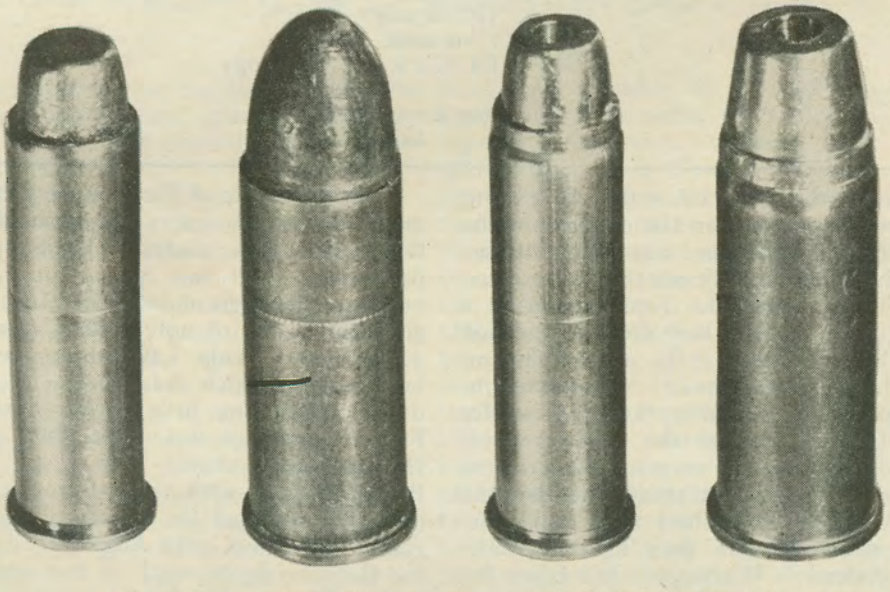
.44 Special vs. .357 Magnum

By John W. Zlatich

Here is a lengthy comparison of two of the hottest handgun cartridges in use today



(L to R) Factory loaded .357 Magnum and .44 Special, handloaded .357 and .44. Both handloads contain Thompson gascheck bullets

A curious thing about the American pistol and revolver shooter is his never-satisfied desire for more velocity, striking energy, and 'power' in his handgun. "Super Speed" and "Magnum" are descriptive names that sell guns and ammunition these days, and the factory that turns out any cartridge with 15 feet-per-second higher velocity than another usually has a seller on its hands.

Many years ago the itch for better handgun performance led shooters to handload their own ammunition, whereby they could develop experimental loads to suit their individual needs. In the course of this experimentation the home-loaders achieved a lot of remarkable things, among them the development of high-velocity cartridges that were nothing short of astonishingly lethal on big game. Among these extremely powerful developments was the .44 Smith & Wesson Special, which years ago stood out as potentially the most effective revolver load ever known. Another was the .38 Special, which was upped in power until its performance was completely different from its original counterpart.

In January 1935 Smith & Wesson, Inc., released a truly fabulous high-velocity handgun development to the shooting public. A gun and cartridge that grew out of high-power .38 Special development, it is with us today as the .357 Magnum. With a 158-grain bullet of medium-heavy caliber and an almost unbelievable muzzle velocity of 1510 feet per second (reduced in current loadings to 1450 feet per second), the .357 struck with 800 foot-pounds of energy. Widely acclaimed as the most effective revolver cartridge ever made, it was indeed a radical development. Not since the Gabbett-Fairfax automatic pistol, which was produced by the British Mars Automatic Firearms syndicate in the period 1900-02 and which fired a 9 mm. or .35 caliber bullet weighing 160 grains at a muzzle velocity of 1600 feet per second, had such a high-velocity medium-bore handgun been offered for sale. The .357's popularity was immediate, and the demand for it was never more intense than it is today.

Naturally, the high position acquired by the newly-born Magnum was challenged by the shooters who advocated .44 Special. They claimed then, and still do, that the bigger-calibered cartridge was and is much more effective than the faster but smaller .357. Their arguments with the smallbore crowd are something to hear.

In one small way, an attempt is made here to indicate, by a number of measurements and calculations drawn from actual test firings from both guns, just how the two cartridges compare. The results of these tests and computations are listed categorically under their respective headings of Stopping Power, Wounding Power, Expansion, Penetration, Energy, Accuracy, and Recoil. They are as objective as a confessed devotee of the .44 Special can make them.

To give a common ground on which to compare .44—.357 performance, bullets from both cartridges were fired into similar material (soaking wet newspapers) under similar conditions (15-foot range, outdoors, temperatures nearly identical) and the results carefully noted.

Bullets for the two guns were picked

Without question, the two most effective handgun cartridges in wide use anywhere in the world are the S&W .44 Special, at left, and .357 Magnum

for similarity of design, exterior shape, and shape of hollow-point cavity where this applies. Both the .357 and .44 bullets were designed by Ray C. Thompson of Grand Marais, Minnesota, and molds from which they were cast were manufactured and sold by the Ideal Tool division of the Lyman Gunsight corporation of Middlefield, Connecticut. Both bullets are gaschecked to prevent leading, from which some revolvers suffer badly at upper velocity levels.

