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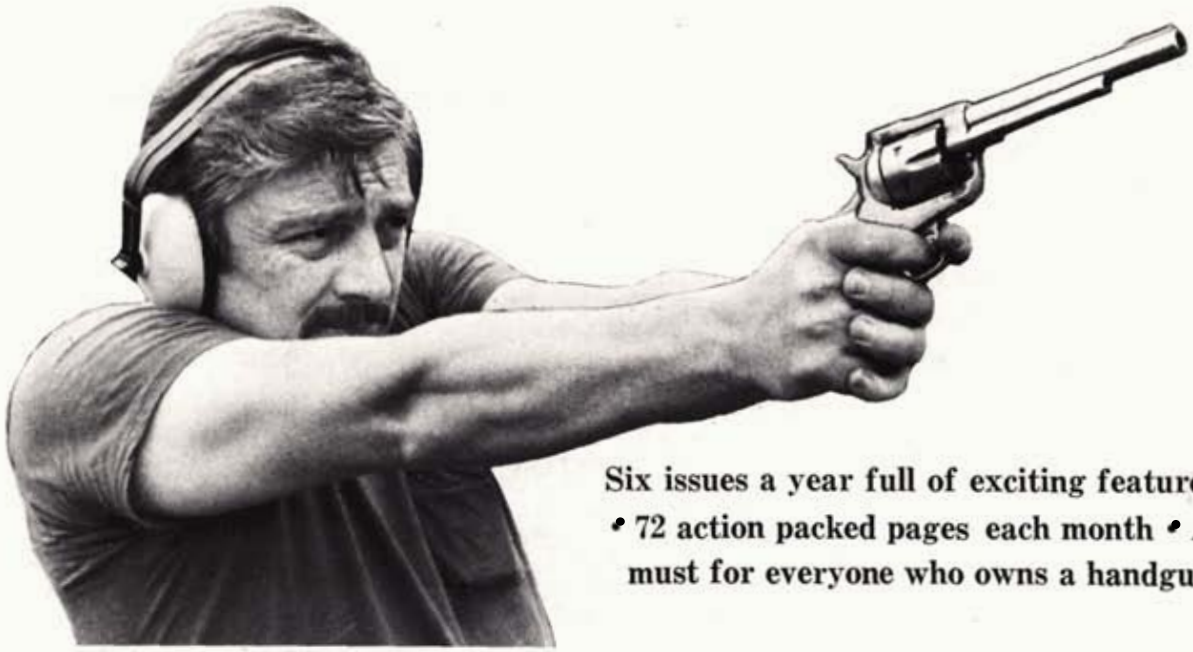

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HANDGUN INDUSTRY INSIDER

NEWS FROM MANUFACTURERS

By MASSAD F. AYOOB

MAGNUM FORCE, the .44 to be specific, is in the news these days in New England's "Gun Valley." Smith & Wesson's Model 29 will be sold at black-market prices no longer, if company execs Del Shorb and Dick McMahon and others have their way, and it looks like they will. The company had been telling the gun writers that they couldn't do anything about those dealers selling 29's for hundreds of dollars over list because of the scarcity, since the Sherman Anti-Trust Act prohibited them from squeezing off supply to dealers who weren't cleaving to catalogue prices. The only solution: to increase Model 29 production, thus satisfying the demand from the shooters that had driven the price up in the first place.

The company has made a production commitment this year: 80% more .44 Magnums will roll out of Smith & Wesson in '77 then did in '76. In turn, '76 production was well above that of '75. It's hoped that they'll be selling at list by the end of the year, everywhere in the country.

Speaking of the Dirty Harry syndrome, a major factor in the Model 29 mystique, the rumor persists that in the first movie, Clint Eastwood was actually using an identical-in-appearance Model 57 .41 Magnum, at least in some of the scenes. The 29s were hard to come by even then, and according to the story, they couldn't get one by the time camera deadlines rolled around; the director supposedly took Smith execs up on the suggestion that they substitute a 57 until a 29 could be shipped to the producers. Whatever Clint Eastwood says about this anecdote, our source is very high up at Smith & Wesson . . .

'77 will supposedly see three times as many double-action .44 Magnums as '76 did. Maybe four times as many.

High Standard Crusader .44 mags, we're told, should be ready for you to buy about the time you read this, or before.

DAN WESSON is ready to toss a big fistful of chips into the .44 Magnum pot. The gun Dan plans to introduce will be, in essence, a scaled-up version of his increasingly popular .357. The same slick, basic action will be there, and the same distinctive silhouette. So will the interchangeable barrels and grips. Many of his advisors are urging Dan to go a step further with the big-frame gun and go for a "Giant Pistol-Pac" with interchangeable calibers as well. This would be a boon to New York shooters, who are limited to a certain number of handguns, and could thus have an almost infinite number of centerfire revolvers charged to one serial number as one gun.

Only problem is that, with present production methods, each cylinder would have to be fitted at the factory, making for an exceedingly expensive initial purchase. Dan is mindful of the fact that, though he sells more of his regular "Pistol-Pacs" each year both numerically and proportionately, still more of his customers like to buy one basic gun and acquire the barrels one at a time, later.

Dan is chary about predicting an intro date; he's been burned before. His .22 rimfire revolver was formally announced to the shooting media, but has since been dropped into a limbo that this writer has learned is probably permanent.

A "newie" you can count on from this manufacturer is longer barrel options: 10", 12", and 15". They'll be available in all four of Dan's present Pacesetter configurations. (It's interesting to note that, though the gun-buyers had just started identifying with the "Pacesetter" sobriquet, Dan is dropping the name in favor of numerical designations like "12-HV".) Rifling twist will be either one-in-sixteen, or the present one-in-eighteen and a half inches that duplicates the Smith & Wesson in the same caliber.

As awkward as it sounds, Dan assures us that the heavy-barrel variation in fifteen inches hangs like a rock. Experimenters and .357 reloaders should love it. A 16" revolving carbine is obviously the next step, though Dan just smiles mysteriously when you suggest it; the stubby grip frame of the DW gun does lend itself to an ideal shoulder stock . . .

Before we leave the Monson, Mass. gunmaker, we should note that the popularity of his guns has increased to the extent that he is once again putting on a second shift of production workers to meet the demand. He did that once before, a couple of years ago when Dan Wesson Arms was making the High Standard Sentinel Mk III .38s and .357s on contract. Quite apart from the subsequent loss of the High Standard contract, the problem was that Dan had put too many new people on the second shift, with too little supervision from the experienced gunmakers on the personnel roster. When Dan talks about putting on the second shift again because of increased market demand, we're not worried about it. Between his hard-learned experience, and the management talents of Dick Rosenfeld, the latest up-step in the company's production should be fruitful . . .

This column has mentioned the second generation SMITH & WESSON 9 mm. autos more than once. Latest word is that the project is still in the plateau phase, and nobody's saying when it will reach climax. The ambidextrous safety has been relegated to "sometime." The fully adjustable sight really is in a fairly advanced stage of development, but is being held pending redesign; it seems that extended tests showed it lacked the durability to keep its adjustments with a continuous diet of full charge ammo. Our sources in the field, who tested the prototypes, gave S&W some specs that may fill the bill.

More honest answers from SMITH & WESSON: Police Combat shooters can forget about that bull-barrel K-38 that has been the subject of wildfire rumors in PPC circles. The popular NRA Distinguished match demands a strictly-production police revolver, and if S&W were to produce a gun like the custom heavy-barrel jobs sanctioned by NRA for regulation PPC shooting, it would have been a boon. But demand is just too small to warrant the company's commitment to the necessary level of production. Colt was able to

comply with the PPC shooters' demands easily enough when they made the Elliason sight a factory option on the Python; the Elliason simply drops into the same slot and screw holes that would accept the standard Accro, and the correspondingly high post front sight is no harder to pin into place than the standard ramp, on special order. Barrels are another thing.

Scuttlebutt was that California Highway Patrol, which has finally decided to buy guns for their men who for years have been required to carry personally-owned 6" .38s had specified a heavy-barrel K-38, thus giving Smith & Wesson a reason to make it a standard item. This is not so.

The CHP gun will be designated the model 68. It will be nothing more nor less than a stainless-steel K-38 with 6" barrel. Rhode Island State Police are looking at the same gun for adoption. That barrel will have a shroud for the ejector rod, and will therefore be suitable for the 6" Model 66 (stainless Combat Magnum) that will be a standard item in the S&W catalogue within two years.

Since we started on a MAGNUM FORCE note, we'll end on one: Ruger still has no immediate plans for a stainless Super Blackhawk .44 (their 9 mm. DA revolver is still not ready for U.S. introduction, though it's apparently selling well abroad, and the long-awaited over-under Ruger shotgun will be teasingly introduced at the NRA show). However, *there are two other stainless steel SA .44 Magnums ready for April-to-June '77 introduction.* Two New York State firms, U.S. ARMS and UNITED SPORTING ARMS are racing each other for the intro. Both companies already have in stock blued versions; the guns are what they call "improved copies" of the Ruger SA design, and show excellent workmanship and finish. The two guns are almost identical, since they're the product of a team that split up and went in two similar-but-separate directions after design had been finalized. U.S. Arms promises a lower price, but United swears their guns will be available sooner. We'll be testing them in these pages; prices are projected as extremely competitive.

PS to police auto buffs: Look for BIANCHI to introduce a breakfront holster for autos with a secret design to resist snatch attempts, as does the current Model 27 and Judge line of their revolver holsters, (which incidentally, has been redesigned to incorporate thumbsnaps and fake strap in all 27 versions). It will be the first high-security uniform holster for autoloading 9 mm. and .45 pistols.

PS to wheelgunners: As far as we know, we were the first to learn that S&W's 125th Anniversary Commemorative revolver was to be a special version of the model 25 (1955 Target) .45 ACP revolver. Don't ask *us* why. We don't even know why they asked us so earnestly to keep it quiet 'til the introduction to their distributors. And now you've already read about it someplace else. Enough of this "Mr. Nice Guy" routine . . .

Also in the "Don't ask us why" department: CHARTER ARMS is bringing out their .357 Police Bulldog in fixed-sight, 6" barrel configuration. The writer still can't grasp the purpose of a small-frame, long-barrel, fixed-sight .357 Mag, but Charter's Dave Ecker says the first five thousand are already spoken for on orders. What the hell, I never thought Ford could put the Mustang over, either, so what do I know . . .?

THE PISTOLSMITH

By GEORGE C. NONTE

A POSITIVE MAGAZINE EJECTOR

ANY autoloading pistol to be used for serious social intercourse may sometimes run dry before all the shooting is finished. When that occurs, the most rapid reloading possible won't seem fast enough.

Every modern, conventional pistol I know of contains a potential problem in this respect: it depends on a combination of gravity and follower-spring pressure to pop out the empty magazine when you punch the magazine catch button. If it does fall clear immediately, then speed of reloading depends purely on the amount of practice you've had in seating the charged replacement.

Unfortunately, all too often, magazines bind in stock autos and don't *reliably* and *predictably* fall clear when they should. Burrs inside the magazine well, bulges and warps in the magazine, dirt, rust, etc. often cause the magazine to just sit there, blocking entry of the spare from your belt.

Dirt, grit, or un-noticed damage can cause this, even if you've carefully cleaned up both magazine and well so the box falls free every time you punch the button home. Any *serious* binding will be felt as the magazine is seated—but things you *don't* feel at that time can prevent the magazine from dropping clear. Caught with a half-out or still-seated magazine, you're stuck with a delay of at least several seconds while the mess is cleared and the gun made ready to continue firing. Those seconds can be fatal.

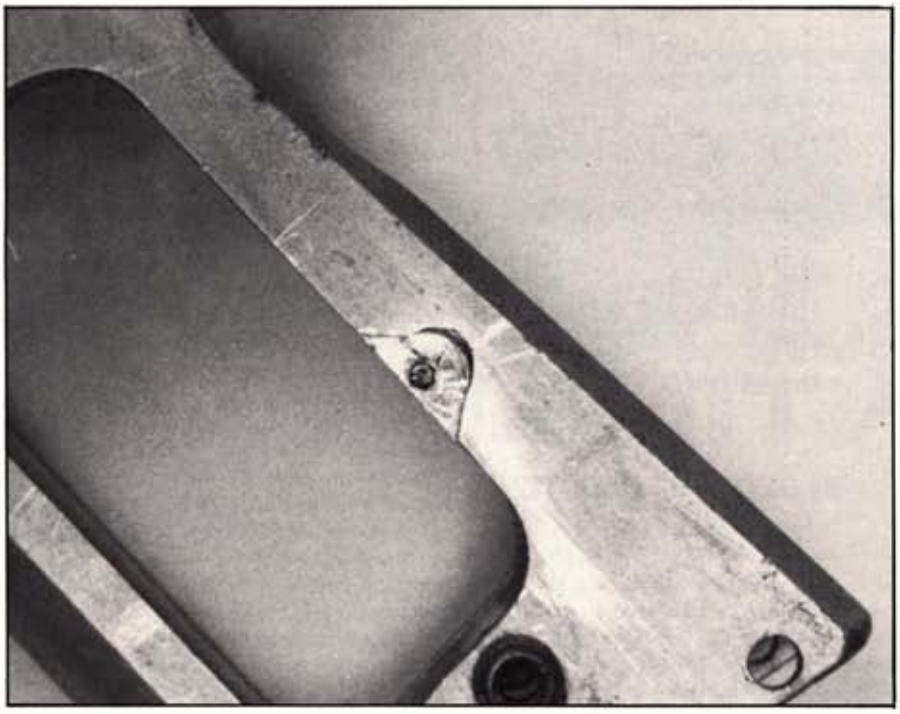
A magazine ejector can prevent that sort of problem. It won't help with a badly jammed magazine, but will take care of any interference you wouldn't notice during loading. In its simplest form, the ejector consists of a stiff spring under the gun's grip; the spring compressed by a lug on the magazine as it is seated. Then, when the magazine catch is disengaged, the magazine is thrown clear, even if the gun is held upside-down.

To make this gadget, obtain a few inches of 3/64-inch diameter spring wire (music wire) from your local hobby shop. Bend the spring shown, altering to suit your particular gun if necessary. The one shown fits the Colt GM series, but will fit big-bore Star and Llama models as well.

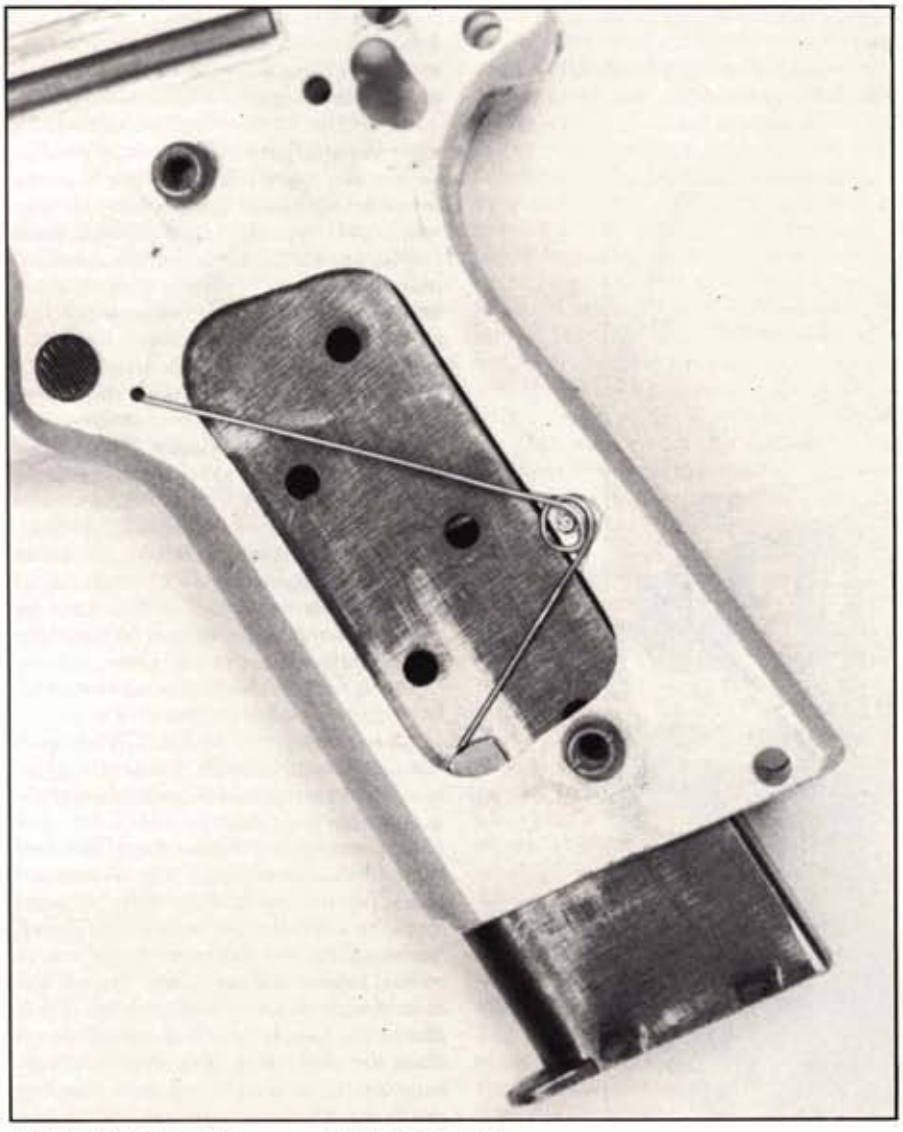
Position the spring so its lower leg falls inside the butt cutout, just above the solid web, as shown. Drill a 3/64-inch hole to accept the turned-in tip of the upper spring limb. With this tip seated in the hole, outline the spring coil on the rear of the frame wall. Use a drill of appropriate size to form a cavity that will accept about half the width of the coil *without* allowing the spring to intrude inside to interfere with the magazine or any other internal parts. If possible, use a drill ground with a very shallow point, and do not drill clear through the side-wall. Ideally, this hole should be flat-bottomed and made with an end mill.

With needle files and/or small chisels (a hand grinder and rotary file will help), open up the front of this recess as shown so both limbs of the spring have room to move.

Position the spring and center-punch directly over web at the rear of the magazine well. Drill a 1/16-inch hole into the web, then drive in a short length of roll



Top: Closeup of spring seat cut-out with anchor pin drive in place. Below: Ejector spring as fitted to a LW Colt Commander. Note small hole near magazine catch and lug soldered to side of the magazine.



pin. This pin keeps the spring from jumping out when there is no magazine in place.

Seat the spring and hold it tightly in place, as it would be if the grip were in place. Bend the lower limb inward, about ¼ the width of the magazine well, but not so far it will catch on the magazine feed lips as it is inserted.

File a piece of 1/16-inch steel to the shape shown. Locate it on the magazine wall approximately as shown so it will engage the lower limb of the spring. File a slight bevel on the upper edge to prevent the spring slipping off. Arrange this lug so it will compress the lower limb about ¾-inch, or a bit more, when the magazine is fully seated.

Solder the lug securely to the magazine wall. Soft solder will do, but silver solder is better. For soft solder, make the lug a bit larger for more joint surface.

Next, file a passage in the inside of the magazine wall to clear the lug as the magazine is seated.

All that remains now is to carefully bend the lower limb of the spring so it is caught by the lug and compressed as the magazine goes into position. It should not require excessive force to engage the magazine catch, but should be stiffly compressed. Then, when the magazine catch is disengaged, the compressed spring asserts itself and literally hurls the magazine clear of the butt.

When reinstalling the grip, be sure to relieve the inner surface for the upper limb of the spring; also at any other point where it might interfere.

The spring can be made as strongly as you want, but I caution against overdoing it. If too strong, seating magazines can become difficult—and magazines can be damaged by too-forceful ejection. In my opinion, it's best if the spring is just stout enough to toss an empty magazine completely clear of the gun when held vertically, butt-up.

Once installed, the magazine ejector can be simply lifted out after removing the grip. Unaltered magazines may be used in the gun, with or without the ejector in place. The modifications to the gun do not effect it functionally. The slot in the frame for the lug on the magazine *does* weaken that area; however, there is no load there unless the gun is dropped or struck heavily. On the other hand, magazines modified by adding the ejector lug *cannot* be used in any gun not altered for the purpose.

In my opinion, that's a small price to pay for positive and unfailing magazine ejection.

HANDGUN HUNTING

By GEORGE BREDSTEN

QUESTION people as to the effectiveness of handgun bullets on big game and, unless also experienced big game handgun hunters, their answers are apt to be based on hearsay and contain misconceptions. A similar situation exists pertaining to most big game handgun hunters and their professed knowledge of handgun bullet performance on big game larger than whitetail deer.

Only a small segment of the handgun hunting fraternity has the interest, opportunity and wherewithal to hunt the larger species of big game. What with the distance, time and expense usually involved, one would hardly expect it to be otherwise. A somewhat larger percentage of handgunners hunt for big game like deer or even black bear, but relatively few of these hunters are successful in taking big game with the handgun. It can be said, without serious risk of contradiction, that the hunting experiences of most handgunners are limited to small game and/or varmints.

A perusal of handgun hunting literature reveals the rather disturbing fact that very few of the authors have experience taking the larger species of big game with the handgun. One should not shoot rockchucks, jack rabbits or similar animals with a handgun and then claim to know what the bullet(s) will do in big game. Also, while it may be interesting to shoot into pine boards, metal plates, modeling clay, or 'clean, sifted beach sand', the handgun bullet performance in such media is a very poor indicator of how the same bullet performs in big game. Yet many authors, lacking field experience, use the foregoing techniques as a basis for postulating handgun bullet performance in big game.

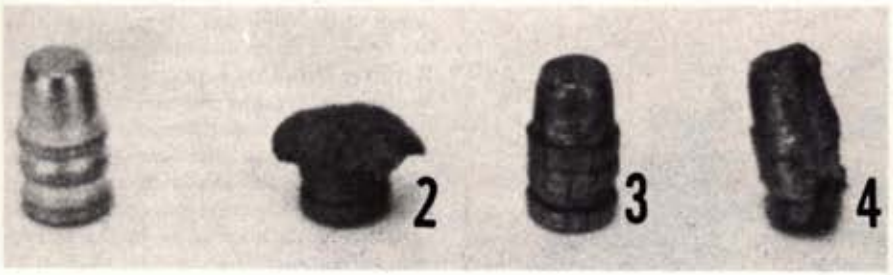
As a result, some authors are not hesitant to cite as fact that which is conjecture. For example, what other rationale explains one author's claim that the 256 Winchester is an adequate (?) handgun cartridge for big game out to one hundred yards, yet at the same time he restricts the usefulness of the 44 Special and 45 Colt to approximately half that distance? Of course, the same author believes only jacketed handgun bullets are suitable for taking big game, and he also maintains handgun bullets do not penetrate as deep into big game as do rifle bullets. Those handgunners who have taken big game using the Elmer Keith design, cast bullet, full power load in .41 Magnum, .44 Special, .44 Magnum or 45 Colt will chortle at such ignorance.

While the 45 Colt bullet (Keith load) gives penetration in big game as good or better than many rifle bullets; it is a matter of demonstrable fact that the .41 Magnum, .44 Special, and .44 Magnum bullets (Keith loads) penetrate considerably deeper into big game than do most expanding bullets from commercial rifle cartridges under forty caliber!

As a *point d'appui*, the reader is referred to the photographs of the moose and of the bullets recovered from the moose taken with a sixgun. This moose was taken at about seventy-five yards by ABGHA president, Larry Barnes who used a Ruger, Super Blackhawk, .44 Magnum and handloads (Hensley & Gibbs #503 cast bullet over 22.0 grains of 2400). While the details of this hunt are not pertinent to the subject of handgun bullet performance in big game, it is interesting to note this moose was taken incidental to a waterfowl hunt.

A summary of the bullet(s) performance—placement, penetration, recovered diameter and recovered weight—is shown in the table.

Lest someone question the efficacy of this .44 Magnum load, it is mentioned that the moose immediately dropped when hit with the first bullet. This bullet, having perforated the upper lungs, was or would have been adequate to kill the animal without the following shots. This is due to the fact that once an animal drops from the effect of a lung shot, it is very rare for the animal to regain a standing position—let alone get up and move.



BULLET	PLACEMENT	MEASURED PENETRATION	RECOVERED BULLET DIAMETER	WEIGHT
1	8" behind left brachium 10" down from dorsum	17" with 2 ribs	None—thru moose	
2	Right brachium angling into neck	26" shattering humerus	.712"	227.6 grs
3	Right brachium angling into neck	32" no bone	.431"	245.8 grs
4	Right brachium angling into/across thorax	37" with 2 ribs	.474"	239.7 grs
5	Right side of neck coup de grace	12"	None—thru moose	

Even though the moose dropped with the impact of the first bullet, it did thrash about with its head and forelimbs—thus, the follow-up shots were made to affect a quicker kill.

Living in Alaska, where many moose are harvested annually, it has been my good fortune to take a few moose, observe other hunters take several more, and to personally check-in *dozens* of successful returning moose hunters. Being an inveterate firearms/hunting enthusiast, it is normal operating procedure to question these hunters as to cartridge (bullet) performance, and where possible to examine the animal to observe terminal ballistics.

This might disrupt the mental somnambulism of those who harbor the delusion that foot pounds of energy equates to cartridge (bullets) performance, but certain large caliber handgun cartridges, properly loaded, have generally proved to be more effective on large big game than rifle cartridges of the .270 Winchester class. Discounting the fluke hit in the brain or spine, the observed/reported performance of this class of rifle cartridge indicates two and three hits in the thorax to be typical—yet, most of the moose so hit were able to travel some distance before dropping. Conversely, a disproportionate number of moose taken with handguns have been dropped with a first shot thorax hit.

To minimize misunderstanding, one should recognize that the existence of certain conditions together with various patterns of hunter field behavior makes it possible for the handgun cartridge to produce superior results. First, rifle bullets of the .270 Winchester class, even with premium bullets, do *NOT* penetrate as deep in big game as do certain handgun bullets. Even though rifle bullet penetration is ample for the so-called 'classic' broadside, behind the shoulder lung shot; the penetration factor quickly becomes marginal and finally inadequate when various angling shots are considered. The small bore devotee usually replies with a rather naive comment to the effect that 'one should bypass or forgo any extreme quartering or raking shot—thereby reducing to an academic subject the problem of inadequate penetration.' Superficially, this appears to be good advice, but it contains one serious flaw that cannot be disregarded.

For most persons a guided moose hunt represents a substantial investment of time and money, and after eight or nine nonproductive days of a ten day hunt, it would be unrealistic to expect most hunters to forgo a raking type shot if it was offered. Whether or not such shooting is ethical begs the issue, because like it or not, many hunters will attempt such shots out of sheer desperation. If the rifle cartridge used is a .270 Winchester, or its ilk, the chances are high that a wounded and lost animal will be the results.

Second, no pretense is made that the subject of wound ballistics is thoroughly understood, but such factors as sectional density (initial, transitional and final), cross sectional area, dwell time, shape and extent of the temporary/permanent wound channel, and the wound track's proximity to or contact with various body organs all contribute to the actual terminal ballistics achieved. However, when all types of shots are considered, the large caliber handgun bullet (SWC configuration) gives more reliable results. Naturally, the distance at which big game is taken with the rifle versus the handgun has an important bearing on their relative performances. Moose shot with rifle cartridges were taken at two hundred or more yards, while the moose taken with handgun cartridges were shot at seventy-five yards and less. The point made is that under the conditions of *actual field use* the handgun/cartridge combination proved more efficient!

