, however, two hundred can be fired at a stretch with no more than normal arm and hand fatigue.

The .44 Special is a man's cartridge from one end of the shooting scale to the other. It has power, plenty of it, enough for emergency hunting purposes and for defense against dangerous game. Its performance will impress you.

If you have a .44, soup up one cylinderful of handloaded ammunition. Aim at something preposterously far away and let fly. When you see that fast-stepping slug tear into the dust at 300 or 400 yards, closer to the target than you would have dreamed possible from a handgun, then you'll be one of us—a confirmed fan of the greatest handgun in the world.

LOADS FOR THE .44 SPECIAL

All loads listed in the table below are tested and known to be safe in a modern Bisley, Frontier, and New Service Colt, and in a Smith & Wesson M1926 Military revolver.

Seating depth in all cases is to the normal crimping groove of the bullets in question. No grease wads were used.

Most of the velocities listed were taken by chronograph, but others, marked "E," were estimated by use of a ballistic pendulum, comparison of drop figures, and by interpolation of known loads and velocities.

No load developing more than 20,000 pounds per square inch has been knowingly listed here.

Bullet	Powder	Charge	Chronograph Velocity	Pressure
145 Bond B429580	Bullseye	6.5	1100	10,500
145 Bond B429580	Bullseye	7.5	1230	15,000
145 Bond B429580	Unique	10.5	1225	10,000
145 Bond B429580	Unique	11.5	1300	14,500
145 Bond B429580	Unique	13.1	1500	Very High
173 Ideal 429438	Bullseye	6.5	1050	
173 Ideal 429438	Bullseye	6.9	1100	15,000
173 Ideal 429438	Unique	10.0	1390	
173 Ideal 429438	Unique	10.5	1450 E	15,000
173 Ideal 429438	Unique	11.5	1500 E	20,000
173 Ideal 429438	#2400	20.0	1500 E	
192 B&M 429200	Unique	9.0	1050	
192 B&M 429200	Unique	10.0	1100	
200 .44/40 Lead	Unique	10.0	1150	15,000
202 B&M 429205	Unique	9.0	1050	
202 B&M 429205	Unique	9.5	1100	
202 B&M 429205	Unique	10.0	1170	
202 B&M 429205	#2400	18.0	1190	
202 B&M 429205	#2400	19.0	1275	
202 B&M 429205	#2400	20.0	1310	
235 Ideal 429421 (Keith Bullet) Hollow Point	Unique	8.5	1050	17,000
235 Ideal 429421 (Keith Bullet) Hollow Point	Unique	8.7	1095	
235 Ideal 429421 (Keith Bullet) Hollow Point	#2400	18.0	1077	17,500
235 Ideal 429421 (Keith Bullet) Hollow Point	#2400	18.5	1100	18,500
235 Ideal 429422 (Keith Bullet) Hollow Base	Unique	8.0	1000	15,000
235 Ideal 429422 (Keith Bullet) Hollow Base	Unique	8.5	1090	17,000
235 Ideal 429422 (Keith Bullet) Hollow Base	#2400	17.5	1000 E	
235 Ideal 429422 (Keith Bullet) Hollow Base	#2400	18.0	1050 E	
235 Ideal 429422 (Keith Bullet) Hollow Base	#2400	18.5	1100 E	
242 Hensley #35 (Sharpe Hollow Point)	Unique	8.8*	950	18,180*
242 Hensley #35 (Sharpe Hollow Point)	#2400	18.0*	1070	15,000*
242 Hensley #35 (Sharpe Hollow Point)	#2400	20.0*	1194	19,700*
244 Ideal 429383 Round Nose	Unique	7.7	900	15,000
244 Ideal 429383 Round Nose	Unique	8.5	1000 E	
246 Factory Lead	Bullseye	6.5	950	17,000
246 Factory Lead	#6	6.5	910	18,000
246 Factory Lead	Unique	9.0	1050	15,000
246 Factory Lead	#2400	18.0	1080	12,500
246 Factory Lead	#2400	18.5	1110	16,000
246 Factory Lead	#2400	19.0	1144	18,000
246 Factory Lead	FFg Black	26.0	770	15,000
250 Ideal 429336	Unique	8.5	990	15,000
250 Ideal 429336	Unique	9.0	1050	18,000
250 Ideal 429336	#2400	17.5	1070	15,000
250 Ideal 429336	#2400	18.0	1100	18,000
250 Ideal 429421 (Keith Solid)	Unique	7.5	900	12,500
250 Ideal 429421 (Keith Solid)	Unique	8.0	935	
250 Ideal 429421 (Keith Solid)	Unique	8.5	1000	18,000
250 Ideal 429421 (Keith Solid)	#2400	17.0	1000	
250 Ideal 429421 (Keith Solid)	#2400	17.5	1060	17,000
250 Ideal 429421 (Keith Solid)	#2400	18.0	1080	19,000
253 Ideal 429251 Round Nose	Bullseye	5.0	860	
253 Ideal 429251 Round Nose	#6	6.0	800	
253 Ideal 429251 Round Nose	Unique	8.0	900 E	
260 Hensley #35 (Sharpe Solid)	#6	6.5	850	19,000
260 Hensley #35 (Sharpe Solid)	Unique	9.0	1000 E	15,000 E
260 Hensley #35 (Sharpe Solid)	#2400	17.0	1010	18,000
262 B&M 429261	Unique	9.0	1000 E	18,000 E
262 B&M 429261	#2400	16.0	1000 E	
262 B&M 429261	#2400	17.0	1050 E	18,000 E
280 B&M 429275	Bullseye	3.0	600 E	

* P. B. Sharpe.