Wet paper was chosen because it is more like flesh in its reaction to bullet impact than any other commonly available material. Soft modeling clay and large bars of laundry soap, long popular as targets which give an indication of relative wounding power of cartridges, fail to show results comparable to performance on real game. These materials may be soft and dense like flesh, but they lack the fibrous qualities of animal tissue, which behaves very differently when struck by bullets. Soaking wet paper affords about the same moisture content as flesh, and has the advantage of fibrous, stringy composition.

The bundles of papers used were brand new, taken fresh from a local newspaper's surplus supply. They were completely submerged in barrels of water for five days prior to shooting. Layers of papers were periodically loosened to insure complete soaking, and the bundles were fired into less than an hour after being taken out of the water. They were so saturated that pressure with a finger on the top layers caused water to ooze out and fill the indentation.

Firing was done at 15 feet range, with all shots entering the bales of paper against the grain at nearly 90 degrees of angle. The layers of paper were peeled off one issue at a time and measurements were taken of:

1) The size of the open hole created by expansion

2) The diameter of the area of pulped paper surrounding the wound channel at its widest point (see drawing)

3) The depth at which expansion appeared to be complete, and

4) The total penetration of each shot.

Velocities were varied by handloading in both calibers to simulate reduced striking velocities at ranges of 100, 200 and 300 yards. .44 velocities at the above ranges are approximately 1000, 800 and 600 feet per second, with a muzzle velocity of 1200 feet per second. Magnum velocities at the same points were adjusted to approximately 1300, 1100 and 900 feet per second, with a muzzle velocity of 1500. This latter figure is 50 feet per second higher than the current factory loading of 1450 f.p.s.

All firing was done from Smith & Wesson revolvers, the Magnum having a 6-inch barrel and the .44 Special a 6½-inch barrel. Much of the Magnum firing was done by Gordon Dean of Burbank, California, and most of the .44 firing by the writer.

As fired in the test, the .357 bullet weighed 151 grains, sized to .3575 inch, and lubricated and fitted with its gascheck. The .44 Special weighed 235.1 grains, sized to .4310 inch, lubricated, and gaschecked. Both were hollow points.

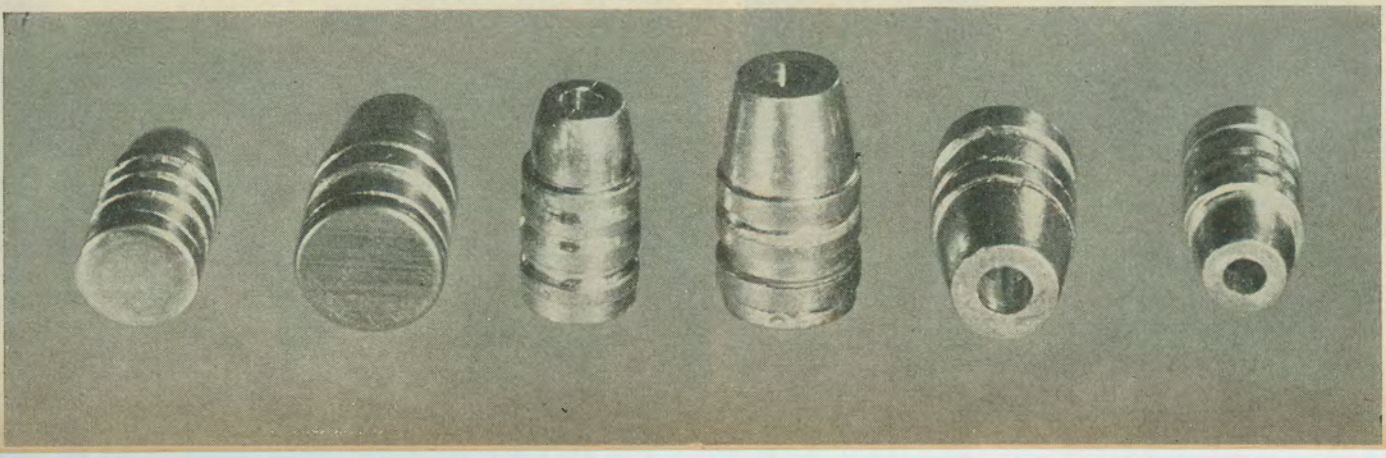
At first glance the .357 bullet appears to have one lubrication groove more than the .44, but that isn't so. The slug has two crimping grooves, so the seating depth may be varied for high-velocity loading in the .38 Special. The bullet will not fit the Magnum cylinder properly with the case crimped in the lower groove because the overall length of the cartridge is then excessive. In the longer .357 case only one seating depth is permissible with this bullet.

Bullets were cast of lead and tin, alloyed 10 parts lead to 1 part tin for the Magnum and 20 parts lead to 1 part tin for the .44. Tests have proven these two alloys to be about ideal for the cartridges in question. Magnum bullets softer than 10 to 1 will tear to shreds at striking velocities above 1200 feet per second, but won't upset at any but short range (1400 f.p.s. or so) when cast harder. An alloy of 20 to 1 hangs together perfectly in the .44 at top velocity, yet permits expansion of a sort at velocities as low as 800 feet per second.