TAKING AIM

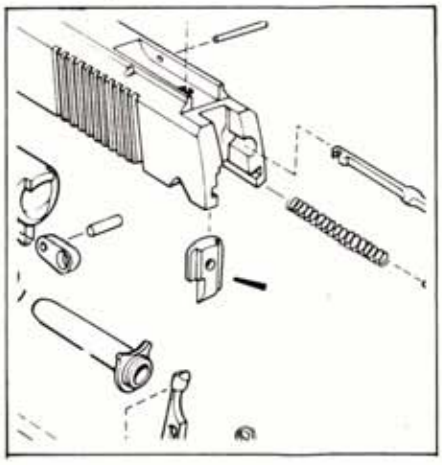
HANDGUN RELIABILITY—Part III

DESIGN ERRORS

Some will argue, and with much merit, that changed circumstances absolve the designers to some degree in certain cases. One case which I don't think falls in this category is a post-war imported 9 mm auto I have recently fired. This fine gun has a light, stamped metal hammer. With excellent American ammunition, this pistol will usually not fire on the first try double action. The light hammer is just not heavy enough to give positive ignition in that mode; it does work faultlessly once the hammer is cocked. I have seen a new Mauser Model P '06/'70 of late manufacture recently which was a masterpiece of beautiful hand work. But, as Luger owners have long known, this pistol is highly sensitive to ammunition power levels, and this example is no exception. It flatly refused to function with any American ammunition loaded to SAAMI standards, but functioned beautifully with stiff handloads and foreign loads. Another design problem involved the large and highly effective extractor made part of the original Smith & Wesson Model 39-1s. Some of these, unfortunately, had a tendency to break under hard use.

A sensitive area for all pistols is the feed ramp which guides the nose of the cartridge from the magazine up and into the chamber. Many fine, older pistols were made when only full metal jacket ammunition was available, and their ramps were not shaped to handle modern, soft point, and often bluntly shaped bullets. Usually smoothing and changing the shape of the ramp will overcome this problem.

Some pistols of the Browning type have a small retaining plate at the rear of the slide which holds the firing pin in position



in its well. Occasionally this plate fits loosely and can, on firing, slide down as the firing pin goes forward and the slide to the rear. When the slide again moves forward the plate will catch and prevent completion of the cycle. Many .45 devotees routinely pin the plate in all new guns to positively prevent this malfunction.

CONDITION OF THE GUN

Improper care can be devastating to revolver reliability. Dirt and grease can collect and harden in cylinder latch cuts preventing lockup and proper alignment with the barrel at the moment of firing. This can be very dangerous to both the shooter and bystanders. The cylinder latch itself can become stuck out of engagement by dirt and grease accumulations.

Cold weather and excess oil and grease stiffened by temperature, can so weaken hammer fall or dampen firing pin movement as to prevent firing. Cold also causes condensation when handguns are brought in out of the cold, and this can cause rust overnight under optimum conditions. Revolver chambers kept loaded seem particularly vulnerable, and once it happens it's bad if you clean them and bad if you don't! Either way a roughness is introduced—either the raised rust or the pitting where it's been removed—and fired cases are going to tend to bind and prevent extraction.

Plastic ammunition components can also cause rust, and in unexpected ways. Under the heat of firing, a tiny amount of the plastic melts and forms a wash coating, usually near the chamber forcing cone. When this happens, it seals in the afterproducts of firing and prevents subsequent cleaning from getting them out. Usually a shotgun problem, this can happen to handguns using plastic capsule shot.

Gunk, burned powder and grease residue, inevitably accumulate as sludge in guns as they are fired. Last summer I had occasion to do an extensive test of pistol spare magazines in which many rounds were fired. One clear impression with which I came away was that this sludge does not enhance reliable function. No big thing, of course, but it does point up the fact that duty guns need to be kept clean and dry.

MECHANICAL DAMAGE

The last cause of failures I look for in examining a gun is mechanical damage. Handguns—I think revolvers particularly—are rather fragile tools. They do not stand up well under abuse no matter who claims they do . . . yeah, I know. I have seen the odd .45 used to pound in tent pegs too, but I am not going to stake my life on one that has been used that way. Handgun sights are specially vulnerable, with the target variety being by far the worst offenders. The very small adjustable rear sights made to go with the issue front sight are the most easily damaged. High front sights for 9 mm and .45 pistols often snap off at the base. But, like a shotgun, a handgun with a smashed sight is far from out of the fight.

Having given my gun as good a visual inspection as I can, with the help of a good gunsmith if needed, what do I really know about its reliability? About all I know is that of the possible causes of failures I've discussed and looked for, I haven't found anything that looks wrong. That's not enough to bet my life on.

Maybe it would be a good idea at this point to stop a minute and be sure that we are all on the same wave length when we talk about handgun reliability. What I mean when I use the term is this: I want a very high degree of assurance that, if an emergency arises, my gun will function as it should on the first try. I think I need a gun that is 95% reliable, as a good goal, and I need to be about 95% confident that it is in fact that dependable!

CONFIDENCE LEVEL	NUMBER OF FAILURES	RELIABILITY 95%	96%	97%	98%	99%
99%	0	96	112	151	227	454
	1	132	166	221	332	665
	2	168	210	280	409	820
	3	201	252	335	504	1005
95%	0	59	75	100	180	301
	1	96	119	158	238	478
	2	126	158	211	318	635
	3	156	195	261	391	783
90%	0	46	56	76	113	230
	1	77	97	129	194	390
	2	106	134	178	269	528
	3	135	169	225	338	675
80%	0	32	40	54	81	163
	1	60	75	101	151	303

Now the question becomes:—what sort of test can I subject my gun to which will tell me whether or not I have these objectives? It is a truism to say that in most all fields of human endeavor we sooner or later find ourselves in a situation in which there is a driving need to strive for perfection. And, there seems to be a law of life that sooner or later in that drive toward perfection you reach a point where the curve of cost, or effort, or whatever you must spend to make progress, turns almost parallel to the goal. Cost shoots up for each small increment of progress made. This happens in reliability testing, and the first thing I needed to know was whether or not I could afford to run a shooting test of reliability that would give me a decent level of confidence, keeping in mind the limited resources I can afford to spend.

For the answer I turned to Navy BuAir aero engineer and good shooting companion Clif Wrestler, who prepared the rough table presented here.

The entries, of course, being the numbers of rounds required to be fired based upon the number of failures encountered. Thus, to achieve my 95% reliability level with about a 95% level of confidence I would have to fire between 59 and 156 rounds, depending upon how many failures I had. I couldn't predict the failures, so opted for an even 150, hoping for the best. Three boxes of cartridges, after all, was an expenditure within reason!

Actually, in the event, I selected to test two guns of different kinds to see what the outcome might be, and because I habitually use two rather than one for the emergency role. The two I chose were a new, unfired Smith & Wesson Military and Police Model 10 in .38 Special caliber, and a .45 Colt Government Model of pre-Series 70 Mk IV vintage but still a new gun. It had never been fired before recently having a custom barrel bushing, buffer and target sights installed. These are service guns in wide use and it is good that they were both new, for most of the guns in the hands of homeowners and businessmen probably fall in this same class—along with quite a few police handguns as well.

Before shooting the test certain ground rules had to be set to eliminate outside influences to the degree possible:

—Ammunition must be compatible with the weapon.

—Ammunition must be new, of commercial manufacture, and all of the same kind and lot for each arm. No change in ammunition could be made during the test.

—The test would begin with the guns in good order and properly cleaned.

—There would be no cleaning during the test; stoppages, if any, would be cleared but no other action would be taken.

A young friend and I fired the test, she using the .45 and I the Smith. I can't say I was really surprised by the results. The Smith came through without a single failure in the 150 rounds fired. The .45 had one failure at round 92, when it failed to eject the empty and stovepiped it between chamber and breech face. Technically, I counted this a failure, though the gun *did* fire, and the bullet *did* strike the target . . . it would have done its job. So, whether it was a malfunction is, I think, at least debatable.

What did I prove? Well, as it turned out if you will enter the table at the 95% level of confidence and move across to the right along the zero failures line, you will see that the Smith & Wesson Model 10 actually gave a reliability of between 97% and 98%. The .45, with its one failure, still fell only 8 rounds short of giving 97% reliability too!

This approach to determining reliability seems pretty well suited to the average homeowner or businessman who, after all, does not reasonably expect to face a large

number of emergency situations. Things look quite different seen through the eyes of a police officer in some of our large cities where the officer may have to face such situations as often as once a week or more during certain portions of his service. Here the problem quickly grows too big for the individual to handle. Departments which can afford the larger ammunition cost—it's going to be shot for training anyway—and keep the detailed records needed over a period of months, can push reliability and confidence levels way on up and use this technique possibly in the selection of service arms and ammunition.

The final consideration is how to maintain your gun in the utmost readiness and at the reliability standard you've established. Obviously it must be kept clean and free of excess preservatives. Some officers who must be out in all sorts of weather prefer to use a tough wax rather than grease as an external preservative. Stainless guns offer real advantages here.

I never like to leave a handgun in a leather holster for any length of time when it is not in use. It's an open invitation to rust. Soft, lined pistol "rugs" are very good for protection but also pose the danger of rust. I keep ready guns stored in these rugs but always in light plastic bags which tend to slow the evaporation of thin coats of preservative.

In the next issue, I hope to conclude this discussion with some thoughts on associated equipment for use with handguns and its impact upon handgun reliability.

BREAKFRONT RIGS

By JERRY AHERN

THE breakfront holster is not a new invention. No source at my disposal indicates when it was originated, but certainly one of the most famous of the early breakfronts is the "Lightning" made by the venerable firm of Berns-Martin. A few years back, Bianchi (100 Calle Cortez, Temecula, Cal. 92390) bought out Berns-Martin and shortly thereafter went into production of several breakfront duty holsters and redesigned the already famous Bianchi 9R shoulder rig to work double duty as an ambidextrous belt holster as with the Berns-Martin model.

Few other well-known makers offer an actual breakfront, but these interesting and effective holsters are once again coming into vogue so more should be available in the future. Three companies, beside Bianchi, come to mind, one of them the respected old firm of Bucheimer-Clark (Valencia, Cal. 91355) with their outstanding model 231 Enforcer, a high ride breakfront concealment holster featuring a metal reinforced thumb snap, available for two-inch Colt D-Frame Revolvers, two-inch S&W J-Frames, the four-inch M-19 and the four-inch Python. The second company is the new firm of Rogers (P.O. Box 8028, Jacksonville, Fla. 32211) featuring a paddle-style thumb-snap breakfront made of synthetic material. Lou Reno (P.O. Box 253, Okeechobee, Fla. 33472) makes only breakfronts. These last two I have not seen, but intend to.

Bianchi, however, with several duty holsters and the redesigned Model 9R, currently has the widest selection. Before examining John Bianchi's breakfronts individually as representative types, it would be well to examine the construction of a typical breakfront holster. A breakfront is most analogous to a right-side-up snap draw shoulder holster, utilizing a leather covered spring clip which holds the gun in the envelope until forceably withdrawn through the bite of the clip. The difference lies in direction. The snap draw goes out trigger guard first, the breakfront goes topstrap first.

In appearance, the breakfront is most similar to a clamshell holster with all the advantages and none of the drawbacks. The clamshell completely covers the revolver, in most cases from the frame just forward of the grips—hammer spur and trigger guard included. To get the gun out of the clamshell a spring must be activated in one way or another which opens the actual pocket of the holster on hinges away from the extension of the shank or backing. However, in the clamshell, one of the two things was wont to happen. Either the holster opened every time it was bumped or jarred, dumping the gun, or the holster wouldn't open reliably when the gun was needed.

I said earlier that the breakfront has all the good points of the clamshell as far as covering the revolver and none of the bad features. The typical breakfront also completely encloses the revolver from the grip frame forward, affording maximum protection attainable without a full flap. It is proof against unwanted withdrawal by anyone but the wearer, whether jerked from the top, from behind or to the side. And, more importantly, when holster size is properly mated to the gun, the breakfront allows smooth, rapid withdrawal and no risk of the gun falling out unintentionally.

I say "no risk" and this I believe. The few stories one hears of breakfronts dumping the gun are usually all too similar to the one I will recount. A gun dealer was swearing up and down that a police officer to whom he had sold an old-style Bianchi 9R shoulder rig experienced the gun falling out on several occasions. I pressed the dealer on the matter because I frequently use one of these holsters myself. The dealer finally admitted that the policeman had been stuffing a 2-inch Colt Lawman, nearly an N-Frame sized gun in Smith & Wesson parlance, into a holster for a two-inch Smith & Wesson J-Frame. Under the circumstances, few holsters would have performed as well under such a strain and it is a testament to the quality of steel used in the Bianchi spring clip that the outsized gun didn't cause it to break.

The breakfront draw is simplicity itself and the easiest fast draw to learn. One simply positions the holster firmly to the belt at waist level. Since the breakfront requires as rigid mounting as possible on the belt, a breakfront should not be slung on the hip. Bill Jordan's method of securing a holster to both trouser and gun belt makes even more sense with a breakfront.

To make the draw, arc the gun hand down firmly onto the butt, exerting pressure downward and forward driving the top strap through the clip. As the cylinder starts to break, the muzzle, being narrower, has a natural tendency to slide out and up, naturally starting the gun into position for firing. The hand almost follows the gun as the butt is brought down raising the

barrel. Note that the entire sequence of snatching the gun up, breaking the pattern of movement and driving the gun forward into position is completely done away with, hence the remarkable speed that can be attained with such a holster.

In the Bianchi line, there are several excellent breakfronts, the first of which is the double duty 9R. When not used as a right or left hand belt holster, it is slung upside down on a shoulder harness. Unlike the more conventional upside-down short barreled revolver shoulder rigs, where elastic is used to hold in the revolver, the Bianchi model is held in by the same reliable spring steel clip. To draw, one merely snatches the butt of the revolver and pulls the gun through the clip. One sees why the original Berns-Martin version was called the Lightnin'.

Two excellent duty holsters are available as well, among these the Bianchi Model 2800, "The Judge". A truly unique holster, it is today's breakfront design at its zenith. The holster features a completely open muzzle, the front of the holster locked together by the spring clip. To minimize bulk and aid retention, The Judge features steel molded cylinder recesses. The butt of the gun is completely exposed for ease of grasping while the hammer is protected and the gun further secured in the leather by an integral thumb snap featuring covered and recessed snaps. The belt loop on this short shank holster is designed so that an Eisenhower-length jacket can ride between the holster and the belt. For rigidity on the belt, a screw tightened belt lock allows the holster to be rigidly fixed to any position on the 2¼-inch belt. The Judge is available in black, right or left hand, plain or basket.

Similar to The Judge but featuring a closed muzzle end and complete coverage of the gun save for the butt is the Model

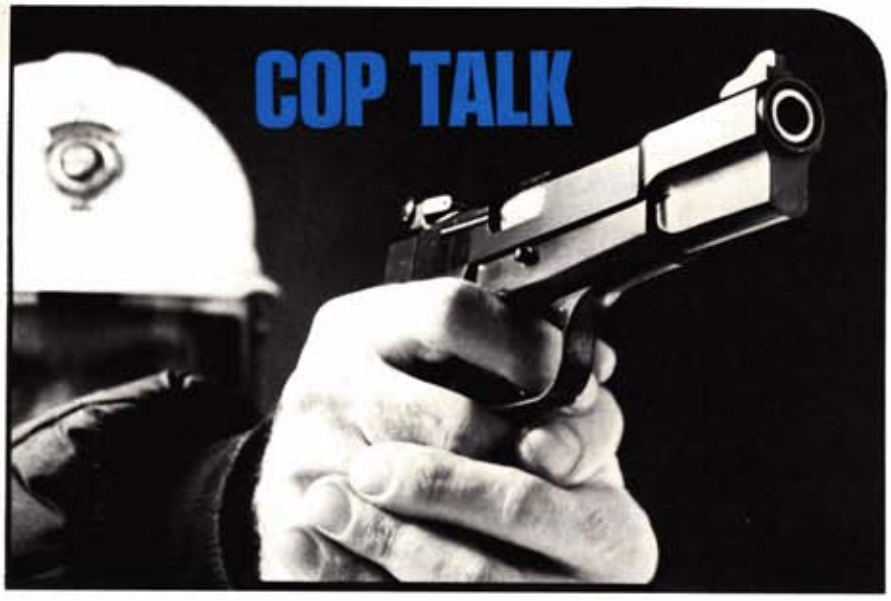
Bianchi Model 27 shown with the standard strap (left) and with modified strap for LAPD use.

#27, known as the "Break-Front". The Model 27 features the most unique safety strap this writer has seen. The strap can be utilized as a thumb snap, looks like a standard hammer safety strap to further confound a prisoner or felon who wants to snatch the gun and can be completely removed without the strap remaining to mar the appearance of the rig or get tangled in the belt.

Not content with these designs, John Bianchi confided he has a new holster up his sleeve incorporating the breakfront system. But, more about that when it becomes available.

The breakfront principle, as made by Bianchi, Bucheimer-Clark or the Rogers design is a sound one, providing the near maximum in speed and security and protection. A totally different style of draw, it requires a psychological change-over for the average pistolero. Once this is overcome and the breakfront design given a try, the results can really prove worth it. Every handgunner should be pleased that this unique concept's star is in the ascendancy.

The #2800 S swivel breakfront from Bianchi.

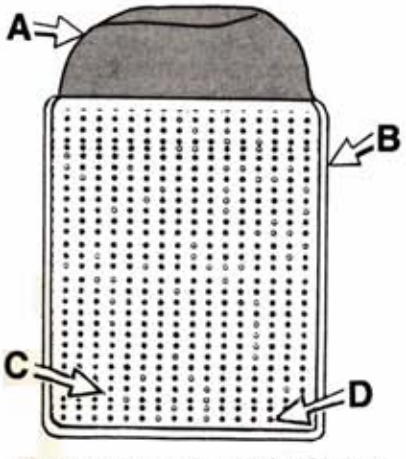


GLASER SAFETY SLUG POLICE-ONLY MANSTOPPER

By COL. REX APPELGATE

Until last year, few police, firearms and ballistic experts had any knowledge of the existence of The Glaser Safety Slug. Its a different situation now, and although this is currently a limited production, little advertised, police handgun round, its popularity in law enforcement circles is rapidly escalating. A recent U.S. government evaluation, comparative demonstrations against conventional police rounds, and word of mouth reports amongst police agencies is "spreading the word" throughout the entire law enforcement community.

The only existent piece of Glaser literature accurately describes the situation, quote: "The Glaser Safety Slug gives the officer the edge." In this case and as the literature implies, the main emphasis is placed on the public safety-anti ricochet factor. However, equally and perhaps more important to the individual officer is the fact that it makes him "safer" in an actual firefight with armed criminals. The capability to deliver instant and incapacitating shock from his service handgun, or backup, with a single head or body hit is always present.



Cutaway rendering of the Glaser Safety Slug shows features contributing to its high RII rating: A. 20% glass-Teflon nose. B. Thin copper jacket. C. Number 12 chilled shot suspended in D. a liquid Teflon solution. Its light (96 grain) weight allow very high velocities.

This round first came to national law enforcement attention through the auspices of the U.S. Department of Justice. In 1972 this department sponsored a survey covering the effectiveness of police hardware, including lethal weapons. Based on a computerized representation of 13,000 police agencies, large and small, the survey revealed that: 99% of all police duty handguns were revolvers, 66% of the state police officers favored the .357 magnum, 94% of all other departments had officers armed with the .38 Special revolver, and that complaints relative to ammunition had mainly to do with the ineffectiveness, lack of penetration and stopping power of the 158 gr. lead round nose .38 Special cartridge. The survey data, plus public and departmental controversy over the effectiveness and types of ammunition that should be issued, resulted in a government financed and sponsored testing program to determine the true facts and provide a data base for police selection of service ammunition.

The National Bureau of Standards was requested to prepare and supervise a testing program that was conducted by the US Army Ballistic Research Laboratory at Aberdeen Proving Grounds, Maryland. Prior to the beginning of the program at Aberdeen, all existent written material on handgun, ammunition ballistics and effectiveness on the human animal was compiled and studied. U.S. military, civil and police handgun wound data was studied, and noted handgun and ballistic experts were invited to add to the pre-testing input. During the test program, 20% gelatin blocks were used as human tissue simulants, flash X-ray and high speed 16 mm cameras capable of filming 20,000 frames a second, and velocity chronographs were all employed. In an entirely new approach to ammunition evaluation, a three dimensional computer man was utilized. The computer man consisted of a human cadaver divided into 150,000 parallelopipeds, called computer cells. These cells were distinguished by their location and type of tissue etc. A team of medical doctors rated each cell with relation to the incapacitation when hit by a projectile.

Allowances were made in the computer for hit distribution, velocity, weight, depth of penetration and temporary wound cavity deformation. The combination of all these factors enabled, for the first time, a reliable measure of the amount of damage a given bullet type, traveling at a certain velocity, would cause in different areas of the human body. During the test program 142 different rounds of commercially available police ammunition, of the various brands, bullet types and calibers were fired from two and four inch police handguns. The summarized result of this program was distributed to law enforcement agencies in 1975.

The most important factor that emerged at the end of the testing was, that bullet incapacitation (stopping power) was definitely related to the diameter and shape of the temporary wound cavity at the time of impact, in relation to depth of penetration. It was only possible to make this determination by the combined use of high speed photography, and X-ray photo techniques in ordnance gelatin blocks, followed by a computer analysis. Each of the 142 test bullets was judged and assigned a relative stopping power rating. The various commercial rounds were rated by brand name and caliber on a decreasing scale. The highest rating of 54.9 was assigned to a Speer, .44 magnum 200 gr. bullet travelling at a measured velocity of 1277 fps. The lowest round on the incapacitation table was the MBA .38 Special Shortsop, 64 gr. bean bag type round with a velocity of 671 fps and a rating of 0.4. "Off beat" rounds such as the MBA, the KTW, and the Glaser were included in the program because they were being sold and used in limited quantities to law enforcement and their capabilities were unknown to police agencies, in general. The top rated .44 magnum round was recognized as one infrequently used by police but was included in the program to enable better comparative values to be placed. It

(Continued on page 16)

The best personal protection you can buy, now comes with a four-inch barrel.

If you ever have to use your personal handgun, you can't afford to miss. That's why you need all the built-in accuracy you can get in a lightweight .38. That is exactly what the new Colt Police Positive delivers. On or off duty.

Now a Colt is even safer. For years, the safety lever in Colt revolvers has served to assure that the firing pin cannot accidentally strike the primer. Now, an improved, notched lever in the new Police Positive provides more contact area to perform this safety function even more effectively.

New Colt safety lever (right) assures greater margin of safety.

But to fully understand what sets the Diamondback apart, you have to shoot it. You have to feel its almost liquid smoothness—completely foreign to any other gun of its caliber. Yet, like the new four-inch Police Positive, the Diamondback offers the compact portability of a handgun weighing less than two pounds. As well as the confidence that comes with owning the finest .38 money can buy.

Colt Diamondback .38 Special. 4" (shown) or 2½" barrel. Target grips, target hammer, adjustable rear sight, velvet smooth action. Optional nickel finish. Also available in .22 L.R. with 4" barrel.

New Colt Police Positive .38 Special double action revolver. 4" barrel, all steel frame, shrouded ejector rod, ramp front sight.

A more accurate .38. The Police Positive has a four-inch barrel. Those extra two inches mean more weight up front, less muzzle jump, better overall balance and greater confidence. The Police Positive also has a new grip designed to fit more comfortably in any size hand. Its "teardrop" shape better accommodates a smaller man's or a woman's hand, while an increase in the grip's length creates a more certain feel in even the largest hand.

Compare Colt quality. Many competitive .38's are made with aluminum alloy. The Colt Police Positive is *all* steel. Some other revolvers have only a five-round cylinder. A Colt cylinder always has six chambers. The ejector rod on many guns is exposed and can get snagged on your holster or clothing. The shrouded Colt ejector rod completely eliminates that problem.

Naturally, anything less than perfect alignment between barrel and cylinder can impair a gun's accuracy. That's why the advancing hand on the Colt Police Positive holds the cylinder rigidly in line with the barrel. There is absolutely no play in the cylinder at the critical moment of fire. On most competitive revolvers, however, you will feel a certain amount of cylinder slack.

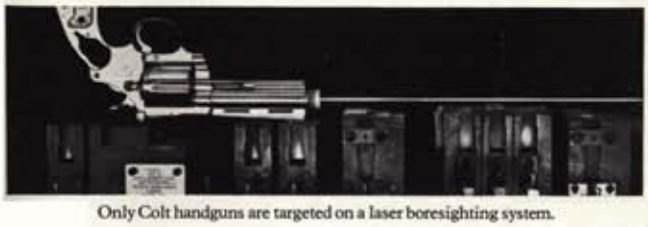
Although this may be only a modest improvement, it is typical of the tireless engineering that makes Colt the revolver other gun makers try to live up to.

Another safety design exclusive to Colt: the loaded cylinder cannot be closed with the hammer cocked. This is a simple feature, to be sure. Which might lead you to wonder why so many other gun makers don't offer it.

For additional facts on the safety and use of handguns, send for Colt's free booklet, "Handling the Handgun." Write Colt Firearms, Department 7 J, Hartford, CT. 06102. Naturally, there is no obligation.

Every Colt revolver must pass several rigid inspections. All are done by experts, by hand.

The best .38 of all. At first glance, the Colt Diamondback (inset photo above) may seem like other "target-style" .38's. True, it has the wide target hammer, ramp front sight and adjustable rear sight, all of which unquestionably enhance comfort and accuracy.



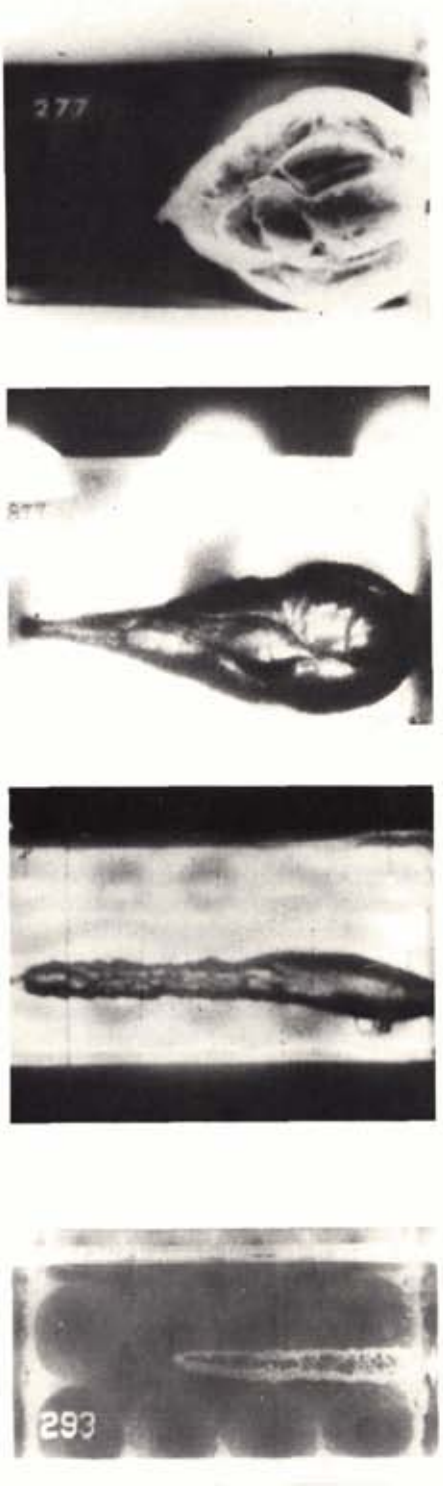
Only Colt handguns are targeted on a laser boresighting system.

COLT - an American heritage

was not unexpected the powerful .44 magnum was at the top of the rating scale, but the extremely high ratings of the Glaser rounds in conventional police calibers was unforseen. Fired from a 4" barrel, the Glaser Safety Slug rounds rated in stopping power: second (9mm rating 54.5) fourth (.357 magnum rating 50.0) and fifteenth (.38 Special rating 41.8). The most used 38 special, 158 gr. lead round nose bullet travelling at a measured velocity of 600-800 fps averaged *only 4.2*. The poor performance of this round was not unexpected due to police complaints and previous experience. However, the 6.5 rating of the .45 ACP, 230 gr. full metal jacketed round was very disturbing to its advocates and those who have for years given it almost mythical status as a manstopper. The study concluded that the velocity .38 special with 158 gr. lead round nose bullet *was inadequate*. As of this date a large number of police agencies are revising, upward, their requirements for bullet performance. Many are changing to other commercial rounds with different lighter bullets and higher velocities. Now, many officers who are able to make an individual choice are carrying the Glaser round and their numbers are increasing by leaps and bounds.

The vastly superior performance of the Glaser rounds is due to an entirely new bullet design combined with a lighter projectile (96 gr.) and use of higher velocities in the 1500-1900 fps range. This particular combination does not produce severe recoil, pressure and accuracy problems. Good firearm control is possible under all types of combat shooting, including fast double action. The Glaser Slug is a prefragmanted projectile, composed of copper jacket enclosing a metal fragment filler suspended in liquid teflon, and sealed with a 25% glass- teflon plug. So long as the pressure remains constant on impact the projectile will continue to penetrate. However, on the slightest variance of impact pressure, the plug disintegrates and the jacket fragments, so that the metal fragment filler is dispersed in an ever widening cone. The richochet problem that is of so much concern to police agencies operating in congested areas is practically non existent. The government report states, quote; "with the exception of the Glaser Safety Slug, all handgun bullets pose a serious hazard to bystanders". It is this writers opinion that there is an exaggerated concern about the ricochet potential, but it exists and many times is the dominating factor in ammunition selection. Certainly, more importance should be given to any projectile's capability to develop irreversible shock and body relaxation accompanied by minimal penetration at the moment of impact in the head or torso area. The so called "hydrostatic shock" effect and superiority of the Glaser slug is graphically portrayed in the comparative gelatin block photos taken at Aberdeen during the year long evaluation program.

Due to agency and other personal reasons most police officers have been reluctant to discuss their use of the Glaser Safety Slug against armed criminal targets. However, a number of informal reports have been made. Three such incidents are summarized:



Maximum temporary wound cavity, (top to bottom): Glaser .38 Spl. @1858 fps; 9mm 115 gr. JPH @1160 fps; .38 Spl. 158 gr. RN @868 fps; .45 ACP 230 gr. MJ @750 fps. Measured velocities.

A. An officer fired at the feet of an opponent armed with a knife. The officer was using a 38 special, the floor was concrete and the area a crowded bus terminal. The offender fell to floor screaming he had been killed. He had only superficial injuries from the fragments in his feet, and no one in the terminal was injured.

B. A criminal was running from an armed robbery attempt about 0130 hours. Several officers were firing at him with conventional ammo, and all missed although they did get two automobiles, one plate glass window, and a coke machine with ricochets. An officer using the Glaser ammo fired from a Python hit the gunman one inch in from the edge of the body, one inch above the belt at a 45 degree outward angle. With any other ammo it would have been just a grazing wound and only served to increase the offender's speed. The criminal was just turning a corner when he was hit. The officers said he went into the air when hit and looked as though he was swimming, and rolled for 35 feet. Incidentally, he was hit at a range of 42 yards. Since it was the first time they had used this ammo, they measured everything. When the officers reached him they thought he was dead, and he was sent to the hospital where he was found to be in deep shock. The projectile had penetrated and disintegrated the right kidney. The X-ray showed a spray pattern of shot just under the surface on the right side of the body. The outward angle was all that saved this individual. As it was, he spent a couple of months in the hospital and was then returned to the penitentiary from which he had escaped.

C. An armed criminal advancing on an officer was shot center with 38 Special. He collapsed, didn't even kick, and was DOA. The coroner first certified death as caused by a .410 shotgun at point blank range but could not understand the absence of powder burns. There was a neat entry hole and the X-rays showed a perfect internal shot pattern.

The effectiveness of this new ammunition is largely unknown to the public, the many times hostile press, and those individuals and organizations that are anti-police and dedicated to disarming them or requiring them to use "marshmallow" bullets in encounters with armed criminals. It should be emphasized that the use of chilled shot can be considered legal and acceptable under the much quoted Geneva convention. This prefragmented projectile does not yet come under prohibitions against hollow point or so called "dum dum" bullets now in effect in many departments because of political or other pressures. Furthermore it should be pointed out that if the department authorizes the use of the riot shotgun with buckshot

lead the rationale already exists for authorization of the Safety Slug.

The Glaser Slug functions satisfactorily in semi automatic handguns with minor stipulations from the manufacturer. Target accuracy is possible at normal police ranges. Chamber pressures are well within the safety limits used by the manufacturers of conventional police ammunition. The Glaser Slug currently being loaded weighs slightly less than 100 grains, and velocities are in the 1500-1900 fps range. Recoil is similar to that of current ammunition being used for duty purposes. As of this writing, limited orders are being shipped in .357, .38 special, 9mm, and .380 calibers. .44 Special, .44 magnum, .45 ACP and .30 carbine loads are scheduled for 1977. At a later date rifle rounds in conventional calibers will be offered to sportsmen and police agencies.

To reiterate, this round will not cause major injuries from ricochet, nor will it completely penetrate a human body and injure innocent bystanders. It is safer to use in and around congested areas, in and around aircraft and expensive installations. After penetration, the projectile ex-

Water-filled jug is shattered, but paper background shows no signs of pellet penetration.

pends its total energy, instantly, within the primary target. Sold only to law enforcement officers, it is the result of many years of world wide combat and hunting experience of Col. Jack Cnon, the inventor. Patents have been granted, others pending. Although more expensive than regular ammunition, it is only necessary to carry a few rounds in the weapon. Practice and training can be done with standard ammunition.

If the officer wants to "walk softly and carry a big stick" a couple of Glaser safety slugs, backed by more penetrating rounds are all he needs. If the police officer carries a 2" barrel revolver or a .380 duty or back up weapon, the Glaser Slug should be a must.

Editors note: The U.S. govt. report on the police ammunition test program is available from: The U.S. Department of Justice, Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, Wash. D.C. Ask for LESP-RPT-0101.01 August 1975.

Note: Inquire from: Glaser Safety Slug, Box 1975, McAllen, Texas 78501. For Police Only.

"WORLD'S RICHEST HANDGUN MATCH"

The National Shooters League's Second Annual Money Shoot Paid out Over $15,000 in Cash Prizes

By MASSAD AYOOB

IN THE PAST couple of years, competitive pistol shooting has burst out of the conventional mold here and there. Perhaps the most historical break was the formation of the National Shooters' League in Laramie, Wyoming, centered around the concept of shooting for big money. Bill Jordan was there for the first one, and his article "Shoot for Loot!" in Feb., 1976 GUNS Magazine was probably the most read and re-read story of the year in the firearms press.

$10,000.00 laid out in cold hard cash prize money? Five thousand for the first place winner? And added to this, the fact that only 20 competitors showed up for the first match, and the winning score was a 108 out of 200?

Across the country, serious competition shooters and committed non-professional gun fanciers cocked their heads in doubt and speculation. In the northwest, shooters who had gotten programs for the shoot and dismissed it as some kind of hoax or rip-off, banged their heads against their gun cabinets in frustration when they saw in the media the smiling face of winner Bill Belts counting his winnings.

In 1976, the biggies were there. The word had gotten out to the serious shooting fraternity that it was on the up and up. It was. The police combat shooters were the most strongly represented; then-National Champion, Royce Weddle, was there from Oklahoma, and women's champion, Ida McKinney, from Denver, and Reeves Jungkind of Texas, holder of more PPC records than anyone else. The

You don't see many trophy tables like this. That's over $15,000 in folding green stuff, guaranteed to make other awards look pale.

fabled California Combat League was present, with names like Al Nichols; the national Army Reserve conventional pistol champion was there too, with members of his national champion team. State champions were there, mostly combat shooters and mostly from the northwest, but the ranks of the hopefuls were also filled out with less accomplished shooters, and even some who had never shot in a match before. They had all come from as far West as Hawaii, as far East as Florida and New Hampshire.

Seventy-nine showed up for the preliminaries. All paid a flat $100 entry fee for the privilege of trying out for the top forty who would make the final run for the prizes. A few had come up ahead of time for their first couple of runs, to get the feel of the range and coordinate their practice a little better. Most, however, saw the course for the first time two or three days before the final, Saturday shoot.

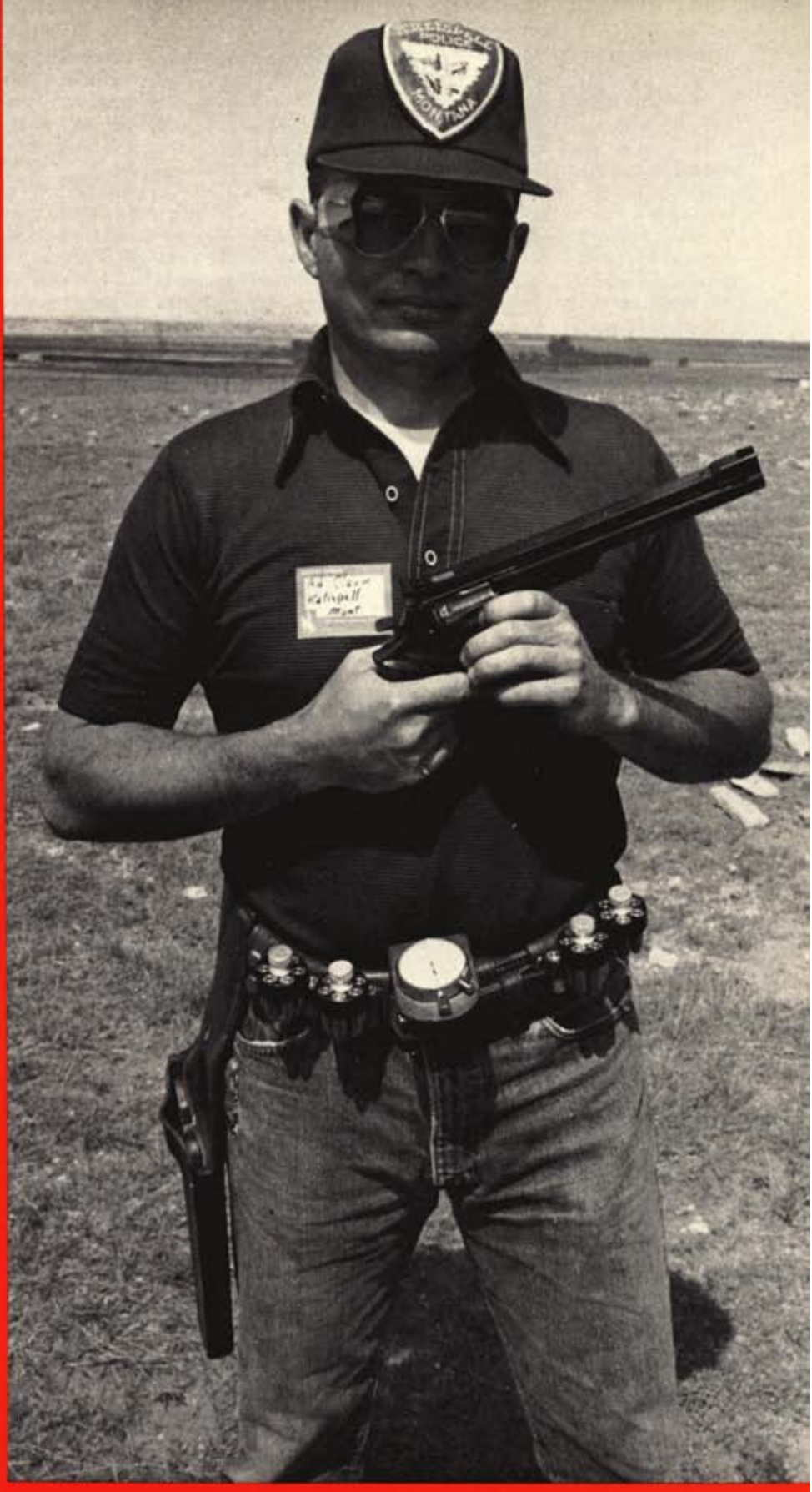
The range consists of ten "shooting pads," concrete squares that serve as firing points. The National Shooter's League range is simply a shallow dish of Wyoming farmland that has been fenced around, and fitted with backstops behind each of the ten asymmetrically laid out firing points.

The range, and the match, belong to Dr. Robert Burgess and his brother Gifford. Doc is a prosperous surgeon in Laramie; Giff is a man of independent means who chose a career as a firefighter purely for action and helping people. Both are lifelong athletes and hunters and gun buffs, and deeply concerned about the future of the latter two sports. "We had both been athletes all our lives," Doc explains, "and we were looking for something that would offer serious and competitive sport for a man over 25. Pistol shooting seemed natural.

"Giff and I had long asked ourselves why there is no favorable media coverage of the shooting sports. You and I and the readers of this magazine support a multimillion dollar industry, and some of that money and talent should be used to promote the sport itself. We built the course in 1973, developed the course in '74, and ran the first match in '75. We had realized that if we didn't do it, we couldn't be sure anyone else was going to. We selected the running course for the sole purpose of creating an exciting action that would appeal to the media."

The general media did not fling itself at the Burgess' feet. Of the competitors and spectators who turned out for the '76 shoot, almost all had learned of the event from Bill's article in GUNS. Local and regional TV stations in Denver and Cheyenne, and area newspapers such as the widely-circulated *Rocky Mountain News* gave excellent coverage, but it didn't make *Wide World of Sports*.

It didn't in '76, either, but the regional media representation was somewhat bet-



Ad Clark of Kalispell, Montana models what the well-dressed money shooter wears. The gun is a Mag-Na-Ported M-29 with a Davis rib and Elliason sights. Hot .44 handloads hang from HKS speedloaders. The leather is custom made by George Aurit. The stopwatch is optional.

ter. The problem is that the Burgesses know shooting and know what the shooting sports need, but what *they* need are the services of professional promoters.

But, back to the match itself. They are careful not to call it a combat shoot; miniscule half-oval targets were selected instead of animal or humanoid silhouettes, because they wanted to stress the aspects of endurance and marksmanship, and too many people watching on TV could have construed it as "people playing at killing" if silhouettes had been used. Still, the aspects of running and shooting do make excellent combat training, and we understand Reeves Jungkind has virtually duplicated this course as part of the training program for the Texas Rangers and Highway Patrolmen.

Two shots are fired at each of the ten targets, at ranges from 15 to 60 yards. The total "run" is 219 yards, and you've got three and a half minutes to make it. To people who aren't into running, that sounds like a track meet, but even for a certain flabby, out-of-condition gun writer, it wasn't difficult to make the time. One simply canters from position to position, not taking too much time to hold and squeeze, and then sprints furiously from Point Ten to the finish line.

Not that the running makes it easy, especially at an altitude of six thousand feet plus, and with at least two of the runs uphill. But the thing that really shakes you isn't the exertion, or lack of confidence in hitting the tiny targets. It's the pressure.

The shooters, National Champions and newcomers alike, all felt it like a weight on their backs. It was worse the final day, because the shoot had been heavily played up in the regional media as well as the shooting press, and gun buffs had poured in from several states just to watch. They lined the bleachers and the rough-hewn fences, sometimes two and three deep.

For the Stateside shooters, especially, it was rough. Whether your game is the National Match Course or the PPC, you normally compete with the knowledge that no one is watching you at the moment but yourself. Many competitors literally wear blinders. But at the NSL shoot, you wait your turn "on deck" and watch the people who have drawn an earlier run go ahead of you, and even then you can feel the pressure of the spectators.

And the applause. As each shooter ran from Pad Ten to the stopwatches waiting at the finish line, the clapping would begin and swell. If a shooter had gone over his time limit, thus disqualifying himself, a sympathetic "oo-o-oh" would come up from the crowd. If you weren't used to it, it could be a little unnerving.

Not surprisingly, the person bothered least by the applause and the hundreds of eyes was the one who captured the match. Major Franklin Green, USAF retired, is one of America's most heavily bemedalled veterans of the Olympics and the Pan Am games, and *had* known the feeling of a gallery behind his back as he shot for all the chips, and it was that acquired coolness—along with his superlative handgun marksmanship—that carried him through.

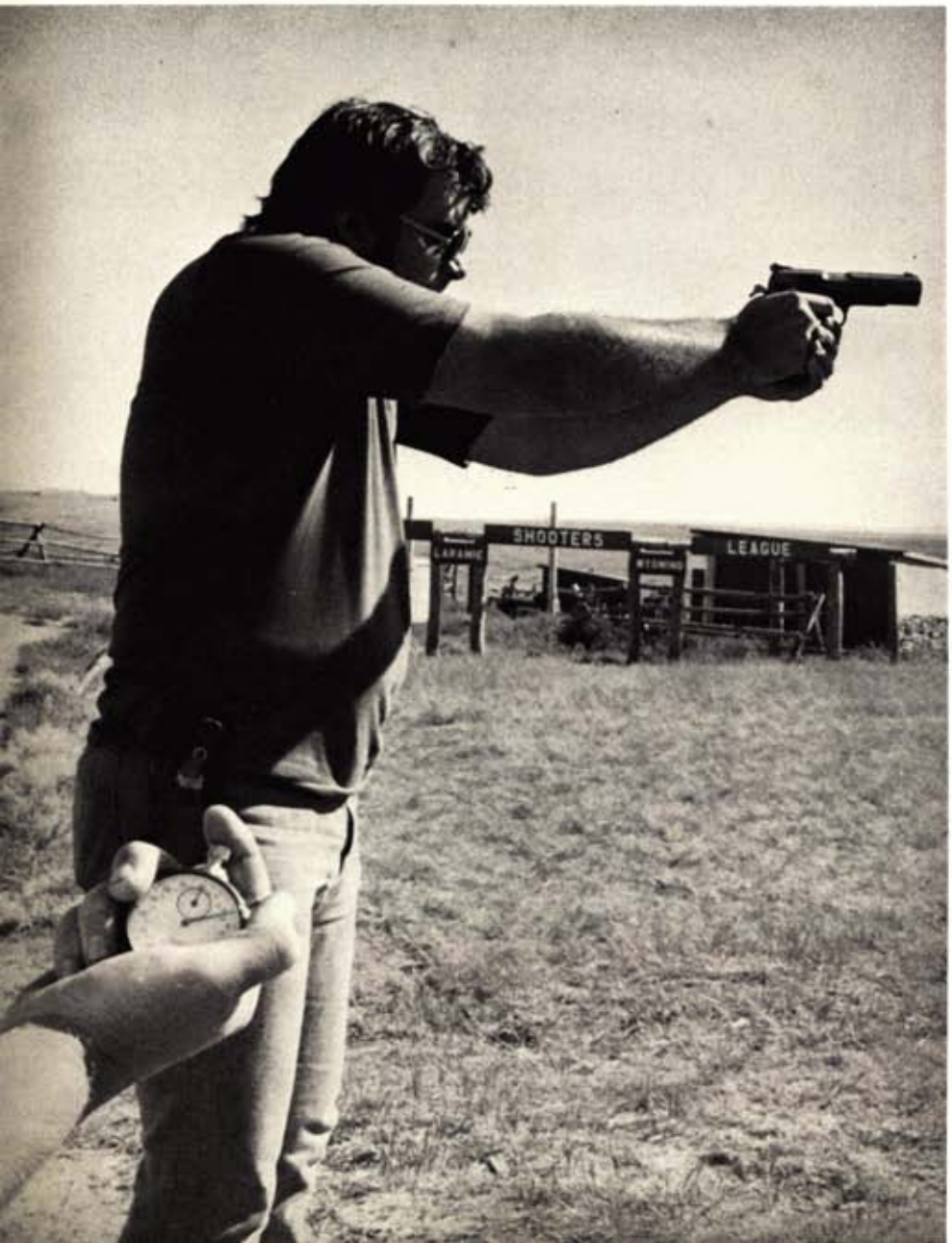
Green's obviating of the tie was too dramatic to be called an anti-climax. It was another scene that couldn't have been scripted more effectively by William Goldman. He had drawn fortieth on the roster. He would shoot last, with the full knowledge of what he had to beat, and would stand by for thirty-nine runs as the tension built.

They say that bravery is not the absence of fear, but the ability to cope with it. The same may be said of coolness under pressure. The tension had gotten to Green, because as he turned toward target Two from the first pad, after centering two hits in the tiny black of target One, both of his shots missed conspicuously and wildly in the white. And Green knew it.

But as he pivoted off the firing line and began to lope up the hill toward the next firing point, he grinned widely and yelled cheerfully to the now-silent gallery, "That was for you!" Green's next fourteen shots went into the black. Eleven were X's.

On the last pad, firing at the most distant target, the cool that had carried him to glory in the International games fled him again. But it had lasted long enough. Even though his last two shots missed the scoring area, at 11 and 5 o'clock, he had totalled a 157, the highest that had ever been shot over the NSL course.

It was shortly after noon that the table was moved to give the photographers a better angle. The television cameras hummed as Doc Burgess spread $15,000 out across a table that also groaned under the weight of guns and sterling trophies.



With clock already going, first shot is on its way. The .45 auto recoil is well under control with the two-hand hold of this shooter.

And the winner is . . . Frank Green (center) is congratulated by Doc Burgess, founder of NSL (left) and brother Giff. Note homemade cross-draw holster for Green's winning long heavyslide .45 auto by Day.

All forty of the finalists went away with something, but as befits a professional match, the real money was floating at the top with the rest of the cream. Green's first place won him a Power Custom .38, a Clark long-heavy slide .45, a commissioned portrait of himself—and $5,000 cash. Ad Clark's strong second was good for $2,000 and a custom Milt Sparks leather set. Jungkind's close third won him $1,500 and a Browning Vari-X scope. Royce Weddle was fourth with a 136-4X for $1,200. A 128-10X won Huntington Beach combat shooter Bob Dawson an even grand, and with an X less, Ed Taylor captured $800 and a Ruger M/77 .30/06 donated by Jim Clark. A 128-5 meant $600 for Tom Blizzard, an Iowa bullseye shooter, and top military pistolero Mel Makin's 128-3 stood up for $500. Defending champ Bill Belts took $400 with a 127-5, and Frank Goza, a Tennessean, found his 117-6 worth $300. Cash in $200, $100, and $50 increments went on through several more slots below the top ten.

The first NSL shoot was won with a Power Custom .38, in the hands of Colorado State PPC Champion Bill Belts. There were a lot of those guns in evidence in '76, because there were so many PPC shooters there. But henceforth, bigbore handguns are likely to rule. With the mark so small, the bigger hole makes more importance here than anywhere else. A shot that misses cutting the line of the "9" ring by a centimeter doesn't lose one point, it loses nine of them. Frank Green, who took it with a Day long-heavy slide .45 (that had a custom trigger of his own design that he wouldn't talk about), told the writer, "To win this match, you need a one-inch gun. And .45 caliber is important. Even when you compare it with the .44, you're talking .454 against .429, and in a game like this, that can make the difference." One inch guns are rare; some will tell you they don't exist. Most of the top makers guarantee their PPC .38s and NMC .45s for two, two and a half inches at fifty yards.

Custom pieces of large bore will be the choice here. I don't know if Day guarantees an inch, but the fact that Green took it with a Day pistol should mean a lot more orders coming in. Ron Power took several orders for heavy Douglas barrelled .44 and .45 Smith & Wessons before he left Laramie.

The next two top guns were Clark's Model 29 with 8⅜" barrel and Davis rib, fired single action with monster .44 Mag hotloads; taking third was Reeves Jungkind shooting double-action with one of his own custom Colt Pythons.

Ad Clark used the heavy .44 load primarily because after extensive experimentation, it proved to be the tightest-grouping long range formula he could work up. The speed gave him a flatter trajectory, too. With the varying distance, a straight line of bullet travel means a lot,

Doc Burgess shows style, rounding the corner between targets 5 & 6.

since there's no time to change your sights, but the problem is that since you're shooting up and down hill, you're going to have to compensate your elevation slightly if you're shooting anything but a laser beam. That being the case, your best bet is to select a load for pure accuracy, and practice enough with it to know where to Kentucky at each range and each angle. Scuttlebutt is that Ad's going to shoot an SA-only Power/S&W .45 next year.

Flat trajectory is still valuable, though, because you'll need to be able to see the black at all stages. Holding under won't hurt too much, but trying to hold over in the center of the white can destroy you with a scoring area as small as the one NSL uses.

If you shoot a sixgun, carry speedloaders. You want a holster that's quick to draw from, yet retains the gun while you're running across the uneven ground. A thumb-break isn't the best, 'cause it takes you a second or two to fasten the strap, and the gun has to be holstered before you leave one pad for another. Most shooters used open-top rigs, and kept a restraining hand on the gun as they ran. However, you can still lose the piece in a fall, and holding one arm rigidly at the side makes you feel awkward running. You want your forearms hanging loose in front of you to sprint with minimum fatigue. A cheap spring-tension holster like the Bucheimer Sentinel might, surprisingly, be the answer.

Footwear is important. More shooters seemed to be shod with sneakers than anything else. I found Nike cross-country running shoes to be ideal for me, but I didn't even place, so take that from whence it comes.

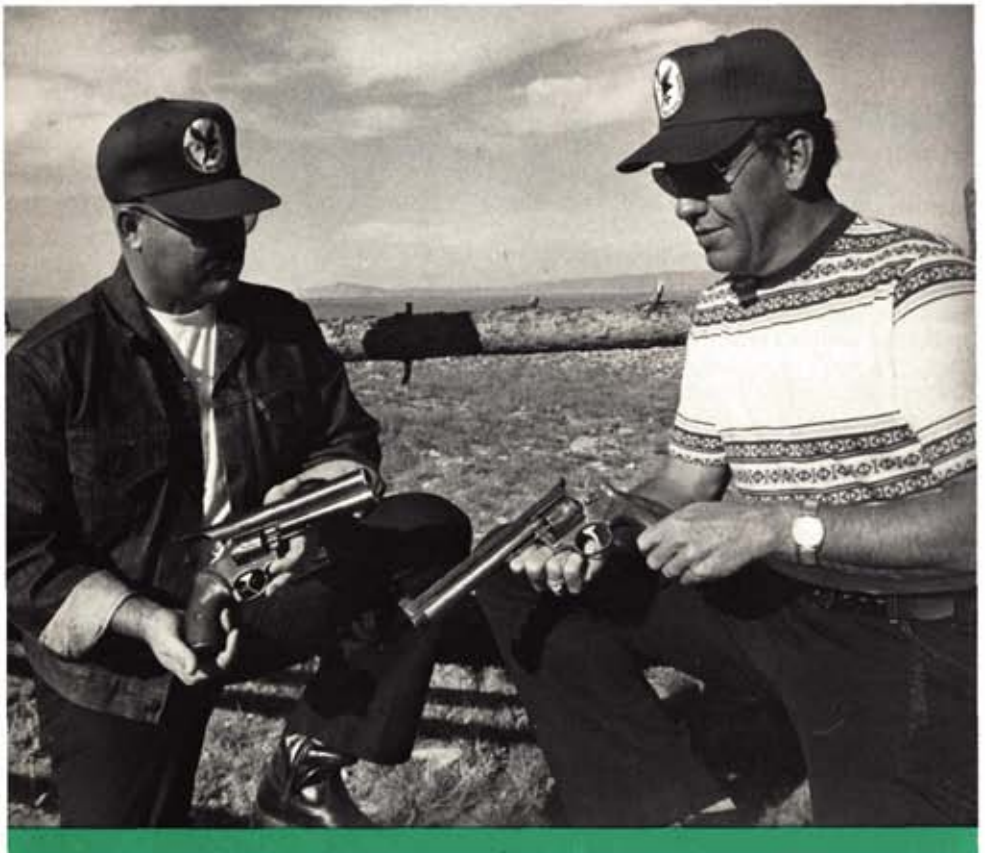
The ground isn't *that* uneven out there. The worst place is coming off the knoll from the last firing position as you make your final run toward the finish line. Several people took spills there, in practice and actual competition. A light, flexible over-the-ankle woodsman's boot might be the ideal footwear.

Dr. Burgess is thinking of changing the course around for '78; the range proper will remain the same, but the sequence of targets, or possibly the angles, may be changed. Your best bet is to write him for the current program, and ask specifically for details as to the uphill or downhill angles of fire on each shooting pad. The ranges will be spelled out in the brochure.

The roast beef banquet had been held already. The winners gradually dispersed, taking a last look behind them at the brightly sunlit pastureland where shooting history had been made a year ago and reinforced again just now.