Stopping Power

Stopping power is a term applied to the actual effect a bullet has when it hits game—how quickly an animal will collapse after being hit. Stopping power is not synonymous with killing power, which is concerned with placement of shots in vital areas, and in some cases is totally separated from stopping power. A .22 Short in the brain, for example, has ample killing power, but its stopping power on large game when non-vital areas are struck is nil. As

Greater mass of .44 slug is shown by comparison with .357 of nearly identical design. This increased bulk makes the .44 expand wider at high speeds



most shots on game are not in areas immediately fatal to an animal, stopping power is of more importance than killing power per se.

There are so many intangibles involved in stopping power that it is difficult to calculate a mathematical rating for it with different calibers and bullets. An attempt has been made, however, to reduce the various factors to a formula, with results surprisingly consistent with findings derived from actual firings into live cattle under laboratory conditions. The formula, developed by Major General Julian S. Hatcher and explained in his book, *Textbook of Pistols and Revolvers*, is a simple one. You take one half of the bullet's momentum, multiply it by the cross-sectional area of the bullet in square inches, and multiply the product by a numerical shape factor.

Estimated comparative stopping power of .44 and .357 handloads and two popular factory cartridges are listed in table above. Though stopping power ratings are figured mathematically, and work out pretty closely in practice, they are only approximations. Note that both hollow-point handloads are theoretically more effective at 200 yards range than the factory .45 Colt is at the muzzle.

Various factors used in computing stopping power in this table are listed on the next page. In this instance, the momentum figures were obtained by dividing the bullet's velocity into its energy. The cross-sectional areas of the expanded .357s and .44s are given at the muzzle; for other areas of these bullets at different ranges see table on "Expansion." Velocity at 100 and 200 yards of .45 Long Colt is 809 f.p.s. and 754 f.p.s. of .38 Super, 1136 and 1097 f.p.s. Energies at these distances are .45 Colt, 363 and 315 foot-pounds; .38 Super, 373 and 344 foot-pounds.

A bullet's cross-sectional area is found by squaring its radius and multiplying the result by 3.14. For example, a .44 Special bullet has a diameter of .431 inch. Its radius is .2155 inch. Squared, it is .0464, which multiplied by 3.14 gives you .1456, or .146 for the bullet's cross-sectional area.

ESTIMATED STOPPING POWER

Cartridge	*Muzzle*	*100 yds.*	*200 yds.*	*300 yds*
.357 H.P.	240.19	180.52	155.86	38.50
.44 H.P.	441.33	376.71	177.12	56.50
.357 Solid	67.95	58.14	49.08	40.24
.44 Solid	111.50	91.25	81.12	57.67
.45 Colt	86.77	80.51	74.95	....
.38 Super	34.33	30.10	28.92	....

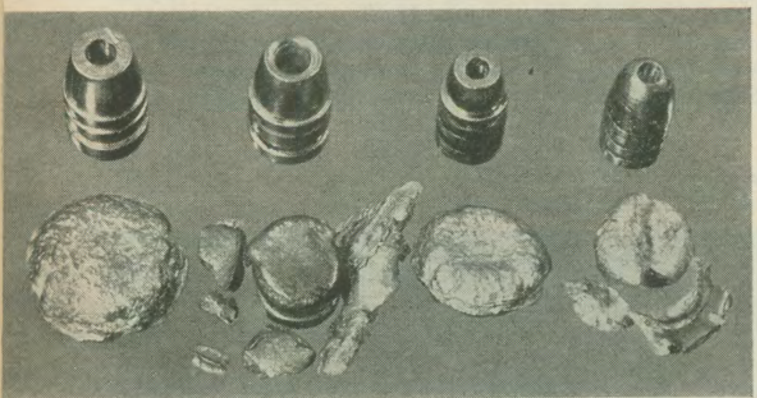
Momentum is easy to calculate if you know the bullet's velocity and energy. Just divide the velocity into the energy and you have one-half the true momentum. A factory .44 Special, for example, has a velocity of 770 feet per second and a striking energy of 324 foot-pounds. Dividing 700 into 324 gives you .4208, or more simply, .421.

If you don't know your bullet's striking energy, momentum is a little harder to figure. In this case, you find it by multiplying the mass of the bullet by its velocity.

To find a bullet's mass, you must divide the bullet weight in pounds by the constant of gravity, 32.16. To convert the bullet weight, expressed in grains, to pounds, divide 7000 (the number of grains in a pound) into the bullet weight in grains. For example, a .44 Special bullet weighs 246 grains. Dividing the weight in grains by 7000 gives you .0351 pounds. Dividing weight in pounds by 32.16 gives you .00109, and multiplying the quotient by the velocity, 770 feet per second, gives the true momentum of .839. To calculate stopping power, take one half of this figure, or .420.