True believers, they were, and they were

Hitting home plate, shooter holds his long slide .45 in the holster.



California shooters display their competition guns. At right is a M-64 stainless with 8" Douglas barrel and Bo Mar rib. Left: a S&W Model 10 with 6" Douglas tube and sight hood; latter will be banned in 77 match.

going back to their own games—back to the National Match and PPC shooters, back to thousands of committed pistol competitors to spread the word . . . and to propagate a new theory of sportshooting.

The next shoot will be held on Labor Day Weekend, 1977. By then, the Camp Perry crowd will have gotten the word. The combat shooters have gotten it already, in Jackson a month after the guns of the NSL fell silent.

Next year, it's anybody's guess how many serious shooters will show up, but the contingent is sure to be large. They'll be people who understand shooting, and love shooting, and want to support what the Burgesses are doing. The money will be an important part of it, but only one part.

And the industry's ears will have perked up, too. Bill Ruger was the only one who supported it with cash this year. John Bianchi and Safariland's Neale Perkins fattened the pot with merchandise. Ron Power, the acknowledged leader in PPC guns, donated one of his heavy barrel customs; Jim Clark, who enjoys the same reputation among bullseye shooters, tossed in one of his long-heavy slide .45s.

The concept of the Burgesses' shoot cannot be ignored by an industry embattled by socio-political forces that would make it extinct. Gunmakers, like gun buyers, are ultra-conservatives who don't step into anything they don't understand,

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.22 Long Rifle Mini-Revolver

By CLAIR REES

A FEW years ago, a company called Rocky Mountain Arms Corp. introduced "the world's smallest revolver"—a tiny 5-shot single-action gun digesting .22 Shorts. Although this palm-sized wheelgun sold well, the company had other problems and went out of business after the first year or so of operation.

An improved version of this little handgun is again with us—this time manufactured by North American Arms Corporation, P.O. Box 158, Freedom, Wyoming 83120. This company has been manufacturing the .22 Short mini gun for more than a year now, and has just introduced a new, slightly larger model that digests full-size .22 Long Rifle fodder.

With its 1⅛-inch long barrel, the new gun measures but 4 inches from stem to stern (just a half-inch longer than its .22 short-firing smaller brother), and is 2⅜ inches high. Empty, the diminutive single action tips the scales at a mere 4½ ounces.

In spite of its small size, the North American Arms Corp. mini revolver is a precision-machined, high-quality handgun. Made entirely of rust-resistant stainless steel, the gun features a highly polished cylinder and frame, while the barrel, trigger and topstrap wear a non-reflective matte finish. With its black, high-impact plastic grips, the little gun makes a very attractive package.

To load this vest-pocket revolver, simply depress the plunger located at the forward tip of the cylinder pin (this unlocks the pin) and withdraw the pin completely from the frame. The cylinder can then be removed from the right side, and loaded by hand. Reverse the process, and you're ready to fire (the cylinder can actually be removed and replaced from *ei-*

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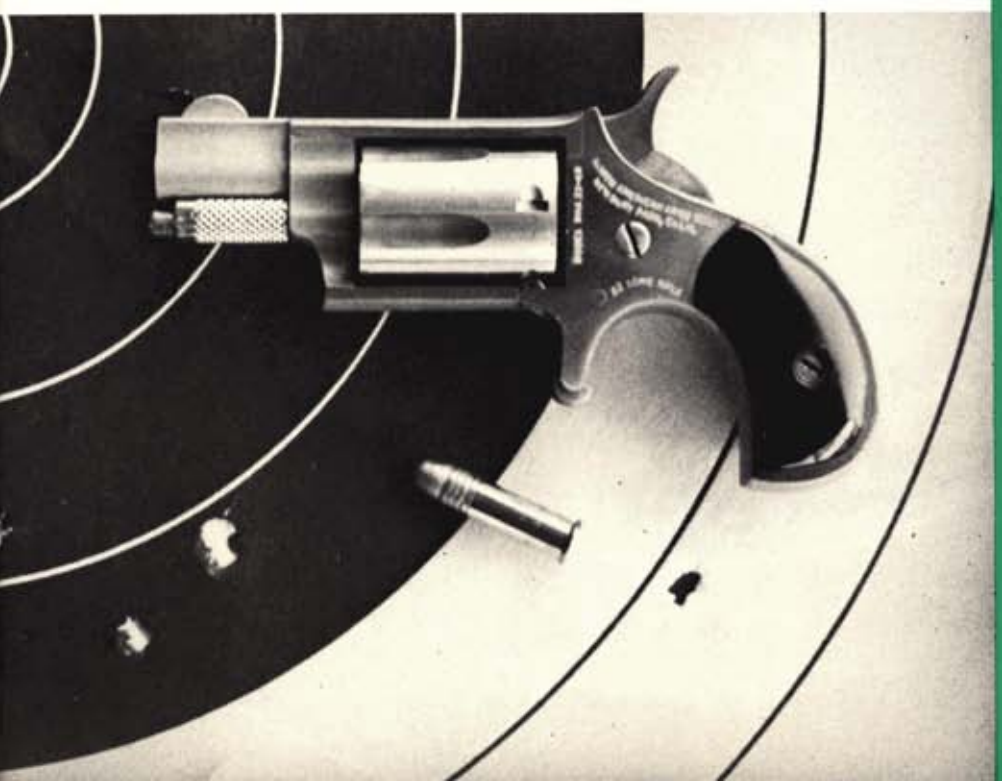


The .22 LR version of the mini-revolver is a little jewel in its fitted case. Retail is $109.50.

Small size makes the mini-revolver a real kicker with .22 LR ammo.—Two fingers and the thumb are all that's needed to control recoil.

To unload empty shells, remove the cylinder and use the cylinder pin to punch cases out of each chamber.

Not a target gun by any means, the mini-gun produced this acceptable 6½" group of five shots (one is not shown in the photo) at thirty feet.

NOW HANDGUNNERS WHO HANDLOAD CAN PLINK AND HUNT WITH A NEW WILDCAT . . .

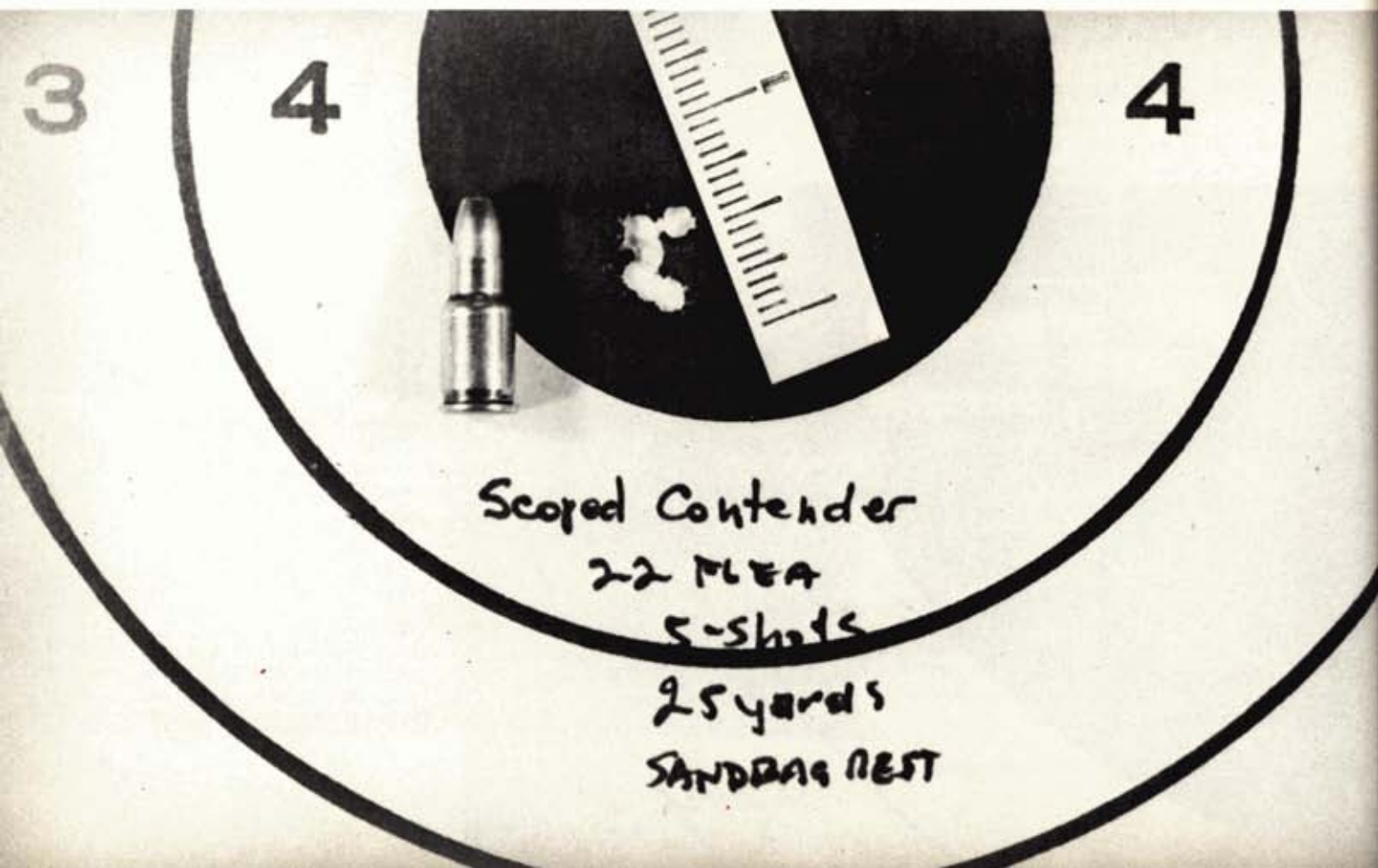
THE .22 FLEA

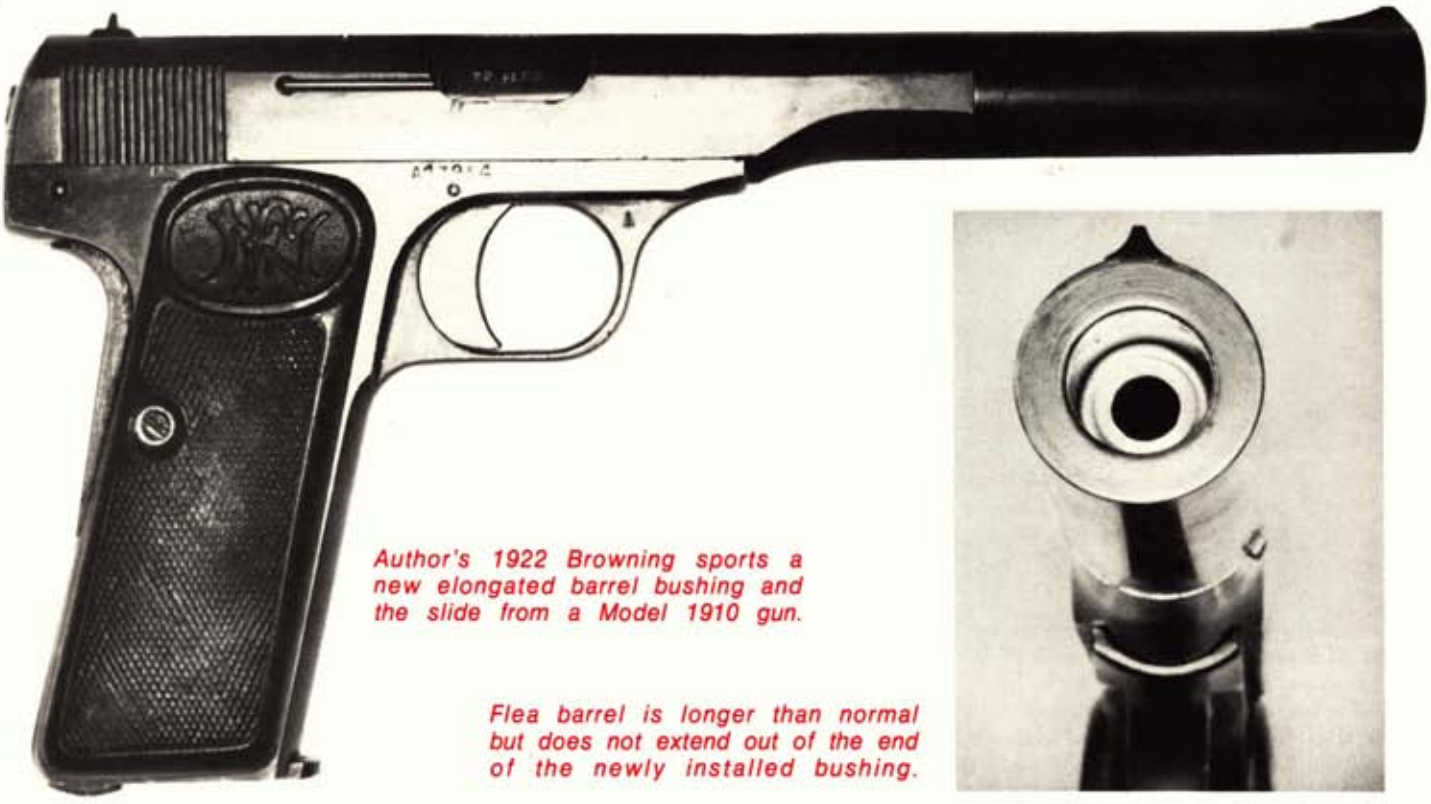
By ANDY BARTON

THE DAYS when almost every shooter could afford to burn up two or three boxes of .22 rimfire ammo in a few short hours have gone the way of the nickel cup of coffee. Some 20 years ago when I shot in competition, I used to buy match ammo, and even then, I felt that the 45 cents I was charged per box of 50 rounds was akin to highway robbery. Burning up that much standard velocity rimfire ammo is now almost as costly as keeping a string of polo ponies was in those days. Now, thanks to Dave Corbin, we have an easily reloadable .22 centerfire wildcat for handguns that, ballistically, is just a shade under the performance level of the Winchester Magnum round and a whisker better than the high velocity .22 Long Rifle round.

Dave, who ramrods the D.R. Corbin Manufacturing Co. (Box 44, North Bend, OR 97459), is a super-distilled gun crank, machinist and engineer, and the handloading gent who in the last year or two has put bullet swaging back into the realm of reality for handloaders. In creating the .22 Flea, Dave was first of all looking for a cartridge that would require a minimum of case forming, rim or base alterations; second of all, the finished round should allow either easy re-chambering or barrel replacement on many of the available .32 ACP autoloaders. He also wanted a round that would not send its bullet over and beyond the nearest horizon; one that would not blast the ears off the folks over in the next county; and one that neither developed a muzzle blast to singe the hair off a woodchuck nor delivered arm-breaking recoil; last, but certainly not least, the round had to be reasonably accurate for plinking and small game hunting. If you try to cram too much velocity into the relatively small pistol cartridge cases, you will encounter enlarged primer pockets long before you'll find either gun failures or other cartridge case failures because of high pressures.

For this handgun wildcat conversion, Dave selected, with malice aforethought, the Model 1922 Browning. The M1922 is the military offspring of the Model 1910. The mechanics of the Browning .32 ACP gun are such that a new slide bushing, longer barrel and the longer M1910 slide could easily be accommodated on the M1922 frame, and should the experiment bomb out, the gun could be converted





Author's 1922 Browning sports a new elongated barrel bushing and the slide from a Model 1910 gun.

Flea barrel is longer than normal but does not extend out of the end of the newly installed bushing.

back to its original configuration and chambering in less than a minute. Starting with the longer M1910 slide, a home-made barrel bushing that accommodates the slightly longer .22 Flea barrel, and a somewhat modified follower in the magazine—and presto, he had created the first Flea. And it is this Flea that bit me, and hard too!

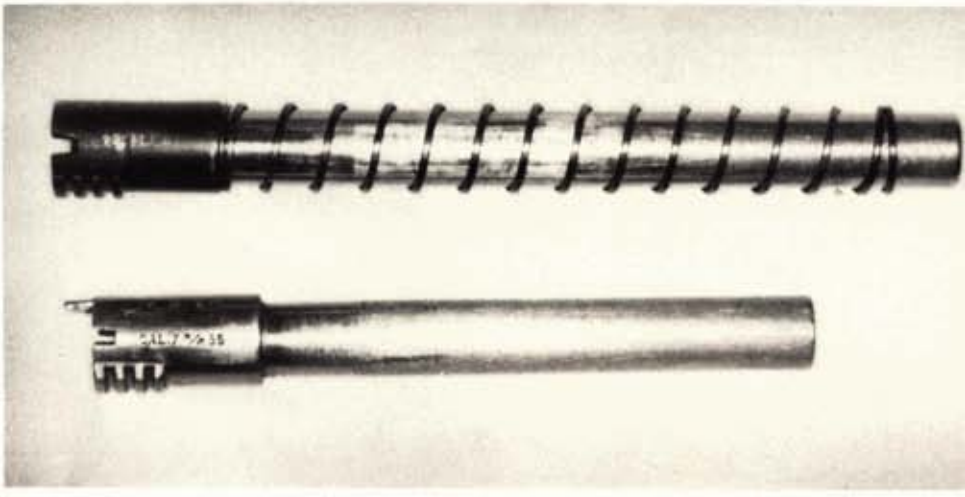
The Browning Flea, thanks to the heftier and longer bushing, has the first-glance appearance of some of the now-defunct short bull-barrelled target pistols. As can be seen, the gun carries the original Browning sights which should be replaced for serious target plinking and hunting with either Bo-Mar or Micro sights. Dave did not have the time to install different sights on the Browning, and I did not feel like fooling around with his gun, hence had to live with the rather miserable original sights during my testing of the Flea. After running some disappointing accuracy tests from a sandbag rest, I set the Browning into the Lee pistol rest and then the gun delivered reasonably good groups.

Some years ago I had bought an unchambered .22 T/C Contender barrel with the idea of dreaming up a .22 centerfire wildcat. After playing with the Browning for a week or so, I shipped the Contender barrel and an action to Dave who chambered the barrel for me and then ran some tests. When this rig came back from the West Coast, I topped the Contender off with the T/C 1½X Lobo scope, and pronto—there was a handgun-cartridge combination that did everything you or anyone else could expect from it.

The long barrel and the heavier slide extension bushing of the Browning simply continue the military ideas that made the 1922 Browning possible with slide modifications. These features are not absolutely essential, but they do serve to reduce stress on the frame when heavy recoil loads are fired. As a matter of fact, you can even use the short bushing with the longer barrel in this .32 ACP gun. Slower powders tend to function the Browning better than faster burning powders, especially when the heavy bushing and the long barrel are installed. With Bullseye and powders burning faster than Unique, the light bushing can be used for loads developing less than 1000 fps or the velocities delivered by 1.5 grains of Bullseye.

Making brass for the Flea is simple, and

Left: Group from the scoped T/C Contender, shot from a rest. The 37 gr. Corbin bullet and 2.0 gr. of Bullseye gave fine accuracy.



Original Browning barrel (without spring) is shown with a Flea barrel. The same spring is used.

Left: An original .32ACP round and the same case wildcatted to Flea with the 37 gr. bullet.

LOAD DATA FOR THE .22 FLEA

Powder	Charge	Avg. fps	Max. fps	Min. fps	Comments
Bullseye	1.5 gr.	937	1006	842	Fireform load, may not function some guns.
	1.8	1318	1352	1272	Good plinking load, accurate.
	2.0	1385	1398	1375	Max. for blowback action guns.
	2.2	1449	1499	1399	Primer cratering, case life still ok, gun functions ok.
Green Dot	2.0	1330	1364	1265	In Browning gun, cratered primers, unimpaired case life.
	2.3	1420	1440	1400	Good accuracy load, easier to load than Bullseye. Works well in Contender and Browning guns.
HS-5	2.0	909	1000	812	Not very accurate, but will function Browning gun.
	2.5	1195	1200	1181	
	2.8	1305	1320	1245	
	3.0	1370	1371	1329	Best load for all-around use in both guns.
Unique	2.0				
	3.0		Performance identical to Bullseye loads		

it takes only a few minutes to form enough .32 ACP brass to make up a passle of .22 Flea cases. The RCBS dies must be modified a bit, according to Dave, especially the trim die. In its unmodified state, the trim die has too sharp a shoulder which leads to excessive case loss during the forming of the brass. The bullet seating plug should also be modified for the 37 grain bullet—you can either buy those bullets from Corbin or buy his .224 bullet swaging dies and make your own at a fraction of the cost. Unprimed Winchester brass is by far the best choice, with other brands of brass often developing shoulder splits during the first firing. Although it is feasible to anneal the formed brass, it is not essential, and trying to heat only the neck and shoulder section of the short case without also heating the head of the case is a bit tricky. An extension shell holder, a standard item in the RCBS lineup, is also needed.

Case forming is started by first necking the case to about .270, then down to .22 in two additional forming steps. Be sure to lube the cases lightly—I've found Corbin's Draw Die Lube to be excellent for this and many other case forming jobs. Fireforming is best done with 1.5 grains of Bullseye and a 37 grain .224" bullet. This load will function the Browning and the round-nosed bullet has been clocked at 937 fps. If 37 grain bullets are not available, 40 grain Hornet bullets can be used without feeding troubles.

For swaging these .224 bullets, Dave suggests that the jackets be drawn from 6mm jackets and pinch-trimmed to less than 0.5-inch. This means that the bullet jacket is fairly thick and will not deform in feeding. As a matter of fact, in some 200 rounds I did not have a single malfunction when using the 37 grain home-swaged bullets. The overall length of the bullet is 0.4522" and overall length of the loaded round is 0.948-inch.

Dave uses barrels with six lands and grooves with righthand twist. Lands on expended bullets measure 0.0373-inch, while grooves mike 0.0721-inch.

Depending on intended use and the type of gun converted to Corbin's Flea, you can choose from a fairly good variety of loads. The 37 grain Corbin bullet comes out of the dies as a round nose open tip bullet which is equally suitable for plinking, paper punching and small game and varmint hunting within its range limitations. I estimate this to be between 75 and 100 yards, depending on the sights of the gun, shooting position, and, of course, your skill. With temperatures being around the zero mark and the range being inaccessible because of snow drifts, I skipped the 100 yard shooting and stuck to testing the Flea at 25 and 50 yards.

All of the listed loads were fired in the

(Continued on page 67)

After using the Browning for test of the Flea, author had Corbin re-do a .22 barrel for the Thompson-Center Contender. Scope is T/C Lobo designed for the handgunner.

Instant Trigger Job for The .45 Auto

With gun unloaded and hammer at half cock the adjusting screw can be reached from the outside and sear contact changed with the small Allen wrench supplied with kit.

New Replacement Hammer Is the Alternative to Trigger Job

By TERRY HUDSON

IT IS true, as has been said, that the Model 1911-A1 pistol is a gun to swear at or swear by. Those who swear at it object, among other things, to its horrendous trigger pull that can be in excess of 8 lbs. in guns out of the box. Those who swear by the 1911-A1—whether in .45 ACP, 9 mm, .38 Super, .22 LR Conversion, etc.—have filed, stoned and honed the full-cock notch on the hammer to smooth and reduce trigger pull to 3½-4 lbs.

Now all you have to do for a trigger job is install a Silva Adjustable Hammer and, with the gun reassembled, turn an adjustment screw with an allen wrench. All adjustments are external.

The principle is similar to that used in adjustable triggers on some target rifles. The adjusting screw reduces trigger pull by regulating the amount of engagement between the sear and the full cock notch of the hammer.

The adjusting screw is held securely by a locking screw, with a neoprene plug between the two that provides a friction lock without deforming the threads of the adjustment screw. The locking screw is set at the factory and generally should not be changed.

Installation of the Silva Adjustable Hammer is straightforward. Complete instructions are included by Woody Silva with each hammer. *Be sure your gun is unloaded at all stages of installation and adjustment.*

Strip your gun and replace the stock hammer with the Silva hammer. You may transfer your *(Continued on page 62)*

The adjusting screw protrudes below full cock notch to regulate amount of contact between sear and hammer.

The Silva Adjustable Hammer as it comes from factory. Sides are not blued; spur has course serrations.

When necessary, disconnector should be ground to radius. Disconnector shown at top has been so altered.

If You Want Some of the Basics of Combat Shooting From an Expert, Here's . . .

Chapman on Practical Pistolcraft

By IRA A. GREENBERG
Photos by Mil Blair, Ray Chapman and W. A. "Buck" Toddy

MATCH SHOOTING, as all competitors know, involves more than a steady hand and keen eye, and this is even more so in practical pistol shooting contests. In such events, good shooting is merely one aspect of the whole, according to Master Combat Shooter Ray Chapman, with the other important parts being equipment and training.

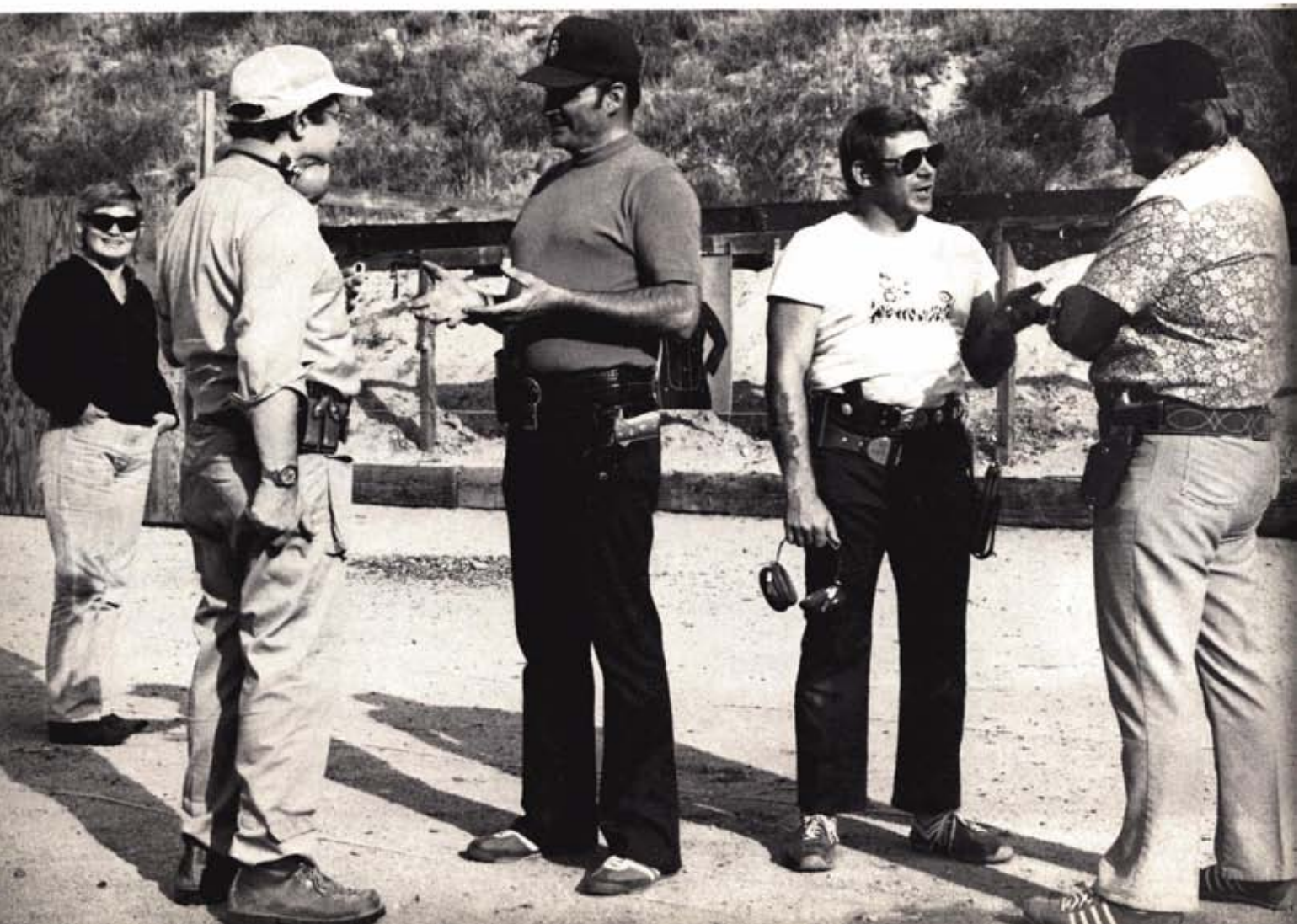
"To help the novice become a winning shooter," he said, "we must first start with suitable equipment, then go into the training aspect, and finally shooting to win."

As Ray insists, pointers for practical pistol shooting must begin with obtaining the proper equipment before going into the other phases. And under the rubric of equipment are to be found the rig and accompanying gear, namely, pistols and magazines or revolvers and speedloaders, clothing, and for the really serious student, reloading paraphernalia.

Probably the Rig Is Wrong

"The chances are," Ray tells the novice, "if you haven't been around practical pistol shooting for any length of time and you already have a belt and holster, they're probably wrong. You should have a holster to suit the condition; thus, you should have more than one, and they should be of quality."

For quality production leather equipment, Ray singles out Bianchi (100 Calle Cortez, Temecula, Ca. 92390), which recently added a new competition belt and holster to its large list of leather equipment for law officers and sportsmen. For custom rigs, Ray recommends G. Wm. (Gordon) Davis (Box 466, Arcadia,



Ca. 91006) and Milt Sparks of Idaho (Box 7, Idaho City 83631).

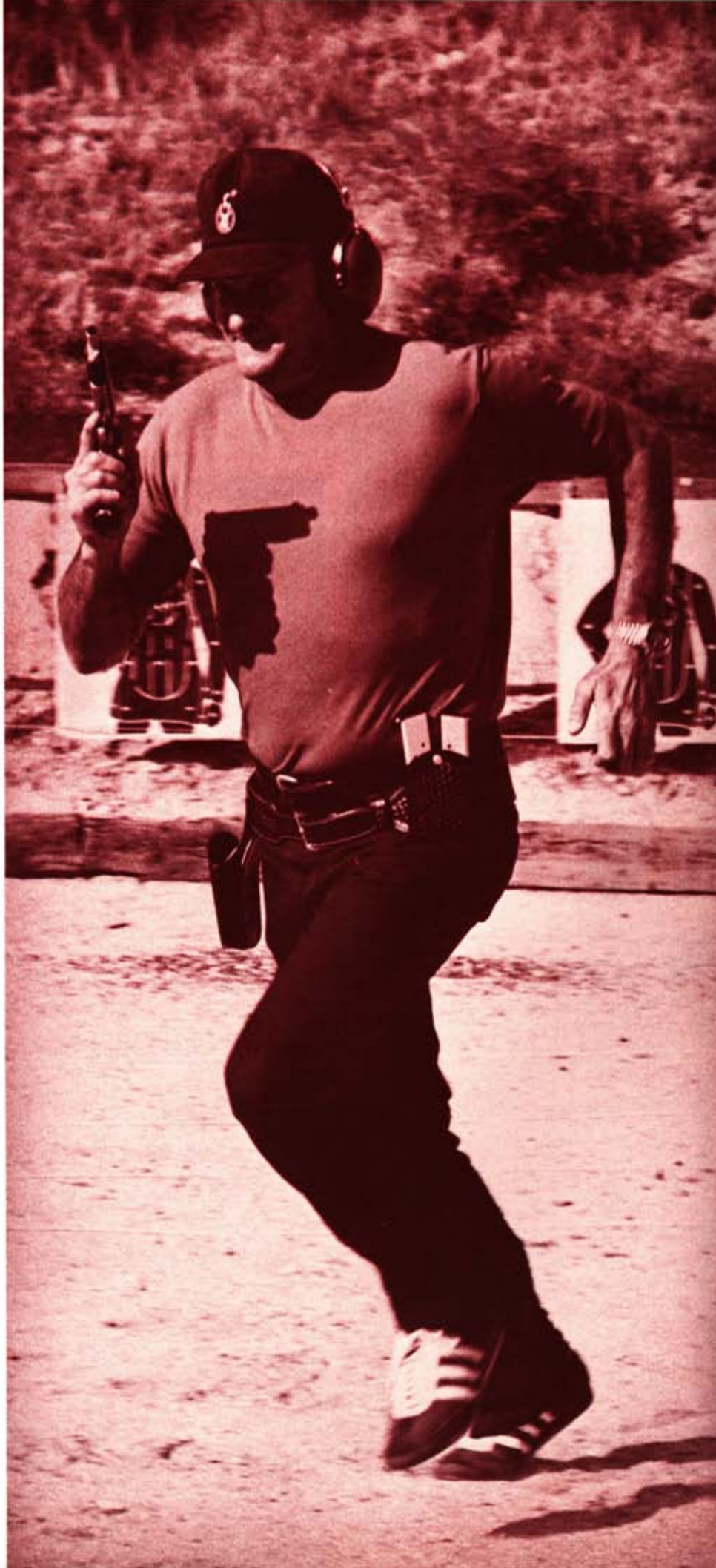
The competitor should have a variety of rigs; specifically, one for each type of event, such as fast-draw, concealed carry, or while driving (cross-draw recommended). "Special situations will probably require special equipment, and if a competitor cannot find a production rig sufficient for his needs he will have to go to a custom holster maker and have his special needs built into one."

Use Quality Guns

As to handguns, Ray recommends the novice stay with quality, adding, "In the firearms field, more than any other, you get what you pay for." He explained that the master shooter has already been through the sorting-out stage and therefore the novice would be well advised to take a look at the equipment the top shooters use before making his own choice. For autoloaders, Ray recommends the Colt Mark IV Government Model in .45 caliber, and cautions, "Stay away from the double-action autos, as they are hard to handle, unreliable, and usually come only in sub-caliber."

The new Mark IV will usually require some minor modifications when fresh from the box; installing adjustable sights and adjusting the sear to lighten the trigger-pull. "Of course you can go all the way and have a "full-house" accurizing job done," he said, "and for extensive alterations I can recommend Pachmayr's Gun Works (1220 S. Grand Ave., Los Angeles 90015), Jim Hoag (8523 Canoga Ave., Canoga Park, Ca. 91304) or Armond Swenson (Box 606, Fallbrook, Ca. 92028). A fully customized pistol like those I use will cost between $700 and $1,000."

The novice who decides to use a revolver in competition has a much wider choice, but Ray emphasizes that the .357 Magnum should be the very lowest caliber chosen, and his personal choice would be either a S&W Model 19 or a Colt Python, each with a four-inch barrel. For hunting, of course, Ray would use either the 6-inch or the 8⅜-inch barrel, depending on the



Preference in rigs is shown here (L to R) by Gordon Davis with his own High Ride; Mil Blair with a Davis Low Ride; Chapman with a Bianchi M-45 Pistolero and author wearing products of several makers.

Snug fitting clothing, shooting cap and sturdy, flexible shoes should be worn for mobility in combat shoots.

game and the field conditions. He says of the choice of revolvers:

"There is a wide selection of very good double-actions available, but again, stay with quality. A poorly designed or poorly made DA is a waste of money and should be avoided. When making your choice of guns, keep in mind that the revolver is always handicapped in practical pistol shooting. It is harder to control in rapid fire, considerably harder to reload, has only a six-round capacity, and usually is non-combatant if a malfunction occurs."

Extra Ammo

The practical pistoleero should always carry extra ammunition on his belt, Ray advises. The semi-auto user should carry as many magazines as the match requires, plus two extra, while the revolver competitor should carry two speedloaders in addition to those required. He then stated:

"It is impossible to cover the thousands of things that you should or should not do in this limited space, but of utmost importance are (a) make sure the gun and the magazine or reloader function perfectly, (b) keep them clean, and (c) replace or repair them if they become unserviceable or undependable."

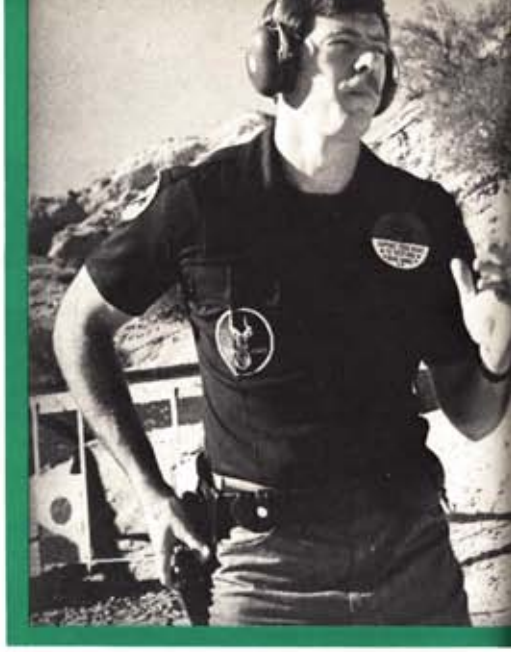
Ray feels that if the shooter can afford it, he should have two competition pistols of the same model number, the same sights, and the same trigger pull, so as to be able to substitute when needed. "I use one as a shooting pistol and leave the other in the gun box at all times as a back-up in case I need it. I usually have a third being accurized, but the novice should be able to get by with two."

Clothing and Ear Protection

The clothing Ray suggests for the practical pistol shooter includes a good, sturdy pair of shoes or boots with flexible soles to facilitate running and climbing. He advises the shooter to wear a snug pair of trousers so that folds of material will not get caught on obstructions, and a close-fitting shirt that one can wear comfortably while shooting or climbing over obstacles. One should always wear a shooting cap with a bill adequate to keep the sun and hair out of the eyes. Hats, he feels, are difficult to use with earmuffs, and they tend to be blown off by the wind or fall off during violent exertions.

"For ear protection, I believe in solid ear plugs *and* earmuffs to provide adequate protection. Should the earmuffs fall off while shooting, the ear plugs will at least give minimum protection. However," Ray continued, "I don't recommend shooting glasses, except when shooting at metal targets at close range, because they have a tendency to come off under violent exercise. Corrective glasses should be worn, of course, if needed."

Finally, for the novice shooter who, like most in the shooting fraternity is a wage-earner whose funds for this sport are limited, he or she probably will find the need to reload his own ammo in order to make it economically feasible to shoot. Ray cautions, in this regard: "Be sure you know what you are doing before you start reloading. If you aren't an experienced reloader, get a few good books on the subject before beginning, and study them carefully." Among those he endorses are (a) *NRA Handloader's Guide*, edited by Ashley Halsey, Jr., 1969; (b) Dean A. Grennell's *The ABC's of Reloading*, 1974, and (c) Maj. George C. Nonte's *Modern Handloading*, 1972, all of which are available at large gunshops or may be ordered through local bookstores.



Larry Mudgett, of the L.A.P.D. Swat team, draws at downrange target out of a typical double action duty rig.

"My suggestion is to stay about 10 per cent under factory duplication loads for training and practice," he said. "You can always go to factory loads for service work, and the difference in strength will not be enough to throw you off, while the lighter loads will be much easier on your equipment. Improperly loaded ammo is the cause of most malfunctions, so be meticulous in your loading habits."

Training

As to training, there are three basic things to learn in shooting a pistol, and they concern (1) sight-picture, (2) breath-control, and (3) trigger-squeeze. All of them involve simple physical acts and are easy to learn and understand, according to Ray. But—and here's the rub—incorporating these simple procedures so that they become a part of one's being and done without conscious effort is not easy for most people (especially the author). Ray's instruction in this respect is:

"Focus your eyes on the front sight, get good sight-alignment, and hold that until your finger pressure forces the sear to release the hammer. If you can do that, you'll be a good shot. Everything else concerns how *fast* and under what *conditions* you can do it in practical pistol shooting."

The sight-picture, of course, is the relationship between the front and rear sight. The top of both sights should be visually on the same line with equal amounts of light showing on both sides of the front blade. The front sight will be in sharp focus, the rear sight will be slightly out of focus, and the target will always be blurred.

This handsome rig was designed by Chapman and Andy Anderson as a duty and competition rig. Mark Reed, master of fast draw, has the only one made; at right he demonstrates the perfect "natural point" position.

In instances where the shooter must visually search for the target, the shooter should train the eye to focus on the front sight as he lines it up with the target and the rear sight. People vary as to where they like to hold on a target and so should find their natural hold and adjust the sights in order to place the impact of the bullet or the hit where they want it.

"I like the impact to be three to four inches above my hold at 50 yards," Ray said. "I never like to cover the spot I want to hit, and so I shoot at 6 o'clock. In practical pistol shooting, the trajectory for intermediate ranges will seldom put your impact out of the highest scoring areas."

Breath, Squeeze, Stance

As to breath-control, Ray advises, "Don't hold a full breath at the time of firing and don't let it all out, but let it out until you reach a point where your breathing muscles reach a balance, and then begin your trigger squeeze. You must keep an adequate supply of oxygen in your bloodstream, so remember to breathe deeply when shooting a long string or during heavy exertion."

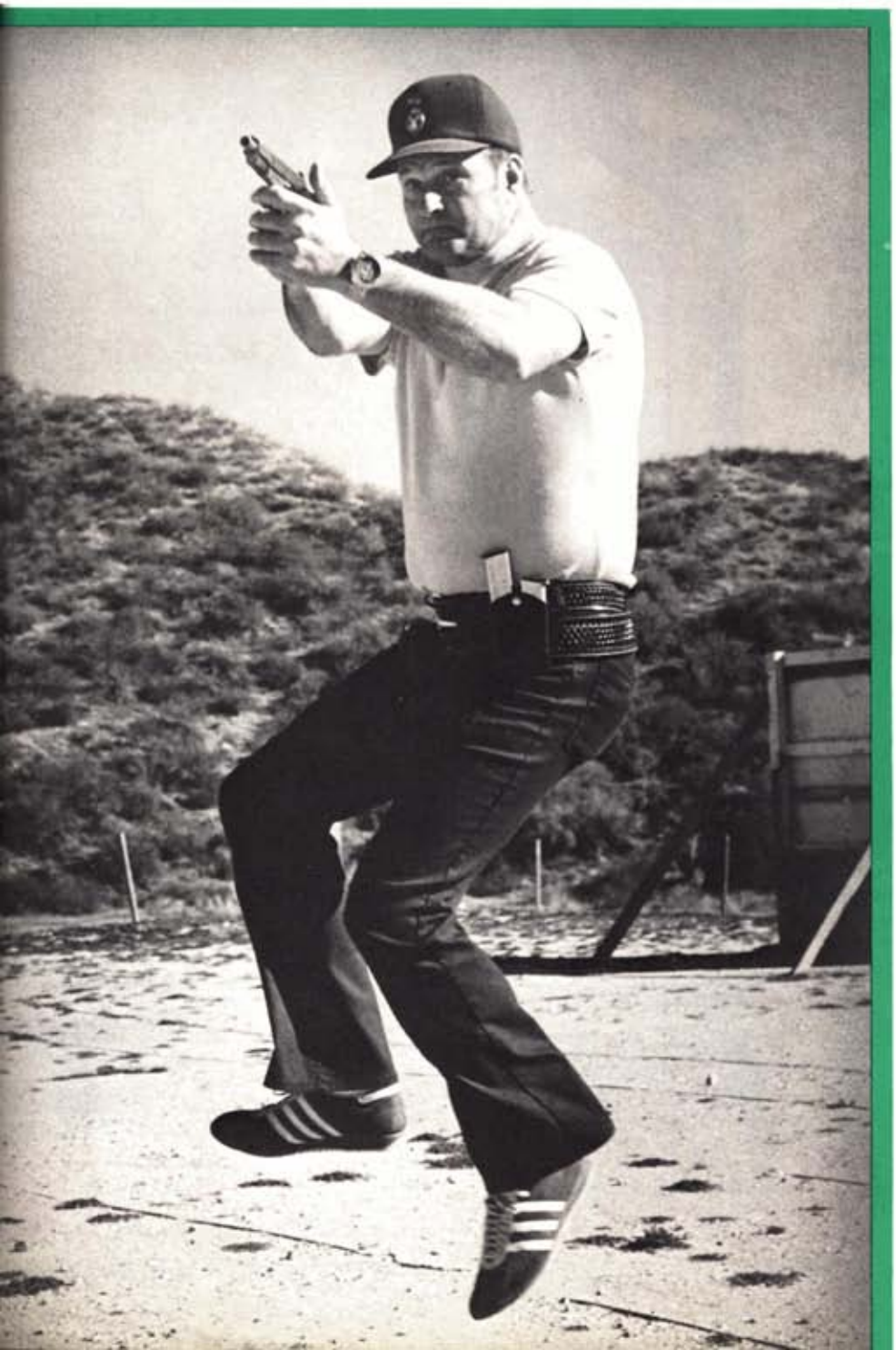
The trigger-squeeze is nothing more than the action of the finger on the trigger, and so when applying pressure with the trigger finger, the shooter should not change the pressure of his grip on the pistol; and, Ray stresses, "the shooter's grip should be firm and solid but not tight enough to make the arms or hands shake."

Ray advises that only in close rapid-fire situations should the shooter force a round off, and even then the shooter should train himself to avoid jerking or milking the pistol. Developing a good, strong stance and a firm two-hand hold on the pistol will help the shooter, and this will be discussed next.

But first, what is stance? Ray defines it as "the position of the body during the

(Continued on page 60)

Combat master, W. A. "Buck" Toddy demonstrates body control while shooting and moving. Note bent knees; minimum upper body movement.



Chapman demonstrates what he means when he says that you must land with feet positioned and ready to shoot.

DAY ARMS "1500" Conversion

By WALTER L. RICKELL

THE PPC (Practical Pistol Course) has replaced the standard NRA bullseye course for police pistol matches, and as with any new game a whole new breed of firearms, and the smiths who build and maintain them, are created. One of these new breed is Bob Day, of Day Arms Corporation, 7715 Stagecoach Lane, San Antonio, Texas.

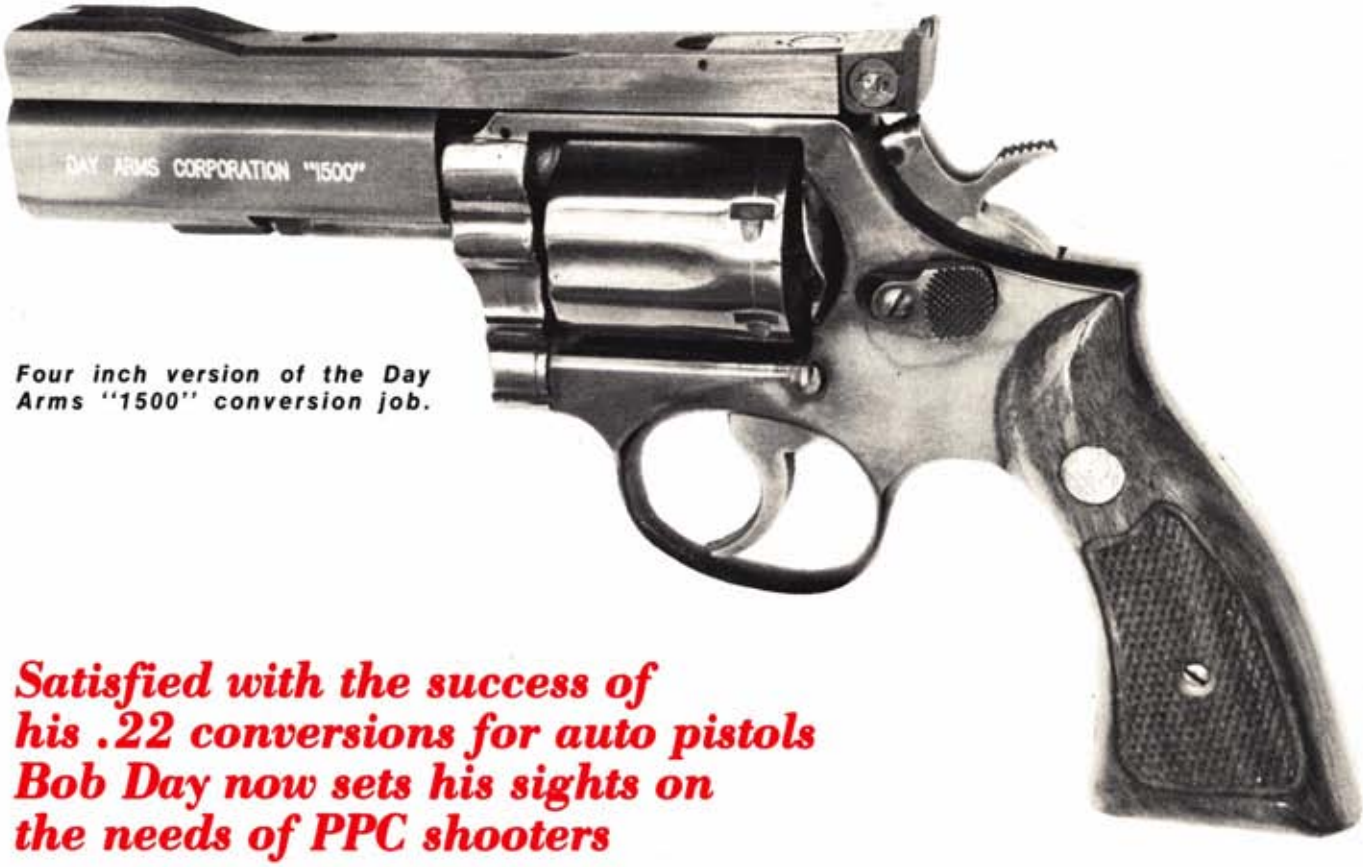
The PPC course requires a revolver that has smooth double action, excellent accuracy and a muzzle heavy balance. Since there are no factory revolvers available in this configuration except the Python and if one likes the shorter action of the Smith & Wesson 'K' frame, a custom job is needed. Most PPC conversions are made in two styles, one with a heavy bull barrel utilizing the existing adjustable rear sight and another with a heavy barrel with full length rib which feature target sights, generally a Bo-Mar.

The Day Arms 1500 conversion is a much simpler package and uses a rib and sights of Bob Day's own design. There are two package deals offered: one is for the Model 10 or like revolver (with fixed sights) which cost $129.95; the other uses a Model 15 or 14 S&W or like revolver (with adjustable sights) which cost $119.95 to make your revolver into a PPC revolver. Both packages include your barrel and rear sight in exchange.

To check out this conversion, I followed a Smith & Wesson Model 10, 4" through the Day Arms factory one day last spring. First the barrel and cylinder were removed and the barrel was replaced with a 6 inch heavy (one inch in diameter) Douglas round one with the sides milled flat to the width of the frame. Then a Day Arms heavy rib with a large square fully adjust-

Standard six inch version of the "1500" conversion with heavy barrel and rib is now 58 ounces compared to normal 34 oz.

Neatly designed retainer latch for ejector rod is shown here.



Four inch version of the Day Arms "1500" conversion job.

Satisfied with the success of his .22 conversions for auto pistols Bob Day now sets his sights on the needs of PPC shooters

The rear sight is of Day's own design and affords a wide, black, square sight picture. Extra long elevation screw allows for full adjustment.

able rear and a winged front were affixed to the barrel with two Phillips head screws. Next the ejector rod catch assembly is added to the under barrel and the revolver timed.

After timing and alining the revolver is then test fired to make sure that no lead will splatter from between the face of the cylinder and the forcing cone. Next the chambers of the cylinder are chamfered at the rear to relieve the sharp edges for ease of loading the .38 Special full wad cutter ammo.

The front sight is winged and actually looks like three sight blades, but the outside blades protect the center or sighting blade and also add more weight. It comes in two heights, one for a head hold on the silhouette target or a lower one for a center hold. The rear sight is the same one

Using the Second Six loader, ammo is lined up with chamber

and inserted. Then slide the ring forward till it stops.

Cylinder is loaded and Second Six is backed off cartridges.

used on Bob's 30-X .22 rim fire conversion unit for the .45 auto and affords a good clean, square sight picture. It has an extra long elevation screw to allow for full adjustment across the PPC course from 50 to 7 yards. The low velocity .38 Special wad-cutter round produces such a long, fast drop that this full adjustment is necessary.

Other accessories are available such as full accuracy jobs and, to assure ignition, the firing pin is lengthened on the old warhorse Model 10.

Aside from the standard 6 inch barrel version that weighs in at 58 ounces, Bob has built special 4 and 2½ inch versions for the hell of it. These little beauties really shoot and I had more fun with them than I did the more serious styles.

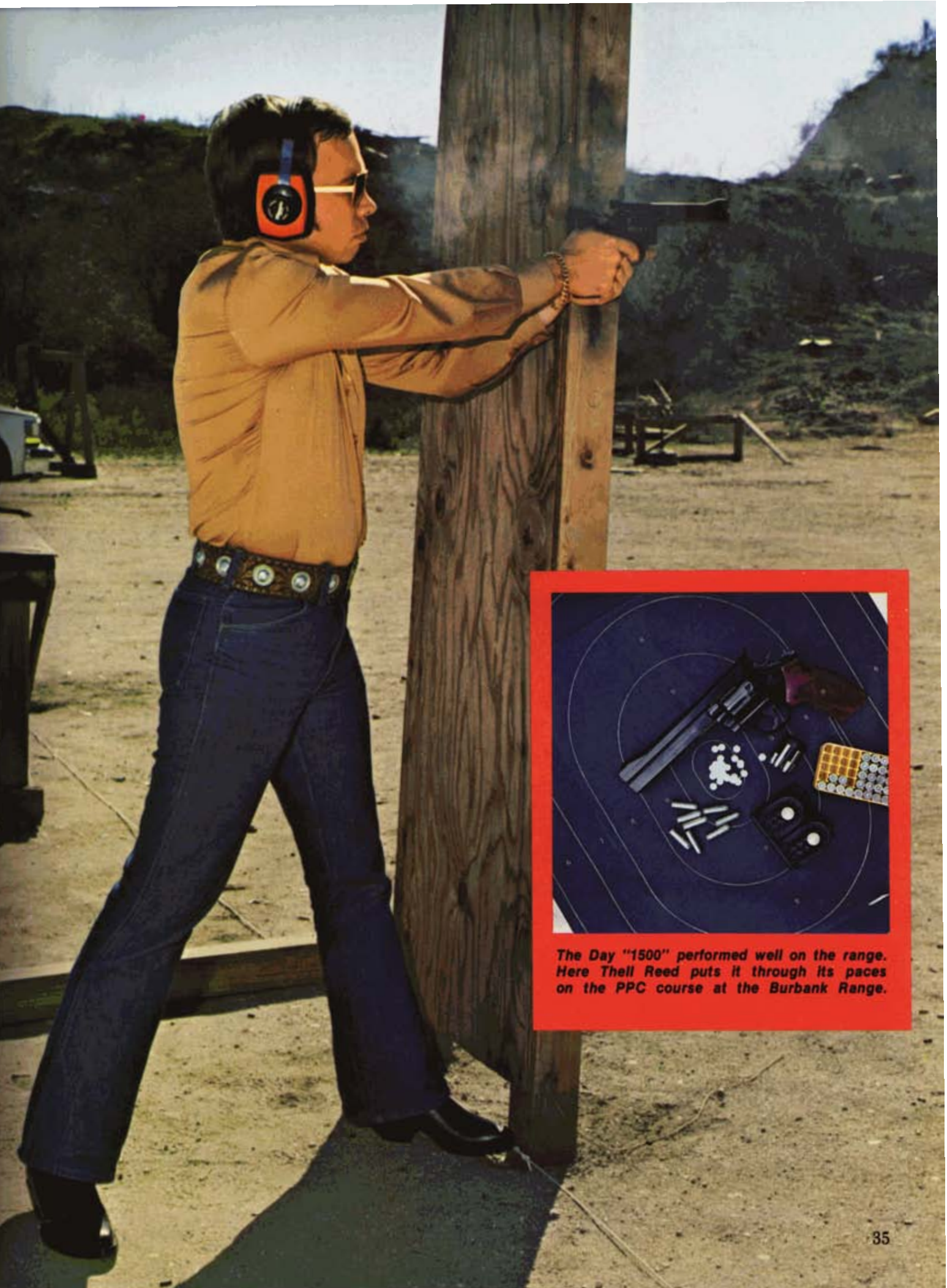
The conversion can also be added to any of the Smith & Wesson 'K' series or 'N' frame series, Ruger Security Six or any of the Colt double action models for the same cost.