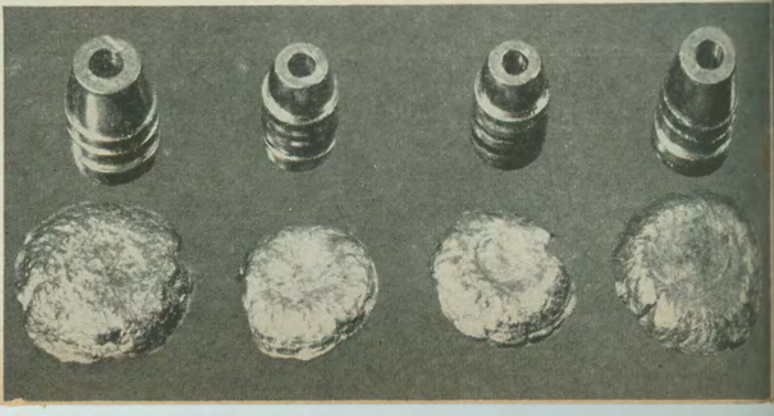
The entire momentum can be used, of course, but the stopping power figures will be larger and less convenient to handle; using half the momentum gives simpler figures and doesn't change the relative value of any rating.

The shape of any pistol bullet is of great importance in determining its effectiveness, and has to be figured into any formula of stopping power. Caliber and velocity being equal, a full wadcutter bullet, say, will be much more effective than a sharply pointed one. The blunter the nose, the more abruptly the bullet will thrust tissue and bone aside in its passage, and the degree of this abruptness lends one bullet shape more shocking power than another. The rudeness with which tissue is compressed and torn is second in importance only to the amount of tissue displaced, this latter being dependent upon the diameter of the bullet. (This is what gives the big bores more knockdown power than small ones of equal striking energy.) To enable these im-



Different .44 and .357 bullets show varying expansion characteristics. (L to R) Thompson, SAECO #7 HP Bevel mouth, Thompson .357, and experimental round nose. Striking velocities were 1200 feet per second for the .44's, 1300 for the .357's.

Extent of expansion in Thompson bullets. (L to R) .44 at 1200, Magnum at 1100 and 1300, and .44 at 1000. Alloys, lead-tin (L to R) 10-1, 20-1, 10-1, and 20-1



portant shape factors to be used, General Hatcher assigns each class of bullet shape a numerical factor, these factors ranging from 900 to 1250.

Round-nosed bullets, such as one finds in factory loadings of the .45 automatic, 9 mm. Luger, and .38 Super automatic cartridges, to name a few, vary between 900 and 1000, the higher number going to the blunter bullets in this class.

Rounded-nosed bullets with flat areas on their tips fall into the next class, and are typified by the factory .45 Colt, .44-40, and .38 Colt Special, among others. Because of the increased effectiveness of the flat surface, the numerical factor assigned them is 1100.

The most effective handgun bullets of all are the wadcutter and semi-wadcutter types. The true wadcutter is familiar to all target shooters, while the semi-wadcutters are typified by the .44 and Magnum handloads pictured throughout this series. Their numerical rating is 1250. The mushroomed .44 and .357 bullets were classed as 1250s for purposes of computing the stopping power table. They are so blunt, and in some instances so sharp-edged, that they do not seem to fit into any other classification.

Calculated as described above, the stopping power of the .44 Special is materially greater at closer ranges than the Magnum, though this difference lessens quickly as the 300-yard mark is approached. Note how much more stopping power both hollow-point handloads have than the factory .45 Long Colt, which, aside from the .357 Magnum itself, is the most effective factory handgun load. Note, too, that a non-expanding .357 bullet, though traveling at 1,500 feet per second, has less stopping power than the big .45 Colt at half the velocity.

To give some idea of the comparative effectiveness of the two handloads in question, a list of the stopping power of some popular pistol and revolver cartridges might be interesting. Taken from General Hatcher's book, they are: .30 Luger, 16.6; .30 Mauser, 16.8; .32 automatic, 10.0; 9 mm. Luger, 29.4; .38 Smith & Wesson, 23.8; .38 Special, 33.8; .38/44 high velocity, 39.4; .44 Special factory load, 60.6; .44/40 Winchester, 64.2, and .45 Automatic, 60.0 The .44 Special hollow-point handload with a rating of 441.33, and the Magnum with 240.19, are out of the pistol and revolver class entirely.

STOPPING POWER FACTORS

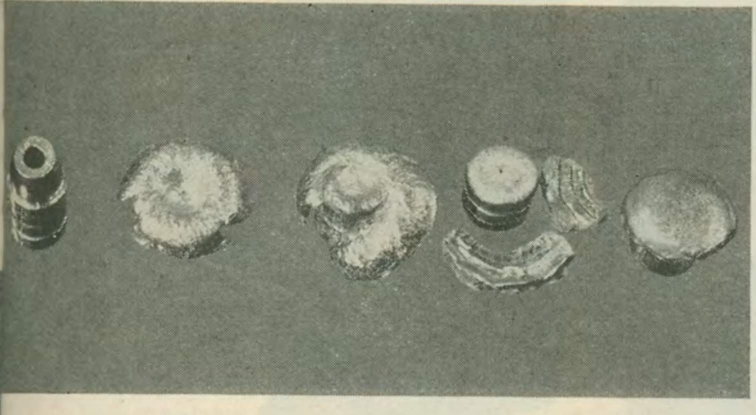
Cartridge	*Bullet Weight (grs.)*	*Muzzle Velocity (f.s.)*	*Cross-Sectional Area (sq.in.)*	*Shape Factor*	½ *Momentum* *Muzzle*	*100 yds.*	*200 yds.*	*300 yds.*
.357 Solid	158	1500	.102	1250	.533	.456	.385	.316
.44 Solid	250	1100	.146	1250	.611	.500	.445	.391
.357 H.P. (Expanded)	151	1500	.384	1250	.502	.435	.370	.302
.44 H.P. (Expanded)	235	1200	.564	1250	.626	.522	.418	.301
.45 Colt	250	870	.163	1100	.484	.449	.418	...
.38 Super	130	1300	.102	900	.374	.328	.315	