After dry firing for several hours with the new PPC revolver I loaded up the car with 1,000 rounds of .38 Special wadcutters and was off to the Burbank Rifle and Revolver Club range near Casteic, California for some serious shooting. Setting several bullseye targets at the 25 yard range I found the point of impact was a full 8 inches below my point of aim. At fifty yards this would put the point of impact in the bull on a silhouette target with a head hold. Although not in the bull, the groups were neat and round, and usually all the shots were touching. The recoil was low with the sights barely leaving the target due to the excessive muzzle weight.

To aid in the testing I used the Second Six speed loader, a unique device that holds six .38 Special or .357 rounds and allows you to load them simultaneously with one motion. This differs from other loaders on the market in that it is not affected by gravity. To load you insert the six rounds into the chambers and slip the ring located at the rear of the unit toward the cylinder. This loads the cylinder, with the sliding of the ring releasing the loaded cartridges.

The combination of the Day 1500 conversion and the Second Six speed loader should prove to be an excellent combo for the PPC course.

Left: Bob Day cuts forcing cone in new barrel being installed on customer's Smith & Wesson M-10.



The Day "1500" performed well on the range. Here Thell Reed puts it through its paces on the PPC course at the Burbank Range.

Handgun Profile:

MODEL 19 COMBAT MAGNUM

GENESIS of the MODEL 19

—Robert J. Neal

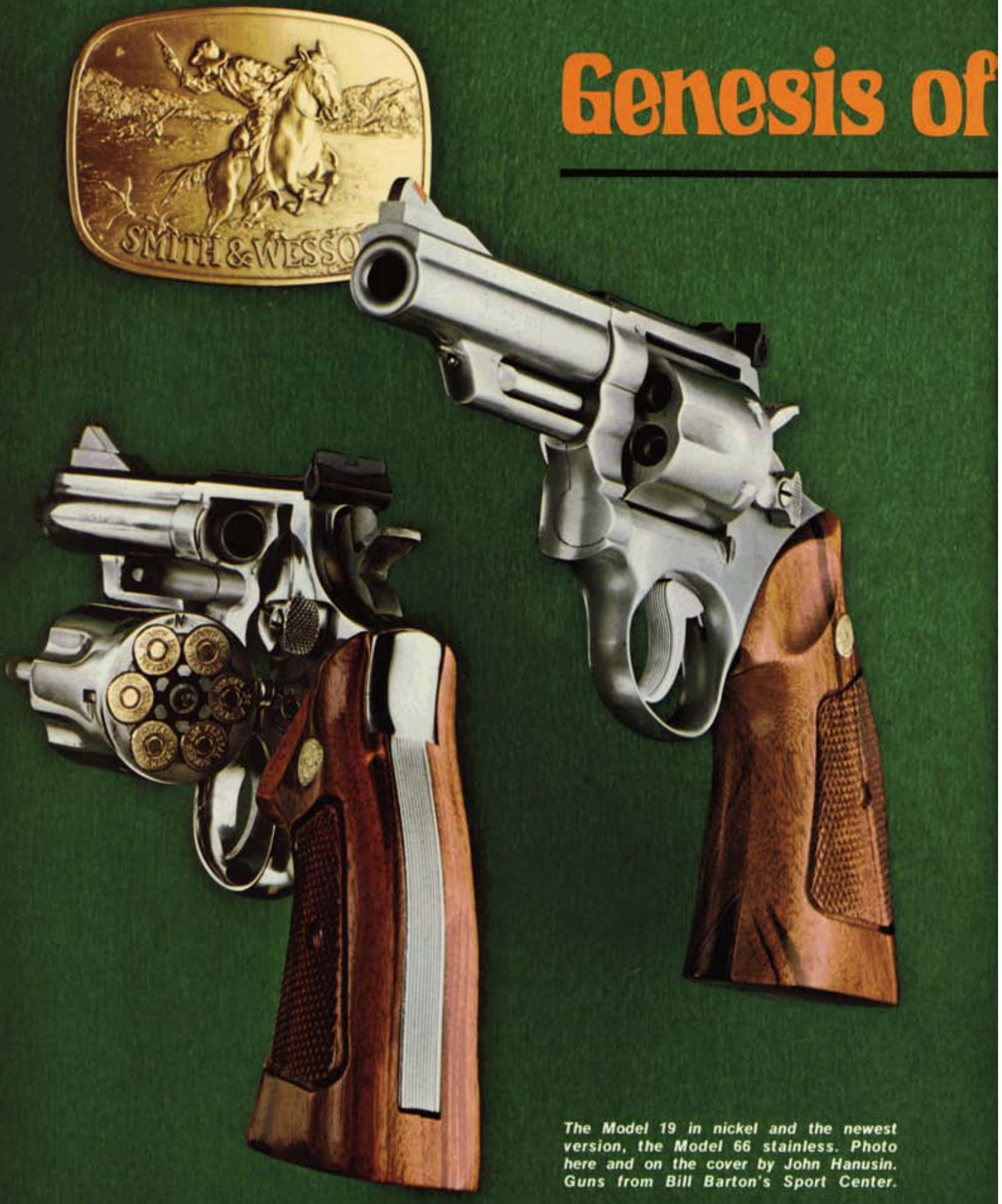
ANSWER to a POLICE OFFICER'S DREAM

—Bill Jordan

LIGHT CUSTOM TOUCHES

—Massad Ayoob

Genesis of



The Model 19 in nickel and the newest version, the Model 66 stainless. Photo here and on the cover by John Hanusin. Guns from Bill Barton's Sport Center.

The Combat Magnum

A short history of Smith & Wesson revolvers of the past and how they influenced the design of the now famous Combat Magnum

By ROBERT J. NEAL

TO MOST modern handgunners the name "Combat Magnum" brings with it the immediate mental picture of a beautifully finished and proportioned target grade holster gun manufactured by Smith & Wesson for the past twenty years or more. Its ancestry goes back to the introduction of the 38 Military and Police revolver in 1899, and even with that early revolver, target sights could be factory installed upon request.

The 38 Military and Police revolver increased in popularity rapidly and in a few years it became the issue sidearm of more police departments in this country than any other. Though few police departments prior to the end of World War II ever issued target sighted revolvers, many began to after about 1950.

By 1942 the company offered .22, .32, and .38 caliber target revolvers built on the 38 Military and Police frame. Upon reentry into the commercial market in 1946, the company introduced the "K Masterpiece" line with revolvers manufactured in .22 Long Rifle, .32 Smith & Wesson Long, and .38 Smith & Wesson Special. All three calibers were upgraded and supplied with the latest features. Quoting from the 1946 All Model Circular:

"Now — what the target revolvers shooters have been waiting for. The famous K-22 Masterpiece which was such a sensation in 1940 has been still further improved ... and all these features are now yours in a complete line of Masterpieces: New Ribbed Barrel gives you more weight up front—still finer balance than before.

New S&W "High-Speed" Hammer with wide, deep-checked spur developed for rapid-fire shooting.

New Anti-Backlash Trigger Feature —further improved for absolutely positive action.

New Short Cocking Action—redesigned for even easier, faster handling.

and don't forget, all three Masterpieces will come to you with the S&W Micrometer Click Sight of the original K-22 Masterpiece, which gives you positive adjustment for both windage and elevation."

With this new post war line of revolvers a new serial series was begun having a prefix letter of "K". All revolvers in this line were numbered interchangeably within this same series. The company was struggling to get back into full production in this early post war period and it was late 1946 before the K-22 went into production and late 1948 before the K-32 and K-38 were available in quantity.

The January 1950 All Model Circular introduced a new "K" model, the Combat Masterpiece. This was a duplicate of the K-38 except for shortening the 6" barrel to 4" and use of the Baughman Quick Draw front sight. Chambering was for .38 S&W Special and loaded weight was 34 oz. The revolver was described as "A short action, target grade, holster gun for law enforcement officers." This represents the companies first direct effort to produce such a revolver, though they had no doubt filled some special requests for similar configurations based on the K-38.

This circular also introduced the K-32 and K-38 Heavy Masterpiece revolvers. These were made with larger outside diameter barrels than the standard K-32 and K-38 in order to bring their weights up to 38½ oz. loaded, to match the

The original .357 Magnum revolver (1935) set the precedence for a whole series of high performance revolvers from Smith & Wesson.

K-22—thus all three calibers would be matched in weight. Both types were cataloged until 1954, when the lighter K-32 and K-38 were dropped.

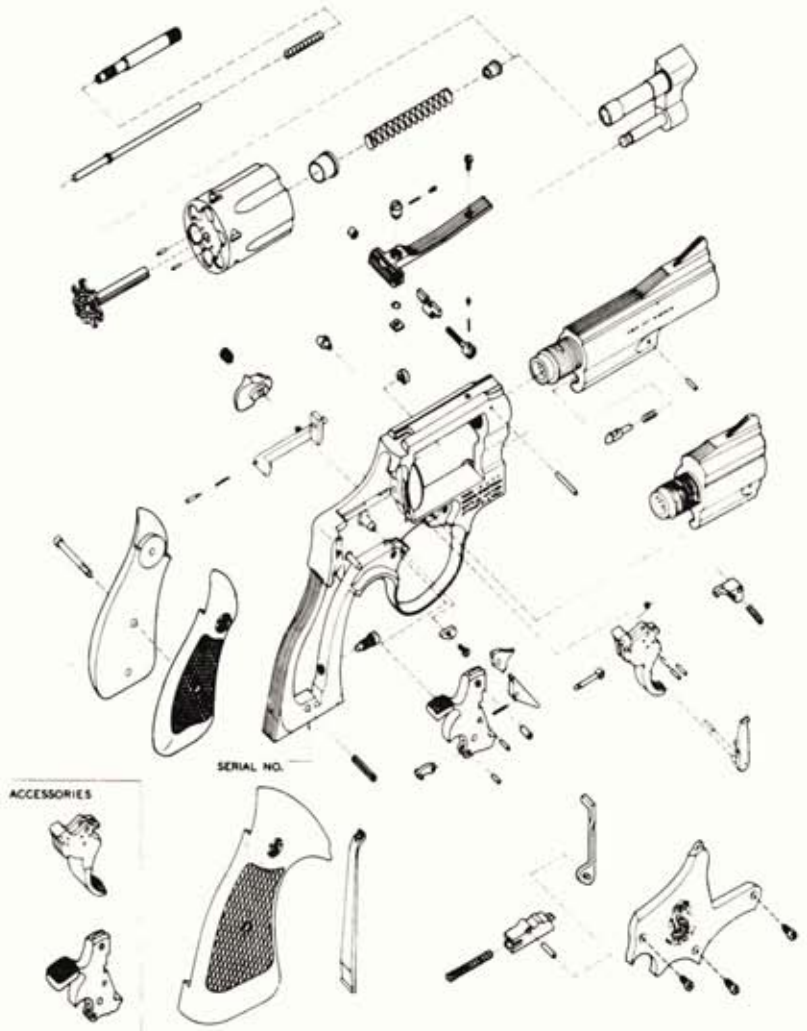
In November of 1952 the Combat Masterpiece also became available in .22 Long Rifle chambering. The company did not seem to want to push sales of this model as the only mention in their All Model Circular was a note under the .38 caliber model "This Model is also available in .22 Long Rifle Caliber for training purposes." They continued to list it in this manner until May of 1961, at which time they began to list it in the same manner as all other models.

In April of 1954 a pilot run of K-32 Combat Masterpiece revolvers was made with the idea of pushing the series of three calibers. Demand had never been high for the K-32 Masterpiece and turned out to be even less for the K-32 Combat. The idea was dropped and no further K-32 Combat Masterpiece revolvers were produced.

The first .357 Combat Magnum was completed on November 15, 1955. The lowest serial for this model was K260001 and was sold to Bill Jordan of the United States Border Patrol on January 5, 1956. Bill Jordan was one of the people instrumental in persuading the company to bring out the model. (See Jordan's article on the following pages).

As introduced, the model was described as "A short action, target grade, holster gun for law enforcement officers. Patterned after the Combat Masterpiece, but built specifically for use with S&W .357 Magnum Ammunition." The .357 Magnum cartridge, most readers may recall, was introduced on December 28, 1934,

Smith & Wesson Model 19 Combat Magnum



by Smith & Wesson along with their heavy frame .357 Magnum revolver (now called the Model 27.)

The Combat Magnum was available in S&W Bright Blue or nickel, with far fewer having been sold in nickel. The description "Bright Blue" indicated a higher luster finish than standard service type revolvers. Only the .44 Magnum, heavy frame .357 Magnum, and the Combat Magnum were finished in this high luster. Barrel length was 4" with ⅛" Baughman Quick Draw on plain ramp. Grips were oversize checked walnut target with monograms. The wood was changed to Goncalo Alves in 1959.

The Combat Magnum illustrated with custom grips is serial K261269 shipped from the factory on June 25, 1956, and

This Combat Magnum, owned by the author, was made in 1956, and has seen much use in police, target and hunting with nary a problem.

purchased new by the writer. The gun has target hammer and trigger and has seen much service in law enforcement, on the target range, and on the hunting trail. In excess of 25,000 rounds have been put through it with no indication of wear or loss of accuracy beyond some loss of blue on the corners.

In the summer of 1963 a 6" version was made available. This gave a longer sight radius to those who wished a bit more long range accuracy and did not object to a little more length. After many requests over the years for a short barrel version better suited for concealment, the company made a limited quantity of 3" barrel versions in April of 1966. One of these is serial K622501 and was shipped on April 29, 1966. It is now in the collection of Roy G. Jinks, noted S&W authority and factory historian. Length was further reduced to 2½" and this became the official short version. It was introduced in August of 1966. Starting serials would thus fall in the K623000 range.

Most readers have noticed that no reference has been made to this point of model numbers. When the Combat Magnum was introduced, the company did not use model numbers in retail advertising or catalogs; only within the factory for production and engineering control. It was not until March of 1958 that model numbers were included in advertising and catalogs. It was at this time the Combat Magnum gained the added designation, Model 19. All guns in current production were assigned model numbers. No number below 10 was used. This was done to avoid confusion with the numbers used on their pre-1900 products. During that period the numbers 1, 1½, 2, and 3 had been used for both factory and retail model designations.

The standard Combat Magnum with blue finish (top) led to natural demand for a similar gun made of stainless; thus the new Model 66.

EVOLUTION OF THE COMBAT MAGNUM

Military & Police	1899
.357 Magnum	1935
K-38 Masterpiece	1946
Combat Masterpiece	1950
Combat Magnum	1955
Combat Magnum Stainless	1971

In 1973 the company produced its first commemorative model, and it was a Model 19 in blue finish with 4" barrel known as the Texas Ranger-Commemorative. This revolver came in several combinations, all cased. It was available cased alone, cased with special Bowie knife, and fully engraved and cased with Bowie knife. The Bowie knife (also produced by Smith & Wesson) was also available cased alone. This was the 150th year of the Texas Rangers, 1823-1973.

The revolver had several unique and special features. Sights were standard Model 19 type with the added red insert front and white outline rear option as standard. Special smooth Goncalo Alves target grips with Texas Star Medallion were used. Barrel markings were gold filled with standard marks on the left side and "Texas Rangers" on the right side. On the side plate was the Texas Ranger Commemorative Commission Seal, roll engraved and gold filled. The hammer was target type. The trigger guard was cutaway on the left side for quick draw and a smooth face combat width target trigger was used. The back strap was non serrated to provide area for engraving. Special serial numbers were used starting with TR1 and ending with TR10000.

During production of the Combat Magnum Model 19 three engineering changes were made which required new parts not used in prior production or parts not interchangeable with prior production. These changes were identified by a dash number behind the model number stamped in the yoke cut of the frame. The dates and meaning of each change is listed below.

Model 19—Nov. 1955—Original design.

Model 19-1—1960—Change extractor rod thread from right hand to left hand.

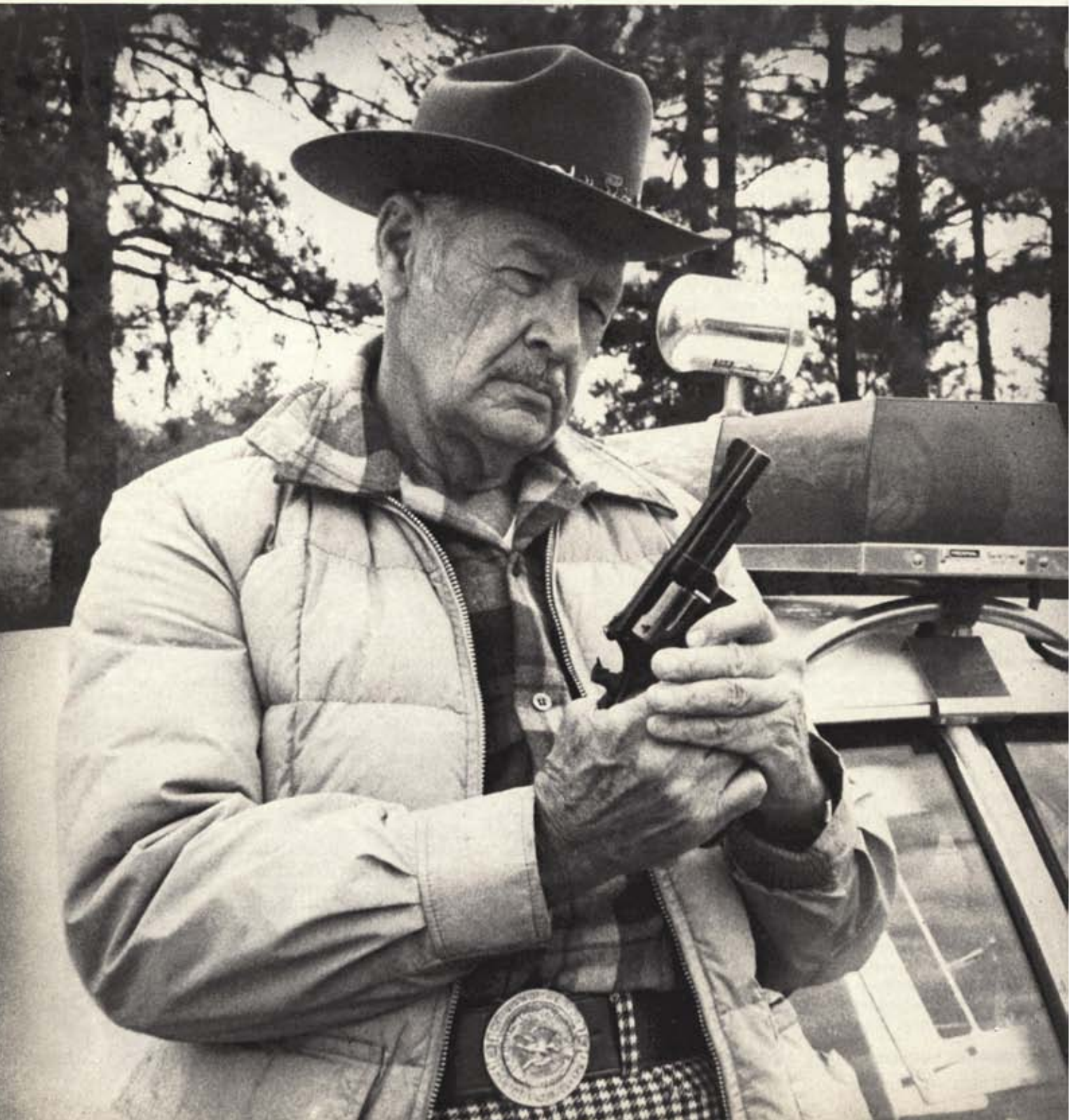
Model 19-2—Dec. 1961—Redesign cylinder stop eliminating stop plunger and screw. This eliminated the exterior screw just forward of the trigger guard.

Model 19-3—Dec. 1967—Relocate rear sight leaf mounting screw from 9/16" back of the front edge of the frame to

(Continued on page 66)

S&W MODEL 19

"The Peace Officer's Dream Gun"



The Magnum (.357) cartridge is the most powerful ever designed for a handgun and will likely remain so for some time. While it would be possible to develop one of higher velocity or greater energy, the gun that would chamber it and fire it without excessive recoil would be so heavy that no shooter could hold it at arms length and fire it with any accuracy.

By BILL JORDAN

Bill's "working" Model 19 with modifications described in text.

THE comment quoted above, lifted verbatim from what was at the time of publishing in 1945, a definitive text on "Smith & Wesson Handguns" by Roy C. McHenry and Walter F. Roper, reflects to some extent the impact of this cartridge on the shooting fraternity at the time of its debut in 1935. Article after article was published recounting its awesome power and fearsome recoil. One that I recall advised any would be shooter that it would be most unwise to shoot it without the protection of a leather glove lest the checkering tear the skin loose from the shooting hand. All this for a cartridge developing 1515 f/s velocity with a 158 grain bullet! A cartridge now being called totally inadequate for defense by many "experts." It would be hard to picture the consternation which would have followed if the .44 AutoMag had happened along in 1935! Truly we shooters were a unsophisticated lot forty years ago.

Did I say forty years? The impact of *that* has just hit me harder than a .357 Magnum!

At any rate, I *had* to have one of those guns. And after much scrimping and scrounging, an order went off to the W. S. Darley Company for the Custom Model in 3½ inch barrel length. Although the gun is long gone—traded to the old Master Gun Engraver, Cole Agee—I still have the certificate that came with it stuffed away somewhere.

After an interminable wait, the gun arrived and it was a beautiful thing well worth the wait, both inside and out. Although a bit fearful of its great power, I was anxious to test it. Attaching a regulation target to a large cardboard box, I backed off 25 feet, put on the leather glove, carefully aligned the sights at six o'clock and just as carefully pulled the trigger. An examination of the bullseye did nothing to establish my confidence in the accuracy of the gun/cartridge combination. There was no hole in the target. In fact, there was no hole in the box, either. Even after all these years I have not been able to figure how this came about, since I recall quite clearly that I had a beautiful sight picture when I closed my eyes.

That gun served me well. The semi-wadcutter lead bullets available for it caused excessive barrel leading and required heavy use of a wire brush plus an occasional treatment with mercury to keep it shooting accurately. But among the many distinctions which accrued to it through the years, was the major role it played in the slaying of the famous Sheep Killing Doe of Brewster County. An affair I would happily forget if people like Harlon Carter and others of his and my contemporaries would allow it. This gun was also the first for which a Jordan Holster was made.

Much shooting, some of it with "ultra violent" handloads, soon made it apparent that, although a fine, flat shooting load which hit with ample authority, the .357 was not the chunk of dynamite it had been depicted. Its recoil was considerably less than I was getting from an old .44 Special Keith load or with loads I cooked up for a .45 Long Colt. Which brought on wishful thinking for a smaller and lighter revolver that would be chambered for this popular cartridge.

I am not sure of the year but think it was in 1954 or early 1955. I was talking to Carl Hellstrom, then Smith & Wesson President, when the subject of an ideal handgun for uniformed law enforcement officers was raised. During the conversation, he had quite casually asked me for my conception of the perfect law enforcement officers' gun. I had formed some very definite ideas along that line and described my "dream" gun to him, in general terms, as having a very heavy, four inch barrel with integral ejector rod housing, recessed cylinders, ramp front and adjustable rear sight, on the K frame of the .38 Masterpiece and chambered for the .357 Magnum cartridge.

Since this had been, according to my thinking at least, an idle conversation, my surprise was complete when Combat Magnum #260,001, along with a letter saying it was number one of the new Model 19 .357, arrived in Phoenix where I was then stationed with the U.S. Border Patrol. It came at an opportune time for a public unveiling. I had been booked to appear on

For combat situations at ranges from seven to fifteen yards, author advises using two hands, particularly if more than one shot will be fired.

what was then a very popular national TV program, Art Baker's "You Asked For It," sponsored by Skippy Peanut Butter. During my part of the program, I held the Combat Magnum up for a full screen shot while I described it as "the answer to a Peace Officer's dream." I was told that Hellstrom arranged to borrow the film of the live show, flew it back to Springfield, and showed it during a lunch break to all the Smith & Wesson employees.

It was only after a month or so had passed that it occurred to me to wonder about #260,002! *Then* I learned that it had gone out with a regular shipment and there was no record of its final owner. I have never learned what happened to it. *Number* 260,001, unfired, I still have.

I would have liked the barrel of this revolver made heavier for better pointability. With practice, a good combat shooter learns to sense the way his gun is aimed in point-shooting situations by the feel of the barrel out in front of his hand. This even when he cannot see the gun due to concentrating all his attention on the target. A long barrel gives this feel, which is comparable to pointing the finger. The longer the barrel, the more definite sensing of the gun pointing becomes. In the 8⅜ inch .44 Magnum, this feel is intensified to a remarkable degree. It is like a fishing pole sticking out there! By the same token, the short barrel, such as a 2 inch "snubby" has very little of this quality. It could be compared to pointing with the fist instead of the finger. To attain this sense of feel, weight must be substituted for any shortening of the barrel. A very heavy four inch barrel assumes the pointability of a light six inch barrel. Since the four inch is the police standard length, as a compromise giving comfort in carrying, adequate sight radius and speed in handling, it needs this extra weight.

Of course, one other advantage of the heavier barrel would be its dampening effect on barrel flip and recoil, giving better control to a lighter frame gun fired in rapid fire bursts.

The "K" frame is perhaps a bit light to stand up under a steady diet of full charge .357 loads. Anyone wishing to do all his firing with maximum loads would do well to stick with the heavier frame of the original .357 revolver. Actually, very few guns are likely to be subjected to this pounding. For most—perhaps 90%—practice shooting will be with mid-range wadcutters, with heavy load firing confined to familiarization and sight setting. This being the case, the Combat Magnum has many advantages over its forerunner. It is more comfortable to carry, lends itself better to concealment, can be drawn and fired faster due to its lighter weight, and the double action pull can be refined to a markedly better degree. There is no way that the heavy cylinder of the Model 27 can be incorporated into an action as smooth as can be attained with the small light cylinder of the Model 19.

In suggesting adjustable sights for my dream gun, I was envisioning a single firearm; a separate entity, not considered in combination with any complimentary handguns. One which could be, within reasonable limitations, all the handgun needed by the one-gun man. Under this concept, adjustable sights would be the obvious choice. Sights which would provide the adjustment capability required for target shooting at different ranges and aiming points plus the flexibility of sighting for widely differing handloads. Had the gun been planned for defense use

Here's a close-up of Jordan's M-19 showing the side of the trigger guard as cut away and rounded for faster speed draw.

Here's Jordan's Combat Magnum, Serial No. 260,001, presented to him by Carl Hellstrom of S&W.

only, with other handguns available for sporting requirements, I would have specified fixed sights. Although lacking in flexibility, adjusted to the load which would be carried for defense, fixed sights would be preferable for their ruggedness and reliability.

While actively engaged in enforcement duties with the Border Patrol, although experimenting with other models as they became available, I always came back to the Combat Magnum. With the exception of some smoothing of the action, these guns were carried as issued except for three minor modifications. First, the hammer spur was cut off. This operation was designed to remove a projection which could possibly become caught in clothing or could cut the hand if hard hit in the act of drawing. For the same reasons, outside corners of the rear sight were rounded and smoothed. These modifications were of special value when the gun was worn under a coat or shirt in plain clothes assignments.