Wounding Power

Wounding power refers to the amount of physical damage a bullet can inflict upon its target. It is not the same as stopping power, for many very large and deep wounds are not capable of stopping game until the animal collapses from bleeding and exhaustion some time and distance after being struck. By and large, however, a bullet with great wounding ability will also have a high stopping power.

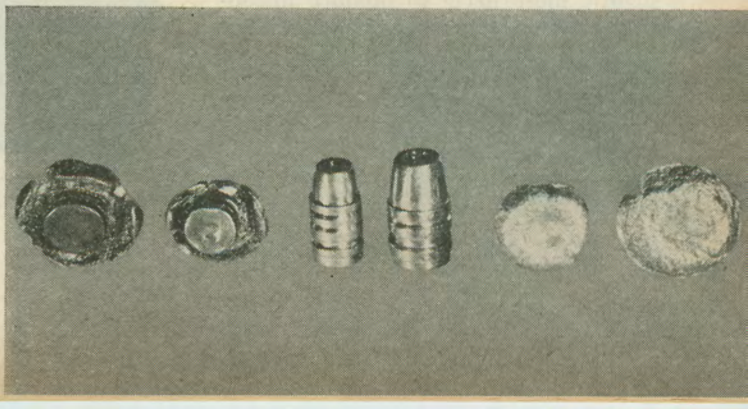
To give an approximation of how big a wound is created by each bullet, the volume of each wound channel was computed and is listed in the table (page 42) in cubic inches. Stated another way, all the tissue that is pulped, torn, or compressed, would occupy so many cubic inches of space if removed and measured.

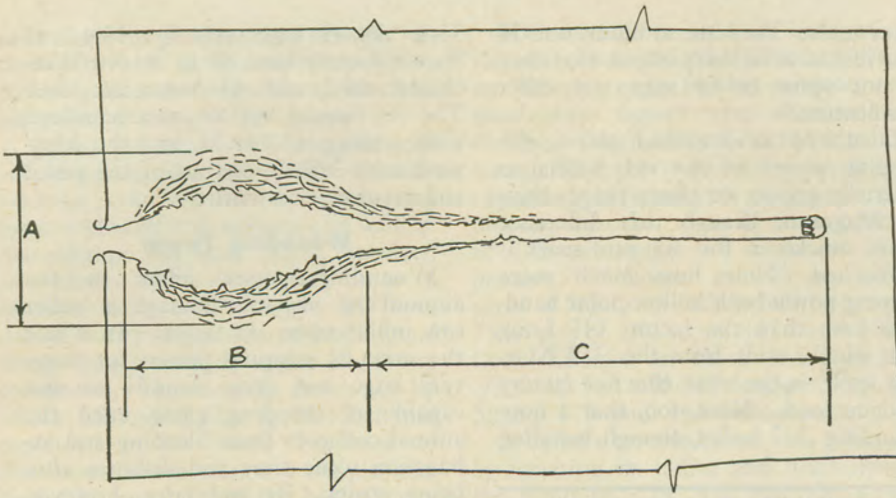
For the table, the volume of each "wound" was taken from two measurements in the bales of paper. First was the volumetric capacity of the "upset" area, that widely-lacerated area surrounding the bullet's path while the slug is expanding with violence. This upset area is roughly diamond-shaped in longitudinal section and in all firings was approximately five inches in length (see sketch). The second measurement concerns the volume of the rest of the bullet channel, which is pretty close to the diameter of the expanded bullet itself. Measurements are listed in the table of the upset area volume, the volume of the narrow slug-diameter



Magnum lead-tin 10-1 bullet at striking velocities of 900, 1100, 1300, and 1500 feet per second. Factory Magnum solid bullet at extreme right shows upset at 15 feet

Greater expansion of .44 Special over Magnum bullets is shown here. Impact velocity approximates that at 100 yards. The .44's were moving at 1000 f.p.s.; the Magnums at 1300





Dimensions for computing volumetric capacity of bullet channels were taken from A, diameter of mashed paper surrounding upset area; B, length of upset area; and C, volume of the remainder of the channel. Latter volume was figured by assuming the entire rear portion of hole was no larger than expanded nose of bullet

channel; and the total volume of the entire passage.

In connection with this, the greater 'shocking power' of the .357 bears mention. When the cartridge appeared, the manufacturer's advertising stated it had greater shocking power than any .44 or .45 tested, thus placing a great deal of reliance on its velocity to render a living target more or less immediately helpless.

There is little doubt that the Magnum possesses greater hydrostatic shock than other handgun calibers, the .44 handload included. The photo showing two water-filled cans struck by a solid from each tells its own story. On animal targets of the composition and resistance of man, this shocking force is a telling factor. On such targets, hits in the limbs or extremities would be slightly more likely to produce unconsciousness or helplessness with the .357 than with the heavy .44 solid handload, although the practical difference would probably be rather small.

Rather than shocking power, the effectiveness of bullets at handgun velocities is dependant on how wide and deep a wound they can inflict. Disregarding brain, spine, and nerve-center shots, where even a .22 Short can be instantaneously lethal, the destructive effect of a bullet is of vital importance. Larger wounds create vastly greater bleeding areas, tear muscles and tendons and blood vessels more, and thus cripple limbs and large muscular masses more thoroughly and quickly, and they bring about a much more rapid state of exhaustion and collapse. The bullet that can create the largest wound is the one that will spell the difference between success or no success when game is in one's sights, not the bullet with the greatest 'shocking power'.

Where pure wounding ability is concerned, the .44 is more effective at almost all ranges, and where close-range self-defense against dangerous game is called for, then the bigger caliber is far and away the more effective of the two. At 15 feet range it will do just under twice the damage the Magnum will.

WOUNDING POWER

Cartridge	*Range*	*Impact Velocity (f.s.)*	*Volume Upset Area (cu.in.)*	*Volume Rest Of 'Wound' (cu.in.)*	*Total Volume (cu.in.)*	*Diam. Open Hole (in.)*	*Diam. Pulped Paper (in.)*	*Total Pen. (in.)*
.357	Muzzle	1500	8.18	.918	9.09	1.13	2.0	14
.44	Muzzle	1200	11.79	4.31	16.10	1.50	3.0	12
.357	100 Yds	1300	5.33	1.77	7.11	1.00	2.0	9
.44	100 Yds	1000	5.33	3.08	8.41	1.00	2.0	10
.357	200 Yds	1100	3.79	1.08	4.87	.90	1.7	8
.44	200 Yds	800	2.94	1.06	4.05	.75	1.50	8
.357	300 Yds	900	None	——	1.43	.357	—	14
.44	300 Yds	600	None	——	1.75	.431	—	12

Expansion

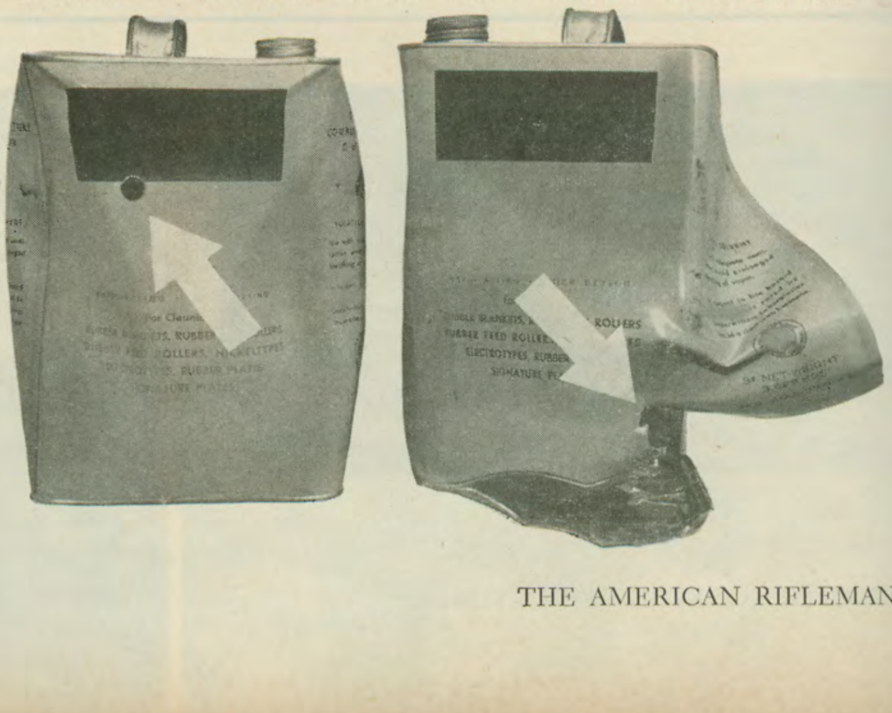
As might be expected, there is a marked difference in expansion in the .357 and .44 calibers at top velocity. The Magnum hollow-point literally exploded after penetrating a short distance and left fragments of itself throughout the length of the wound channel. At velocities corresponding to hits at 100 and 200 yards, however, expansion was beautiful, of the classic wide, peeled-back variety.

Expansion of the .44 slugs was not characterized by explosive shattering when bullets were cast of 20 parts lead and 1 part tin. Ten parts lead and one part tin and straight type-metal bullets did come apart on close-up hits, however. No alloy was found that would prevent hollow points from tearing to pieces at 1,500 feet per second in the Magnum.