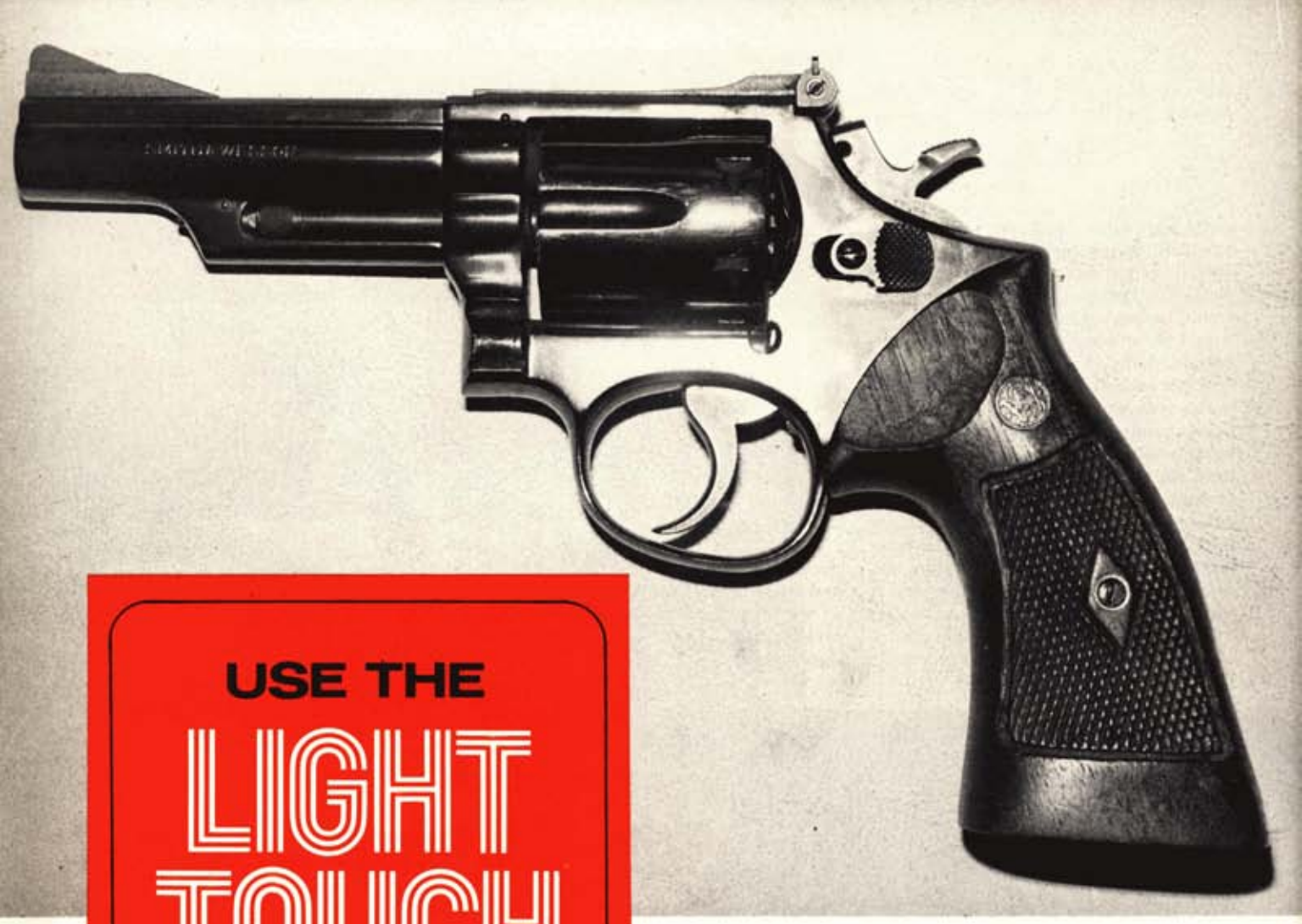
The third alteration was the thinning and tapering of the trigger guard on the front of the right side (I am right handed). This allows the trigger finger to slip easily into the trigger guard without any possibility of being bruised by hitting the sharp edge of the guard. While not needed for small hands, this alteration is of great advantage to the man with oversized hands and a long forefinger.

The .357 Magnum cartridge, while never the powerhouse it was originally acclaimed, is the logical choice for law enforcement agencies and a good choice for the individual. As such, it has become the preferred caliber for most enforcement agencies. It is actually more potent today than it was in the thirties due to the improved, jacketed bullets now available. These have solved the problem of excessive leading and have improved the lethal potential of the caliber. Its adaptability to light .38 Special target loads is a training advantage to a department and to an individual.

As for the Combat Magnum? Now 21 years old, it has surely come of age. That it has proved itself is evident in its predominant popularity with police and civilian alike. There have been changes since the first gun came to me. Some good and some not so good. The best was its introduction in stainless steel as the Model 66. The worst are the dropping off of the quality only hand finishing could maintain and the price escalation from about $85 to an even hundred more.

However, in that twenty-one years nothing has changed my thinking. It is still the answer to a Peace Officer's Dream.

As mentioned in the text, the corners of rear sight have been rounded and the hammer bobbed.



USE THE LIGHT TOUCH

In Customizing The Combat Magnum

One desirable modification on Combat Mag is hogging out the left side of the target stock as shown here. Factory stocks will not allow full ejection of magnum cases or let you use many of the popular speedloaders.

By MASSAD F. AYOOB

TO MANY seasoned experts, Smith & Wesson's Combat Magnum is the ultimate .357 in terms of versatility, police/defensive combatability, and styling. But even if you concede that it's the best of its breed out-of-the-box, that's not to say you can't make it better.

There are several little touches that can make the Models 19 and 66 even sweeter. They can be added with a minimum of tools; at most, you'll need some good stones and perhaps that ubiquitous standby of the home gunsmith, the Dremel Moto-Tool.

Curing "Smith & Wesson Thumb"

A lot of people with beefy fingers find that the sharply squared cylinder latch of an S&W revolver cuts into the right thumb when firing heavy Magnum loads. My own digits are skinny enough that I can shoot a "K" or "N" frame Smith all day without a scratch, though a "J"-frame will slice me every time, and I've got the scars to prove it.

If you find your Combat Maggie bites the hand that feeds it, there are a couple of simple cures. You can acquire one of S&W's grooved, rectangular cylinder latches like the ones used on their model 12 Airweight M&P. Why these never caught on is a mystery to me; I can only assume the buying public was accustomed to the distinctively squared S&W thumbpiece, and the rectangular one didn't look Smith & Wesson-y enough for them. (When I suggested this remedy to one victim of "S&W thumb," he snorted indignantly: "Are you kidding? I don't want my Nineteen to look like a cap pistol!")

Another approach, which doesn't require the skill of a master gunsmith either, is to round the bottom edges of the latch by grinding. Ron Power did that on one of my S&W Combat's, and I thought it was a sleek touch that will get me an extra few bucks if I ever resell the piece to somebody with hammy hands.

Grip Shape

Custom grips are no longer considered to be really customiz-

ing the gun, but choosing the proper ones will go far toward adapting it to the owner's hands and purposes.

The factory target stocks that are standard on the Combat Mag never appealed to me, being too narrow toward the top and too wide toward the bottom, and impossible to conceal. I'm especially fond of the Pachmayr Presentation grips, particularly since they brought out the new style with the speedloader cutouts. Even if you don't bother to load all six at once, any 19 shooter will appreciate the fact that all six empties will eject without hanging up as they do on the S&W wood.

Farrant stocks are another favorite. They're sleekly slim and flat, and they taper down toward the bottom of the butt in both width and thickness, permitting excellent concealment in the armpit or under the coat-tails. Best are those that require the front edge of the grip frame to be cut away, though Fuzzy Farrant makes a set with a wider bottom to fit unaltered grip/frames in case you've got big hands, or are equipping a department-owned weapon that can't be "surgically" altered.

Guy Hogue makes my all-time favorite Combat Mag stocks, the finest I've seen anywhere. Though there's a little flare toward the bottom, the overall grip shape is trim enough that you don't have to worry about bulge when carrying concealed. Like the Farrant stocks, Hogue's have a palm swell that fills the hand and permits maximum control of hot loads.

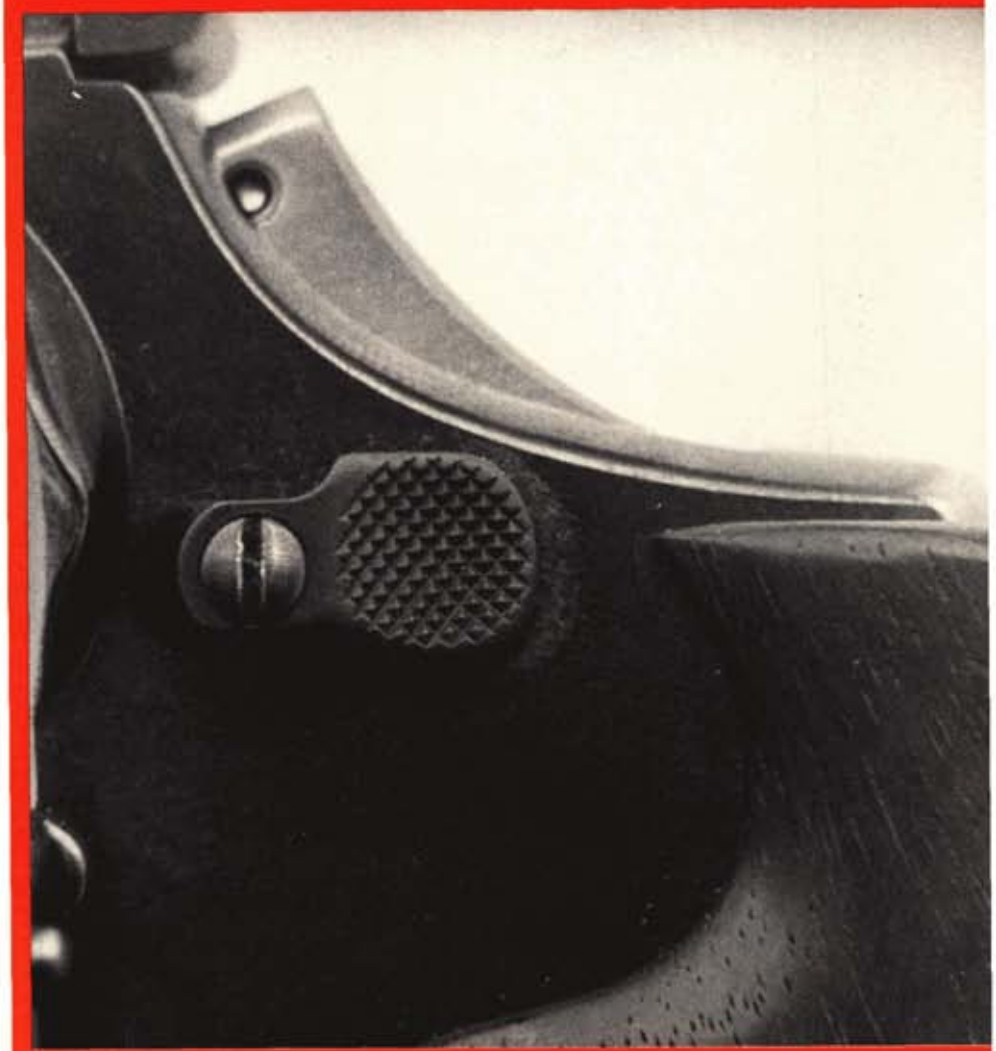
While the square-butt "K" frame has always been thought to be an excellent foundation of grip design, there are many of us who feel the *round* butt "K" frame is even more so, especially in average or smaller than average size hands. Sadly, it's in the Combat Magnum catalog only in company with the 2½" barrel.

The handful of these round-butt guns that were made in three inch barrel lengths are collectors' items, not only because of their rarity, but because they have incredibly good handling characteristics, coupled with a balance of line and heft that is as graceful and natural as any revolver ever built.

If you want to make a special order to S&W for a three-inch 19 or 66, I wish you luck. They've turned down requests for such guns by people a lot more influential than you and I. A four-inch 19 or 66 barrel on the round-butt frame *is* possible, and very nice, but still a special order item; you can probably get it, but don't hold your breath.

The alternative, if you have a couple of Combat Mags including a four and a snubby, is to simply swap tubes. This will leave you with one superbly handling revolver . . . and one square-butt snubnose. The latter will be a nice gun for snubby matches on the PPC tournament circuit (indeed, the 2½" 19 is the competition gun of choice for these side events, when adjustable sights are allowed), but won't

Ideal Combat Magnum trigger, in author's opinion, is ¾" wide Ranger trigger fitted with set screw trigger stop device and then rounded at edges. This one is on author's Model 19 by Ron Powers.



Close-up shows two desirable Combat modifications. Hammer has been bobbed for D.A. only shooting and cylinder latch has rounded edges to prevent cut thumbs after hot load recoil. Both are simple jobs.

Four inch round butt is author's favorite. Note polyethylene front sight protector—a good touch.

be great for anything else. Of course, if you can find a PPC shooter who wants a big-gripped snubby for competition as opposed to carrying, you can afford to sell him that one, because your 4" round butt 19 or 66 will now be every bit as concealable as the 2½" was in most holsters, actually *more* so on the belt because the extra 1½" of barrel will ride against your hipbone and force the butt (the part that causes the bulges) tighter into the hollow of your waist.

Failing *that*, good machinists can convert a square-butt 19 to a round butt; Ron Power showed me one that had been produced by a highly-skilled associate of his. The workmanship fooled me for a second, and was in fact excellent, but if you're not a top craftsman doing it on your own piece as a labor of love, it seems like an awfully expensive job to farm out. It would be less costly to buy another 19 or 66 to swap tubes with, then sell off the second gun.

It's a concept worth looking into, though. In my mind, the four-inch, round butt 19 or 66 is the ideal Combat Magnum format.

Triggers

Most 19's and 66's leave the factory with standard narrow, grooved triggers.

Mainspring strain screw should be left alone. There are better ways to create an easier pull.

These are quite satisfactory for double action work, and adequate for single action shooting. Wide, serrated target triggers will reduce your double action control, though if your Combat Magnum is used primarily for single-action plinking or hunting, the wider surface will give you a little better control, and the comforting illusion of a lighter trigger squeeze since it better distributes your finger pressure.

No matter what kind of shooting you do, but especially if you're into double action, the best choice is S&W's optional "Ranger" trigger, the smooth-finished one that's about three fourths the width of the target style. Being more rounded, it allows the finger to slide smoothly across the surface as it changes position during the DA trigger stroke, yet is perfectly controllable in SA shooting. In serious handgun circles, the Ranger trigger is the mark of people who really know their sidearms. Advanced, competitive wheelgunners go a step further by putting a bright polish on the trigger and rounding the edges still more, a Ron Power trademark that gives you the ideal Combat Magnum go-button.

Also worthwhile is a trigger-stop. A handy person can drill a hole through the trigger and tap it, then install a corresponding piece of stock with an Allen-head screw hole on the trigger face end. This can be adjusted for a backlash-free pull, either for single action or for double action only. Use a size 640 set screw, just under 1¼" in length. Another alternative, less cosmetically effective but more secure and easier for some to install, is brazing or soldering an oversize stud to the back of the trigger, and then filing it to a precise fit so it contacts the back of the trigger guard and stops rearward movement as soon as the hammer has been launched forward. I set mine for double action shooting, though a trigger-stop adjusted for the SA letoff will also reduce DA backlash somewhat.

Routine field stripping allows access to action for smoothing.

Hammers

I never liked a wide target hammer on the S&W Combat Magnum or any other revolver, at least for hunting or combat work when you might be drawing quick and taking an uncertain hold on the gun. If the web of your hand winds up too high on the back of the grip frame, the wide hammer may be blocked by your own mitt, preventing or delaying the shot.

I'm partial to grinding off that case-hardened hammer spur. S&W hammers are shaped in a manner that allows an appealingly streamlined flow of metal when this de-horning operation has been performed. Colts and Dan Wessons, by contrast, are often left with ugly nubbins where the spur used to be.

Obviously, this makes for a pretty much DA-only proposition. Sure, you can start the hammer back via the DA trigger pull, then roll the hammer back with the tip of your thumb. This technique is surprisingly easy to learn, especially if the top edge of the hammer has been roughened. But have you ever tried to *un-cock* a revolver with a bobbed hammer? Accidental discharges are extremely likely, especially in the emotional aftermath of a lost shot at game or a tense defensive confrontation. Most of my de-horned guns have also had the mechanisms reworked to render them DA only; on the Combat Magnum, this is best done by grinding off the full-cock notch on the hammer. Here, though, we're getting into areas that should be reserved for expert gunsmiths only.

If you do choose to bob the hammer on your Combat Mag, you'll find that it's an especially forgiving gun: like almost all S&W's, the lopped-off spur doesn't seem to lighten hammer impact and endanger realiability, as can happen when you bob a Colt without making certain other compensations in the mechanism or the hammer design. Quite apart from the sleek appearance and the snag-free draw, the bobbed S&W hammer actually seems to fall quicker, giving you better lock time and a snappier impact that actually increases reliability. Still, if you're not shooting double action most of the time, the regular S&W hammer seems to be the best choice.

Actions

The uninitiated make two serious mistakes when they try to slick up a 19, 66, or any similar gun: they weaken mainspring tension, and they cut coils off the trigger return spring.

Really good revolversmiths most frequently leave S&W's mainspring alone; the few exceptions like Fred Sadowski who *do* mess with mainsprings will reshape it rather than simply weaken it, a process that requires experience in, and sophisticated knowledge of reheat treating. It's not for the home gunsmith unless he has a drawer full of spare springs. Leave that screw in the front of the S&W grip frame *alone*.

(Continued on page 63)

What's New...

BROWNING'S CHALLENGER II

Looks and operates enough like the original Browning Challenger that there is no mistaking its origin. Browning's chief gun designer, Joe Badali, designed this new .22 semi-automatic on a steel frame skirted by two-piece, highly-figured laminated grips. Unique locking system (patent pending) secures barrel solidly to frame. Ten round capacity in magazine, so with a cartridge in chamber will handle eleven .22 long rifle shells. Rugged construction, reliable operation, handsome design and gold trigger all say the Challenger II is typically Browning. Write Browning, Morgan, Utah, 84050.

CHANGE OF CALIBER

Due to the increase in popularity of the .177 caliber size, Crossman Arms announces that it is changing its models 38T and 38C from .22 caliber to .177 caliber. This modification will give over 50 shots per CO_2 powerlet at an average improved velocity of 356 f.p.s. for the 38T and an average of 312 f.p.s. for the 38C.

Models 38T and 38C have both single and double action with revolving cylinder that holds six .177 caliber pellets. The 38T with six inch barrel weighs in at 2 lbs. 6 oz while the 38C weighs 2 lbs. 4 oz with a 3¾ inch barrel with full adjustable rear sights. For more on these better performing air pistols, write Crossman Arms, 980 Turk Hill Road, Fairport, New York 14450.

RECEIVERS AND SLIDES

Essex Arms is now producing Model 1911-A1 receivers and slides in 416 Stainless Steel, finished to a non-glare silver grey. Slides are of Government Model style with front sight installed, and are heat treated ready for assembly. Frames come complete with bushings installed. Slides and receivers are also available in Carbon Steel (4140) with blued finish, are made to government specifications and

accept either commercial or GI parts. .45 Auto pictured was assembled by Terry Hudson, owner of Crown City Arms, on the first Essex stainless receiver produced. Finish is Armoloy, barrel and bushing are by Bar-Sto, and checkered rosewood grips by Phylip D. Letiecq. For info., or to place order for frames and slides, send #10 SASE to Crown City Arms, P.O. Box 1126, Cortland, NY 13045.

QUALITY HOLSTER

A medium weight leather holster to be worn inside pant trousers has been designed by the George Lawrence Company, manufacturer of quality leather goods since 1857. This model, No. 23, has a leather-covered spring clip which slips easily over any width belt or belt-

less pants. It can be removed without unfastening the belt. Primarily designed for 2" revolvers and .25, .32 and .380 automatics, it is also available for other handguns at slightly higher prices. The holster is furnished in plain, unoiled leather only. For more information and a free catalog write George Lawrence Company, 306 S.W. 1st Avenue, Portland, Oregon 97204.

Custom Shop PROFILE

Where our readers and writers tell us of a custom gunsmith you should know.

By EVAN MARSHALL

RACKING UP QUALITY AT THE GUN RACK

This Gun Shop Offers Top Quality Work At Realistic Prices

TAKING a handgun to a "pistolsmith" for combat work can be a bitter experience. I recently had a Colt Commander .38 Super butchered by a local individual who supposedly was top notch.

I was more than mildly surprised then, to find two top quality pistolsmiths under one roof. Dave Lawrence and Ed Wood of The Gun Rack, 1336 El Camino Real, Belmont, California, have more than thirteen years experience in spite of both being only in their mid-thirties.

While Dave and Ed are both willing and able to work on any rifle, shotgun or pistol, at least 80% of their work is on combat handguns; the bulk of that combat work is on the .45 Auto and Colt Python.

They both consider the .45 Auto the best police duty weapon; the Python is their first choice for the NRA-type combat pistol competition circuit. While they'll build a gun to the customers specifications, they first try to find out what its intended use is. If Ed and Dave feel the customer doesn't really need all those features, they'll try and explain how the work can be done cheaper. They both feel that most combat pistol customers tend to over-modify, and the end result is that they don't like the finished product and The Gun Rack has lost future business.

The Gun Rack offers a basic package for the Colt MkIV .45 that they feel makes it ideal for police duty or self defense. They can either perform these modifications on a customers gun or provide a MkIV fully modified.

The .45 combat package includes the following:

1.	MMC Sights (installed)	$37.00
2.	Throat Barrel	$10.00
3.	Tighten Slide	$25.00
4.	Combat Trigger Job	$45.00
5.	Pachmayr Grips	$18.00
	Total	$135.00

The above work, coupled with the MkIVs collet barrel bushing, will produce 4-4½" groups at fifty yards. Furthermore, it's a gun that's totally reliable.

An indication of the quality of the Gun Rack's combat modifications on the Colt Python is the fact that Officer Jim Cost recently out shot 700 competitors in a California combat match with one of their guns. Surprisingly, Ed and Dave don't radically rework their Pythons. They feel the trigger is at least 80% of the work the Colt revolver needs.

Because a growing number of police departments in the San Francisco area have adopted the S&W Model 59, they have begun to do a lot of combat work on this

Above: The Colt Detective Special never looked so good. Finish is a special beadblast with clear coat.

Left: A Gun Rack job on Colt Combat Commander with Seecamp DA conversion and Herrett stocks.

Model 59 S&W as reworked by Gun Rack features MMC sights, trigger job and inside polishing. Grip is the popular Pachmayr Signature.

gun. The trigger pull, as it comes from the factory, is unsatisfactory, and Ed and Dave can produce an incredibly light and smooth trigger pull for $45. They have also found that the 59 will not feed all brands of high performance ammunition, so they throat the barrel and rework the extractor for reliable functioning.

They also provide trigger work on a surprising variety of pistols. I handled both a Colt Detective Special and Walther .380 that had such light trigger pulls that I found it difficult to believe that they would function properly. Both, however, functioned reliably with a variety of factory loads.

The Gun Rack offers a variety of finishes for handguns. A top quality deep blue is available, but their most interesting finish is a bead blast with clear polyurethane coating. They have found this to be extremely durable under all conditions. They also offer black chrome in either dull or bright finish. Both the bead blast and black chrome are available for $70.

A last service they offer is a trigger job on the Seecamp double action conversion. The Seecamp conversion as it comes from the factory is smooth, but rather heavy. Ed and Dave lighten the trigger pull by at least 30%' and that makes the gun much easier to shoot accurately.

If you've been looking for a place to do some combat work on your pistol but have been afraid of being stung, the Gun Rack will make it a painless experience.

Interior view of The Gun Rack shows racks of long guns offered for sale. Back room holds the shop where custom handgun work is done.

RELOADING

PERFORMANCE TIPS FOR THE MID-SIZE MAGGIES

How cop's .357 (with proper ammo) looks to a felon—six devastating and high velocity hollow points.

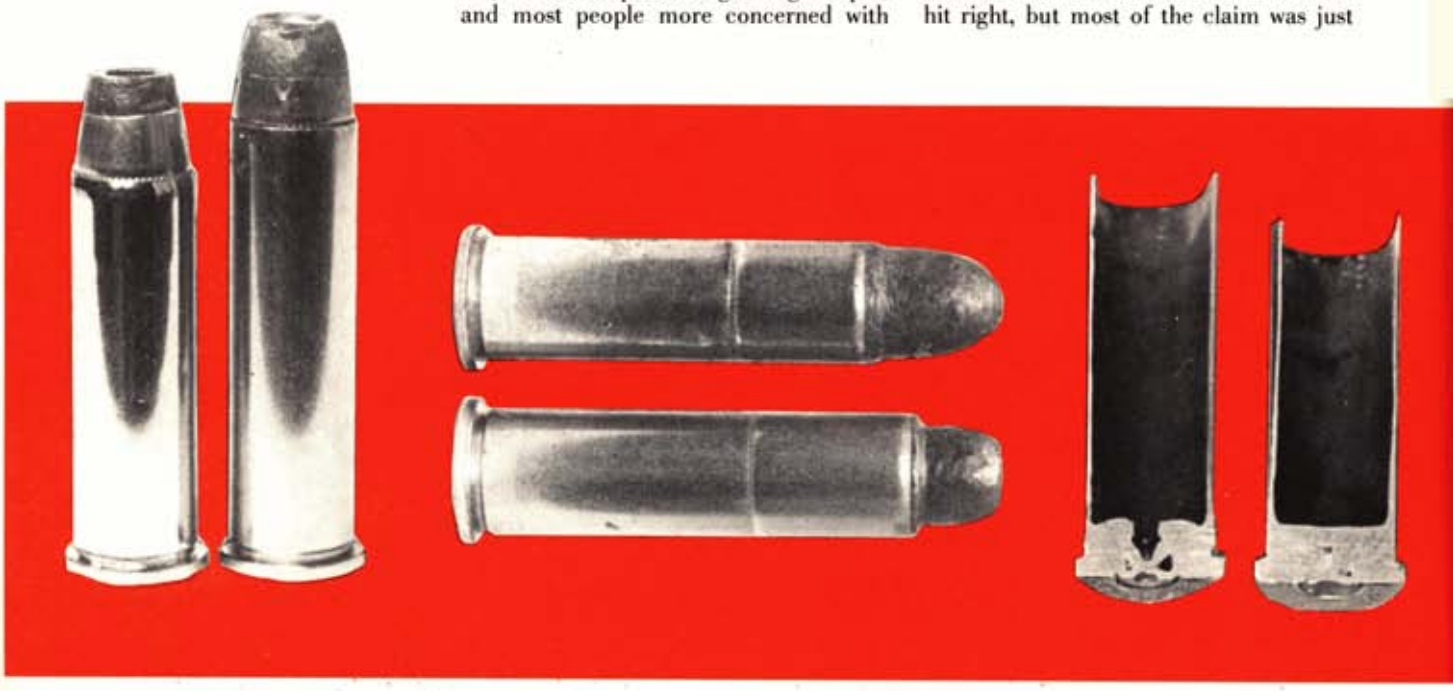
By GEORGE C. NONTE

Back in the middle 1930s the greatest handgun news, since cartridge revolvers, was the .357 Magnum—both the gun and the cartridge. According to ads of the period, the pair offered a blistering 1510 fps with a 158-grain, lead bullet (that's 800 fp of energy at the muzzle), a performance level that could hardly be believed by those accustomed to the .38 Special, .45 Colt, and other contemporary cartridges. Even more impressive to the knowledgeable gunbuff of the period was the chamber pressure the .357 Magnum employed to achieve that performance level—40,000 CUP (PSI then) and more. Many contemporary, rifle cartridges were loaded no more heavily than that.

It wasn't the best time for a new item, with a vast depression growing deeper, and most people more concerned with food than guns—but maybe that's the reason Smith & Wesson introduced it. Anything that would boost sales was worthwhile under those conditions.

Smith & Wesson made the gun, while Winchester developed the cartridge and load. The ".357 Magnum" revolver was a superb piece of work, a refinement of the 1926 N-frame guns and fitted with target sights. Materials, workmanship, and heat treatment were the best to be had so as to handle those high pressures. In the beginning, the revolvers were issued with a separate registration number. The price was high, nearly twice that of a comparable N-frame gun in other calibers, but people like George S. Patton, as well as gunbuffs, didn't let that stop them.