Extensive testing with high-velocity .38 Special loads (Keith-Ideal and same

(Continued on page 46)

Results of .44 Special and .357 bullets fired into cans of water. Greater hydrostatic shock of fast-moving Magnum is evident in can at right. .357 bullet expanded in passage through can, .44 did not. Point of impact is indicated by arrows



.44 Special vs. .357 Magnum

Continued from page 42

Thompson bullet at 1,400 feet per second) seems to indicate that satisfactory hollow-point expansion isn't possible at the Magnum's velocity peaks. Bullet upset is much too violent, and only the factory solid bullet behaves satisfactorily at this speed. A hollow point seems almost to be a hindrance at upper velocity levels rather than an aid to wounding power. This is not true of lesser impact speeds. For strict self-protection work at close range, the factory Magnum bullet is probably the best available, but for hunting work at a distance, the hollow point is superior.

Everything mentioned in this section is based upon a bullet's passage through flesh and soft tissues only. Where bones are encountered, the expansion of all bullets is of a highly unpredictable sort, and even solid bullets, at speeds as low as 500 feet per second, may upset or deform into projectiles much more injurious than would otherwise be the case.

warrant excitement. Properly handloaded, both will penetrate clear through almost any game animal likely to be encountered on this continent, providing no large bones are struck, but then so will a number of factory cartridges in various calibers, among them the 7.63 mm. Mauser automatic and the .45 Long Colt. Certainly the vital internal organs of our biggest North American game are well within the penetrative range of either the .357 or the .44 Special, factory or hand loaded.

Of the two cartridges, the Magnum will penetrate deeper. This is assuming bullets are of the solid type and cast hard enough to resist flattening. Such a bullet would be the same Thompson numbers in both calibers cast of straight printers' type metal, as Ideal manufactures these bullets in both solid and hollow-point form. A cylinder loaded alternately with hollow points and solids of the same excellent shape would give the hunter or woodsman some real fire power, for either defense or meat potting in general.

Of interest in the table on penetration is the 90 grain .357 Western Alloy

EXPANSION

Cartridge	*Impact Velocity (f.s.)*	*Max. Expanded Diam. (Inches)*	*Min. Expanded Diam. (Inches)*	*Weight (Grs.)*	*Cross-Sectional Area (Sq. In.)*	*Comment*
.357	1500	.751	.650*	99.1	.384	Shattered
.44	1200	.861	.833	234.8	.564	Perfect Rollback
.357	1300	.650	.650	147.5	.332	Almost Shattered
.44	1000	.859	.832	235.1	.562	Perfect Rollback
.357	1100	.657	.657	149.7	.337	Perfect Rollback
.44	800	.659	.659	233.0	.339	Flared-out Only
.357	900	.357	.357	151.1	.102	No Expansion
.44	600	.431	.431	235.5	.146	No Expansion

* Magnum bullet shattered, dimensions of expanded bullet estimated

How much bigger hollow-point bullets get after they strike and expand is shown in the table above. Five shots were fired from each caliber at each velocity level shown, and measurements were taken of the widest and narrowest dimensions of the flattened 'umbrella' or mushroom. These were averaged together and the cross-sectional areas figured from that. Note that most widely expanded bullets have almost four times the area of their non-expanded forms. All measurements except cross-sectional area, weight, and velocity are given in thousandths of an inch.

Penetration

Penetration of either the .357 or .44 Special isn't significantly impressive to

bullet. Driven at a velocity of approximately 1,750 feet per second, bullets of such composition are rated as excellent piercers of sheet metal. But in test paper it lacks the push to keep going in very far. Its penetration in paper is not at all in keeping with its comparative excellence at punching holes in iron plating.

PENETRATION

Cartridge	*Muzzle*	*100 yds.*	*200 yds.*	*300 yds.*
.357 Solid	29*	28**	22**	17**
.44 Solid	25	23	18	12
.357 H.P.	14	9	8	16
.44 H.P.	12	10	8	12
.357-90 Gr. Western Alloy	18	—	—	—

* Remington factory metal-piercing round
** Thompson-Ideal sharp-shoulder solids

Penetration in inches in bales of wet paper gives the .357 Magnum an advantage at almost all ranges. Note that deepest penetration in hollow-point bullets occurred at 300 yards range, where bullets failed to expand. This gives some indication of retarding or braking effect expanded bullets undergo in passage through flesh-like media. Lightweight Western Alloy bullet at bottom was driven at a velocity of approximately 1,750 feet per second.

In striking energy, easily calculated for any bullet where velocity and weight are known, the Magnum is slightly ahead at all ranges. For comparison, two other high-powered factory loads are listed, pointing up higher impact force of heavy handloads.

Energy

Energy as calculated on paper doesn't mean much as far as actual performance on targets is concerned. However, it does indicate the force with which a bullet arrives at its destination, and it offers a comparison of the ability to do work each bullet may have.

ENERGY

Cartridge	*Muzzle*	*100 yds.*	*200 yds.*	*300 yds.*
.357 H.P.	754	566	406	272
.44 H.P.	751	522	334	186
.357 Solid	800	593	424	284
.44 Solid	672	450	356	274
.45 Colt	421	363	315	—
.38 Super	488	373	344	—

The figures in the table are obtained through a convenient though long-working formula. You square the velocity in foot-seconds, multiply this by the weight of the bullet in grains, and divide the answer by 450,240. The result will be foot-pounds of energy.

Velocities and weights of the bullets listed above are:

.357 H.P., weight 151 grains: 1500, 1300, 1100, and 900 f.p.s.

.357 Solid, weight 158 grains: 1500, 1300, 1100, and 900 f.p.s.

.44 H.P., weight 235 grains: 1200, 1000, 800, and 600 f.p.s.

.44 Solid, weight 250 grains: 1100, 900, 800, and 700 f.p.s.

Accuracy

From the standpoint of accuracy, neither cartridge leaves anything to be desired. Unbelievably small groups at 300 and 400 yards have been recorded with them. It isn't possible to say one cartridge is more or less accurate than the other, for merely upping the velocity of either does not alter its accuracy one bit. As far as tight grouping goes, both arms are on a par.

(Continued on page 93)

.44 Special vs. .357 Magnum

Continued from page 46

Trajectory is another matter, however. The .357, with a much higher velocity than the .44, has a bullet of only slightly less sectional density. This enables both bullets to bore through the atmosphere with the same relative loss of speed. Thus, the velocity drop over a given range is proportionately the same for both, up to around 200 yards range, at which distance the slower .44 loses velocity at a lesser rate than the .357. This is, however, of little importance. Suffice it to say that the Magnum's flatter trajectory enables a materially greater error in range estimation to be followed by a good solid hit than is the case with the faster-dropping .44.

As far as game is concerned, no sensible shooter would attempt a shot on anything much over 150 yards range. Two hundred yards would certainly be the maximum. Anyone who shoots his gun a great deal, and anyone who even toys with the idea of accurate long-range firing will burn up a great quantity of ammunition, will know where his gun will hit up to a very minute point. Careful, slow shooting has to be done at game at any range, and the shooter will take time enough to estimate his trajectory to the gnat's whisker or else he won't dare fire. The revolver hunter is never in a hurry. He has to stalk his game to as close a range as possible, and then his shot has to be dispatched with great care. Time to estimate range and trajectory must be taken, and to some extent this offsets the apparent advantage of the Magnum's higher velocity-flatter trajectory.

To err is human, however, and the .357's more level flight is worth gold when one's range estimation is off materially.

Recoil

The first apparent disadvantage a novice detects in the .44 handload, fired alternately with the .357 Magnum cartridge, is the bigger bore's vicious recoil. It feels roughly twice as hard as that of the .45 Long Colt fired in a similar gun. It is more than double the .45 automatic cartridge's kick, whether this be fired in the revolver or self-loader.

For most shooters, this recoil is too severe. If one's hands are small and not very strong, he simply cannot handle the kick. A few shots will make him put the gun down and leave it there, or else it will make him flinch so badly he couldn't hit the side of a house if he were inside it. Even with special hand-filling grips the recoil is bad, and few are the men who can fire 50 full-power loads at one sitting, with consistent accuracy.

The recoil of the Magnum is about the same as the Colt .45, which as noted above is about half that of the heavily-charged .44 Special. Comparatively light though this kick is, a small man can't handle *it* steadily, either. But it is safe to say that many more shooters could fire passable scores over a period of many shots with the .357 than with the big .44.

Unless a shooter fires only a few shots at one sitting, say two cylinderfuls, he cannot maintain gilt-edge accuracy with either arm. The recoil is simply too great to permit a long string of shots to go completely unaffected.

Conclusion

From the firings and the tables noted above, it is felt that the .44 Special is the better of the two calibers as regards its action on game after the hit has been made. Its stopping power, expansion, and wounding ability are markedly superior to the Magnum's. But the .357's trajectory is flatter, making hits easier; its recoil is less, tending to eliminate accuracy-destroying flinching, and its total penetration is greater, somewhat increasing its chances of sinking into a vital organ deep inside a large animal. Accuracy-wise, the two are equal.

Admittedly the tests and computations reported here are by no means the whole story of the .357 Magnum versus the .44 Special. But they do indicate a general trend of performance, from which neither round has deviated very far in the writer's experience.

Not every one will agree with these conclusions, of course, some feeling that the stress has been laid too heavily on one aspect and not heavily enough on another. Whatever the case, the tables and figures are here, showing from one given series of tests how these cartridges may be expected to perform.

Beyond any question, the two cartridges discussed are far and away the most effective handgun loads available anywhere in the world today. Compared with the best handloads in other calibers, they are much superior in almost every respect, and the performance of both is almost completely out of the handgun class, belonging more in the bracket of low-powered rifles. Both, certainly, will do execution no one has any right to expect from a revolver.

Conclusions as to the breakdown of performance between the two, then, is largely of academic interest, and had best be made by the individual shooter. Though opinions have been expressed in favor of one cartridge or the other throughout, the final decision is up to the owner or prospective owner of either arm, for he knows what he wants and needs much better than the spokesman for a small group of .44 and .357 enthusiasts halfway across the country possibly could.