Much was made of the .357's ability to crack or penetrate an auto engine block; it *could* do this on a 1936 car if the shot hit right, but most of the claim was just



(Above left): High performance loads, .38 Special 110-grain JHP and 125-grain JHP .357. (Above center): Original forms of both cartridges, .38 Special 158-grain lead RN (top) and lead SWC .357 Magnum. Above (right): S&W case actually has a thinner web and weaker transition than the smaller R-P .38 Special case.

THE .357 MAGNUM

press-agentry. Even so, law officers hungered after the new powerhouse, and many of them did buy it.

While many outsiders assisted, notable among them the late Phil Sharpe, the definitive .357 loading was developed by Winchester. It utilized the basic .38 Special case lengthened about 1/10-inch to 1.29 inches long. Some early cases are known with large-diameter (.210" nominal) primers, but the small size soon became standard. A 158-grain bullet was driven at a claimed velocity of 1510 fps by a special, non-cannister powder often identified as a variation of Hercules 2400. The velocity claimed was obtained in a one-piece test barrel equivalent in length to an 8½-inch barrel, plus cylinder in the revolver. For obvious reasons, then, the load didn't perform that well in a revolver because of the barrel/cylinder gap and other factors. Genuine velocity enthusiasts bought the 8½" (later changed to 8⅜") barrel, but most pistoleros chose 4", 5", or 6" tubes and so obtained much less velocity. A 3⅝" barrel was available and popular among law officers, and it gave the least velocity of all.

In any event, the .357 Magnum was heavily promoted, especially by Col. D. B. Wesson through widespread, big game hunting. He took most North American big game with the .357 Magnum and this was widely publicized.

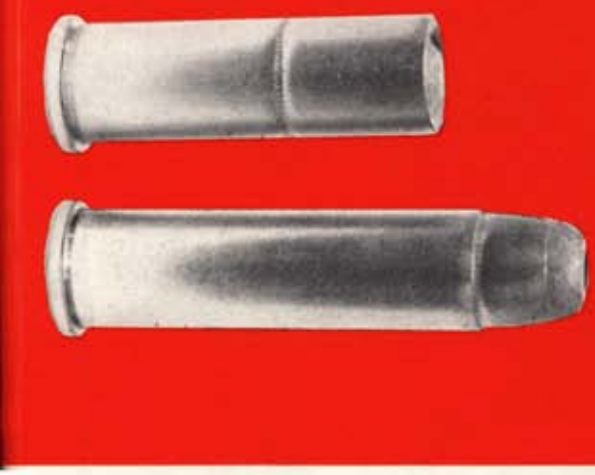
Thus the .357 Magnum became *the* premier high-power handgun cartridge, and it remained so for 20 years, until the advent of the .44 Magnum. Even then, because of the wide spread between the two, the .44 did not decrease the popularity of the .357. Even today, the .357 remains the top-performing round among all calibers under .40, and is the hottest of all the 9mm/.38 class. It deserves the honors heaped upon it.

Of course, since the 1935 Smith & Wesson, dozens of production-model revolvers have been chambered for the .357 Magnum; almost every domestic revolver maker offers at least one such model.

On the surface it would seem that the .357 Magnum is reloaded just like any other rimmed revolver cartridge. Essentially, it is, but there are a few points one should give extra consideration if best results are to be obtained. Since these points vary according to the type of load being assembled, we'll cover them that way as we go through the different load classes.

Because the .357 case is simply the .38 Special case lengthened about 1/10-inch, any .38 Special factory or handload may be fired in any .357 revolver. And, generally speaking, a load that performs well in a .38 will perform well in a .357. Theoretically, the difference in case length should increase bullet deformation and this is generally deleterious to accuracy—but the practical effect is apparently insignificant.

It happens like this when a .38 Special is fired in the .357 chamber: as it leaves the case, the bullet is upset, expanding radially to contact the *chamber* walls first; as it moves on, the bullet reaches the smaller chamber throat and is swaged down. That first upset/swage-down is in addition to normal bullet deformation in a properly-chambered revolver and *can* re-



You can't buy light/target loads in .357 (right) such as the mid-range wadcutter .38 Special, so handload!

Typical cast lead lubricated bullets. Bullet on right based with gas check, bullet on left has been improperly resized.

duce accuracy.

The use of .38 Special cases can also cause problems with loads intended to produce maximum velocity. Bullets can be seated ahead 1/10" to produce powder space in .38 cases equal to the .357. However, this reduces bullet/case contact and generally interferes with a proper crimp. The result is reduced bullet pull, and often wider variations in bullet pull. The result is less velocity and less consistent velocity than can be obtained in full-length .357 cases.

Generally speaking, then, .38 Special cases are perfectly *safe* in .357 revolvers, but often are *less efficient* and may be *less accurate*. However, this doesn't at all preclude their use for any but the most potent and most exacting uses.

TARGET LOADS

Beginning at the bottom, the traditional .38 Mid-Range Wadcutter load performs very well in most .357 revolvers. With a 145-150 grain, cast, solid-base, lead bullet, 2.7 grains of Hercules Bullseye or the equivalent is quite accurate. Recoil is mild (especially so in heavy-frame guns) and it's great for plinking or close-in small game. Substituting a swaged, hollow-base bullet may improve accuracy, but not necessarily so. Theoretically, the HB bullet is more stable, but targets seldom read theories. This load seems to do equally well in .38 or .357 cases, and there seems to be no difference between new and much-fired brass so long as they aren't mixed in a given batch.

Bullets should be seated to the crimping groove and the case *lightly* crimped into it. When no crimp groove is present, I

(Continued on page 58)

.357 Magnum LOAD DATA

(Velocities in six-inch revolver barrel)

LIGHT LOADS: TARGET AND PLINKING

	BULLET	POWDER	CHARGE	VELOCITY
1.	148 gr., lead WC	Bullseye	2.0	630
2.	148 gr., lead WC	Bullseye	2.5	730
3.	148 gr., lead WC	Bullseye	2.7	765
4.	148 gr., lead WC	Unique	3.5	710
5.	148 gr., lead WC	Unique	4.5	880
6.	148 gr., lead WC	Unique	5.2	980
7.	115 gr., lead WC	Bullseye	2.0	630
8.	115 gr., lead WC	Bullseye	3.0	830
9.	173 gr., lead SWC	Unique	3.0	620
10.	173 gr., lead SWC	Unique	4.0	770
11.	173 gr., lead SWC	Unique	5.0	965

MEDIUM LOADS: GENERAL PURPOSE, SMALL GAME

	BULLET	POWDER	CHARGE	VELOCITY
12.	146 gr., lead SWC	Unique	6.0	1120
13.	146 gr., lead SWC	Unique	7.5	1375
14.	146 gr., lead SWC	Unique	8.5	1520
15.	148 gr., lead WC	Unique	4.5	910
16.	148 gr., lead WC	Unique	5.5	1070
17.	148 gr., lead WC	Unique	6.3	1170
18.	158 gr., lead SWC	Unique	5.5	1150
19.	158 gr., lead SWC	Unique	6.5	1265
20.	173 gr., lead SWC	Unique	4.5	915
21.	173 gr., lead SWC	Unique	5.5	1110
22.	173 gr., lead SWC	Unique	6.0	1170

HEAVY LOADS: HUNTING AND DEFENSE

	BULLET	POWDER	CHARGE	VELOCITY
23.	110 gr., JHP	Unique	10.0	1700
24.	110 gr., JHP	AL-8	15.0	1680
25.	125 gr., Speer JSP	Unique	7.5	1200
26.	125 gr., Speer JSP	Unique	8.5	1300
27.	125 gr., Speer JSP	Unique	9.5	1422
28.	125 gr., Speer JSP	Unique	10.5	1545
29.	125 gr., Speer JSP	2400	17.5	1380
30.	125 gr., Speer JSP	2400	18.5	1475
31.	137 gr., JSP	2400	18.0	1580
32.	146 gr., JSP	2400	16.0	1470
33.	160 gr., lead SWC	2400	15.0	1550
34.	160 gr., lead SWC	Unique	7.7	1300
35.	160 gr., lead SWC	4227	15.0	1350
36.	173 gr., lead SWC	Unique	7.0	1260
37.	173 gr., lead SWC	2400	12.5	1160
38.	173 gr., lead SWC	2400	14.0	1340

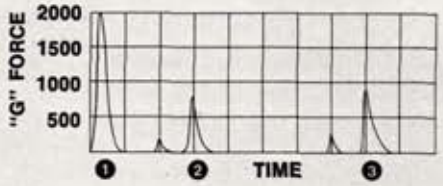
Leupold scopes pass "Krentz Test" ...more than 5,000 times

William F. Krentz of Allen Park, Michigan has developed a fascinating new test for scopes, although that is not what he intended to do.

Bill has been a very active competitive pistol shooter for 25 years or more. As an example, his meticulous records show that just since he began using a scope sight on handguns in November 1970, he has fired at least 38,000 rounds of .22 LR and 21,700 of .45 caliber. However, when he scoped the .45 automatic he began having trouble with his mounts. So, he wrote us, asking what we thought about mounting a scope on the slide itself. After thinking it over carefully, we decided the only answer we could give was, "We simply can't recommend it." *(Bill told us he switched to a Leupold M8-2X scope during this period because the lens system in three models of one brand had previously broken down after 600, 800 and 400 rounds of .22 LR—and the reticle in another brand tore out after 265 rounds of .45 ACP.)*

Then, one day in the summer of '75, Bill showed up at our plant with a Leupold M8-2X mounted on the slide of his .45 ACP. He casually mentioned that he'd fired about 5,000 rounds, using Leupold scopes on several slide-mounted .45s—without a single scope failure. That gave our people something to think about! Like, what kind of stress does this put on the scope? So, we decided to rig one up and find out. (That's really ours in the picture. If you want to see Bill's original, look on page 38 of the May, 1976 *American Rifleman.)*

Well, the results of the accelerometer tests were fascinating, too. We discovered that every shot subjected the scope to three separate stiff jolts—varying from 750 to a staggering 2,000 G's. The simplified graph is from the actual oscilloscope reading.



(1) ACP firing develops 2,000 G's. (2) Slide stopped in full open position creates 750 G's. (3) Slide stopped in closed position produces final 800 G's. (The other two minor peaks are caused by ejection of the empty case and picking up of a round from the magazine.) In case you don't know, one "G" is the measure of the pull of gravity at sea level, normally shown as 32 ft./sec.². To fully appreciate the figures, you should realize that 2,000 G's is roughly the same as the deceleration of a car going 135 mph when it hits an immovable wall.

Bill tells us that since he started using Leupold scopes he's fired at least 21,000 rounds of .45 and 36,000 rounds of .22 LR —without a single scope failure. And, in case you're wondering, the Leupold scopes Bill used were not specially selected for him. Except for a prototype he tested in late 1975, all came off a dealer's shelf. Which makes his following statement all the more important: "Once they are sighted in, I have never had a Leupold *(scope)* lose its zero."

Naturally we're pretty proud that Leupold scopes can take this amount of punishment. *Certainly, performance like this has to start on the inside . . .* with the right design, materials and careful craftsmanship.

You can enjoy a Leupold "Golden Ring®" scope performance, too. There's one to satisfy every shooting or hunting need.

See your dealer.
Write for a catalog.
Leupold & Stevens, Inc.
Dept. AH-1, P.O. Box 688,
Beaverton, Oregon 97005, U.S.A.

These are unretouched photos

Leupold sights
Partners in Performance
WITH NOSLER BULLETS

(Continued from page 56)

always seat the bullet flush in the case mouth, then crimp lightly. Accuracy may vary with case/bullet fit. It may be worthwhile to try different-size, expander plugs until the best combination is obtained. Bullet alloy isn't critical to accuracy, so a wide range may be used. Everything from Lyman #2 to pure linotype mix seems to shoot well so long as bullets are properly lubricated and sized.

Shooters sometimes want to speed up these wadcutter loads for one reason or another. With hollow-base bullets, not much velocity increase can be obtained without danger of the base blowing out at the muzzle. This produces wild shots. Solid-base bullets can be speeded up considerably, but over about 900 fps, a fairly hard, lead alloy becomes desirable if accuracy is to hold up and barrel leading is to be prevented. Actually, these 'hot' wadcutter loads serve no useful purpose in ordinary target shooting, but are sometimes recommended for defense use.

Target-type loads are best for plinking and fun shooting. Conical bullets may be preferred by some, but so long as bullet *weight* remains the same, target-load powder charges may be used safely. Our target loads produce very low pressures, so even if a bullet substitution does cause an increase, no problems will be encountered.

SMALL GAME & FIELD LOADS

This load class falls between target and full-charge, magnum loads. It is probably the most useful of all to the average shooter because it covers such a broad spectrum; yet per-shot cost is quite low, only a little more than that of target loads. Cast, lead bullets of medium weight are best, and velocities of up to 1000 fps are easily obtained with relatively small charges of powder. Yet, these loads can be effective to 100 yards or more and will kill edible, small game without excessive meat damage.

Hard-alloy, cast bullets of 150-175 grains weight and semi-wadcutter form seem best. A 5/5/90 tin, antimony, and lead mix is hard enough, and on up through linotype metal. I've never seen any need for gas checks in this range so long as hard-enough metal was used. Nor are hollow-base bullets of any particular advantage. Bullets should be well lubricated with an Alox-base lubricant and sized to actual groove diameter or no more than .0015" greater.

Powder charges are greater than for target loads and I've found Hercules Unique will do everything that is needed—and at low cost. Others are suitable, of course, for this range of loads, but why argue with success?

While .38 Special cases are usable with these loads, I really prefer the full-length magnums. Cases must hold bullets tightly, and a good, stout, roll crimp is necessary. If all this is done with .38 cases, you'll be reducing powder space about 15 percent, increasing pressures accordingly. If for some reason you must use .38 Special cases, select those bullets which have the crimping groove properly located so that they may be seated to produce standard .357 cartridge length in .38 cases. In effect, this moves the bullet forward in the case, duplicating .357 case powder space. When doing this, though, making the crimp a bit heavier will help obtain more consistent ignition and velocity.

BIG GAME & DEFENSE LOADS

The "creme de la creme" of .357 Magnum loads. These are the two purposes for which the cartridge was originally developed and promoted. For the very simple reason that the cartridge is the most powerful which the *average* shooter can learn to handle really well, the .357 is our best *revolver* defense number; for much the same reason, it is a superb hunting cartridge for all but the biggest species.

For both uses we need loads producing maximum velocity and energy, and with the capability of transferring as much as possible of that energy to a live-animal target. However, this does not mean that hunting and defense loads should be identical. "Big game" implies heavy, massive animals, while "defense" implies the target will be man, which is a relatively small, light animal. In defense, there are other considerations of safety which require limiting penetration, reducing ricochet probability, etc. Yet on big game we need more penetration and do not encounter those other limitations. This means that for defense we want light, frangible bullets which do not penetrate deeply or ricochet easily and yet create massive tissue damage. For game, we need deeper-penetrating bullets.

Both are best served by modern, jacketed, expanding bullets of the type pioneered by Super Vel Cartridge Corporation. For defense, the lighter, hollow-point bullets deliver maximum energy to the target without excessive penetration or ricochet risk. For heavy game, the heavier, soft-point bullets at slightly lower velocity give us what we need.

The reasons are simple. A fast, lightly-constructed, JHP bullet of around 100-110 grains weight expands violently on impact, creating a very large-diameter wound cavity; therefore, it transfers maximum energy to the target and does not penetrate deeply. Its light construction re-

duces ricochet probability. Thus, this is a fine bullet for defense. A slower, 140-150 grain, JSP bullet of heavier construction expands less and more slowly, therefore, penetration is deeper and so is more likely to reach the vitals of a large animal. These characteristics make it a better, big-game bullet.

Regardless of bullet, the slow-burning powders needed for maximum velocity require heavy and consistent bullet pull. This means very tight case/bullet assembly, a deep crimping cannelure, and a very heavy roll crimp. The expander plug may require reduction in diameter to obtain a tight enough case neck. In some instances, a tighter resizing may be needed for the same reason. Because of the soft, fragile nature of such bullet noses, carefully-fitted seating stems are necessary to prevent deformation under seating pressure.

Because of changes in case-mouth hardness with each firing, velocity tends to drop with each successive use of a given case. A case fired several times with the same load will produce significantly less velocity (we are talking about top loads) than it did when new. For this reason, *serious* defense and hunting loads should be assembled in *new*, unfired cases. Fired cases are okay for practice, but for the *real thing*, use new ones. This isn't really the economic burden one might think, for relatively few shots will be fired at big game, and even fewer at people.

Defense and big-game loads should *always* be run through the gun after assembly just to make absolutely certain there is no external defect that might interfere with functioning. When facing a wounded bear or an angry man is no time to find out that you have a dented case or thick rim that locks up the gun.

Sure, there are countless other .357 loads which you might find interesting. Every loading manual is full of them, and they represent the pet ideas of dozens of shooters. Yet, the loads we've described, and also listed in our table, cover just about every real or imagined need a modern pistolero might have.

(Continued from page 31)

shooting procedure. It should be a steady and comfortable position with the body properly addressed to the target or targets." He thereupon states:

"Stand facing a target at approximately 25 yards in the stance you would use to fire a shotgun or rifle, keeping your feet well spread and your weight equally balanced. This stance will have your body turned away from the target some 30 to 45 degrees. Now, close your eyes and draw an empty pistol and point it toward where you think the target is. Imagine that your shooting arm is the stock of a shotgun and you are sighting along it. Your shooting arm should be fully extended with the elbow and wrist locked.

"Your weak arm will be bent slightly at the elbow, with the fingers of that hand overlapping the fingers of the shooting hand. The index finger of the weak hand should be around the trigger guard without touching the trigger finger. Now, push forward with the shooting arm and pull back with the weak arm.

"This will help you hold the pistol down during rapid fire. With all this done, open your eyes and see if your sights are on the target. If not, adjust your angle until they are, and then start the procedure over again. Keep doing this until when you open your eyes the sights will be on the target. This is your natural point of aim, and this will be the stance you always should try to assume when you are shooting. With enough practice it will become a natural movement."

Ray urges the practical pistol shooter to always take advantage of any support available, including use of the prone position. "The all-important thing is hitting what you are shooting at and not how you do it," he says. "There are no alibis in practical pistolcraft."

If the amount of time the novice can spend in the field or on the range is limited, he should dry-fire at home, both to familiarize himself with the equipment, as well as to practice sight-alignment combined with trigger-squeeze and breath control. However, Ray warns "Always make sure the pistol is empty before you dry-fire," he warned. *"Don't take someone's word that it is, you check it.* If you don't know how to check a particular action, then don't handle it."

"Now you know why we don't put our finger on the trigger 'till we have cleared leather."

Core Training Program

Ray recommends the following exercises as the core part of a training program. It should be practiced each time the shooter goes to the range:

1. Fire 12 shots at eight-inch bullseye target from 50 meters (55 yards). Fire three-shot groups from standing, kneeling, sitting, and prone positions. Concentrate on sight-picture, breath-control, and trigger-squeeze. No time limit.

2. Fire 12 shots at silhouette target. From 25 meters, start with hands empty, palms touching (not necessarily as in prayer). Draw and fire one round. The novice should take as much time as needed. The expert should get a good hit in two to three seconds. Repeat 11 times. Fire four each from standing, kneeling, and sitting positions. Make smooth draw and try to touch the trigger off immediately after getting sight-picture on target.

3. Fire two shots at each of three silhouette targets 10 meters downrange, spaced about one width apart. Start with palms touching. Again, the novice should take all the time needed. Repeat this, starting with back to targets and hands shoulder high.

4. Fire two rounds at each of three silhouette targets, spaced one target width apart, 10 meters downrange. Reload and fire two more at each target using the weak hand only. Experts should be able to do this exercise in 12-14 seconds with the semi-auto and in 14-16 seconds with the double-action revolver.

5. If you have an ample supply of ammo, move up to 7 meters and practice firing from a one-hand natural point, with the pistol raised just above the beltline and well out in front of you.

"When you are practicing (training), do everything smoothly and surely. Try to place your shots as near the center of the target as you can. This is the time to develop good shooting habits that you can rely on when the going gets rough."

Drawing the Gun

The draw should always start with the gun in the holster and with the safety on, if the gun has one, Ray states, With the single-action and double-action revolvers and the double-action autoloader, the hammer should be down. With the single-action auto, the safe carrying condition is "cocked and locked," with the hammer being at full-cock and the thumb-safety in locked position.

Ray recommends that the shooter wear the holster in such a way that he does not

have to "stretch" to draw, and this means the holster of a full-competition rig should be on the hip with the gun slightly under the hip point and over the front pocket. For a holster worn on the belt that supports the trousers, Ray suggests a cross-draw, as it is easier for the shooter to get at the pistol. "You can get it out in any position, except lying flat on your stomach." As to the draw itself, Ray says:

"The draw should always be smooth and sure. While the expert might be able to take calculated risks, the novice should train himself to be safe and to always have the pistol where it should be at the completion of the draw; that is, with the sights aligned and the pistol ready to fire (thumb safety off).

"Try to use as little physical movement as necessary to draw the pistol. Using more movement than necessary requires that the movement or movements have to be controlled, and this means that you are wasting time and energy.

"Keep your trigger finger straight while you are drawing the pistol from the holster. If you are using a semi-auto with a thumb safety, release it and move your trigger finger to the trigger *after* you are well clear of the holster. If you do this then the possibility of your messing up the firing line with a lot of your blood and earning a lifelong limp will be lessened considerably."

After the pistol is drawn, Ray advises that the shooter use a two-hand hold if there is time; the reasons being (1) more control of the handgun itself, (2) easier to use the sights, and (3) considerably less sight-alignment loss during rapid fire.

"The *natural point*, or hip-shooting, as it's sometimes referred to, should only be used at extremely short ranges, such as seven yards or less, depending on the shooter's ability to hit from the natural point," he stated. "The farther you are from your target or the longer the range, the more important it is to hold a sight-picture and *squeeze*.

"From 10 yards you might be able to jerk the trigger and still score a good hit, but from, say, 25 yards out, you must have a good sight-picture and a clean break of the sear or trigger. The farther you get from the target the more exacting you have to be in everything: sight-picture, trigger-squeeze, grip on pistol, breath-control, and position."

Speed vs. Accuracy

"If time permits the shooter's assuming a more positive position, the kneeling or prone position will provide greater stability, and," Ray adds, "at long distances always try to use the prone position, if you can."

Normally, in competitive shooting, all stages of fire will start from the standing position, with pistol in the holster, and the shooting position will be "assumed" after the starting signal is given. "You will have to decide at once how much time you want to designate for assuming a position

as well as the position you will assume," Ray said, explaining, "this means you will have to determine which firing position will be advantageous for a particular problem."

The decision thus involves whether or not it would be better to shoot fast and possibly miss or shoot more slowly and score positive hits but possibly not get off all the required rounds in time. "You have to decide that for yourself; thus, for the novice, always try to stay under control, and try never to waste a shot."

In shooting multiple targets, Ray advises that the shooter always assume the position or natural stance for the hardest shot of the string. For example, in a reloading stage or a weak-hand stage, the shooter should take his natural stance on the target in that stage that normally is the most difficult to hit and, from that stance, aim at the other targets.

Moving Shooter/Moving Targets

If the shooter is required to move from one firing point to another, "It's a good practice to move with the pistol in the holster and in a safe condition." If a match permits the shooter to move with the handgun drawn, then "you must make sure the pistol is always pointed in a safe direction, and—I cannot emphasize this enough—with all safeties engaged and your trigger finger outside the trigger guard."

Ray suggests that when the shooter is moving from one firing position to a new one, he always approach this new firing point so that he is ready to fire when he comes to a stop. "A good procedure," he notes, "is to give a slight jump so that you will be properly addressed to the target or targets, or be prepared to go immediately into your firing position if it is other than standing. This readiness can save you a few seconds."

If shooting while moving is required then the competitor should try to move from the waist down, using the knees as shock absorbers, enabling him to keep his upper body and arms from bouncing. "The rule is, shoot with your upper body and move with your lower body," Ray states, adding, "If possible, try to fire in a sequence so that both feet are on the ground when you fire."

Moving targets present trajectory problems, Ray points out, noting that estimates must be made as to distance to and the speed of the target. After making the estimates quickly, the shooter will have to determine the correct *lead*, the lead being defined as the number of inches or feet the shooter will have to aim ahead of the target on firing so that the target will move into the path of the bullet. Ray has worked this out mathematically, thus:

"By using the equation, L = DS/V, the contestant can quickly calculate his lead (where L = lead, D = distance from shooter to target, S = speed of target, and V = velocity of bullet). An example of this might be: distance to target is 25 yards (75 feet), speed of target is 10 feet per second, and velocity of load is 850 feet per second. Therefore, 75 x 10/850 equals 0.88 feet or a lead of 10½ inches."

These pointers, Ray feels, should help the novice through his first few matches. But whether the novice remains what he is or works his or her way up to Expert or Master category in competition shooting depends upon several factors, including how hard the novice is prepared to practice his shooting and train for particular matches, how well he takes care of himself and his equipment, and how much thinking he does prior to and after the match.

"An Expert or Master can normally forget a match after it is over, providing no problems were encountered," Ray said. "A novice, on the other hand, should try to use match experience to develop shooting skills and eliminate mistakes. By mentally recalling his mistakes in a match a contestant can program himself to eliminate them."

A good time to do this, according to Ray, is immediately prior to sleep or while doing self-hypnosis and thereby letting the subconscious help in correcting or in eliminating these problems.

Using whatever of these pointers are appropriate for his needs and always practicing range courtesy and safety procedures should not only enable the individual to enjoy and achieve success in the sport of practical pistol shooting but also to insure that he is welcome at whatever range, club, league, or tournament he competes in. And when he competes, his mental attitude should be that of a winner. He should demand the best of himself, and he should shoot to achieve this.

INSTANT TRIGGER JOB FOR THE .45

(Continued from page 27)

hammer strut and strut pin to the Silva hammer, but I suggest that you obtain a new strut and pin. Removing and replacing the same strut pin could result in an undesirably loose fit.

To eliminate all creep, you may wish to stone any burrs or tool marks from the end of your sear.

If you are installing the hammer on a Gold Cup model, you should replace the Gold Cup sear with a standard commercial or GI sear.

The Silva hammer's full cock notch is adequately polished and I do not recommend stoning or modifying it. If your gun has adjustable sights that protrude over the firing pin stop, you may need to file or grind the top of the hammer to avoid hitting the rear sight.

There is one modification you may need to make on your disconnector. The adjustment screw extends into the space in the center of the hammer that is in line with the back of the disconnector. With the adjustment screw extended, the hammer may catch on the back of the disconnector just above and to the rear of the rectangular hold the sear pin passes through. Silva Products says this happens in rare cases, but it happened in two of the three guns I installed hammers on. Simply radius the area involved on the back of the disconnector—illustrated directions are included by Woody Silva with the hammer and a photograph accompanies this article.

With thes minor modifications, reassemble your gun with the Silva hammer. Put the hammer to full cock and adjust the screw below the firing pin with the allen wrench supplied. Trigger pull is decreased by tightening the adjusting screw (clockwise) or increased by loosening the adjusting screw (counter-clockwise).

Directions supplied with the hammer say to turn the adjusting screw in quarter turn increments which is good advice on your first hammer. As you get the feel of how the Silva hammer works, you will learn to turn it in one-half turns or even more at first, then back off to quarter or less turns as adjustment is achieved.

At all stages of adjustment you must find a trade-off between lightness of trigger pull and engagement secure enough to hold the hammer at full cock as the slide travels forward. To test the former use a trigger pull gauge such as an Ohaus throughout your procedure. To test the latter pull the slide back and catch it on the slide stop. Then release the slide stop letting the slide slam forward. If the hammer follows to half-cock, your pull is too light and you need to turn the adjustment screw counter-clockwise until the hammer holds.

Some connoisseurs of accurized pistols shudder at the thought of a slide slamming forward as described above. In practice the slide never moves that freely, but has the added resistance of stripping a cartridge from the magazine, feeding it into the chamber and forcing the extractor over the "rim" of the case. If the hammer will hold without this normal resistance, however, it should hold well under actual firing conditions.

The directions say that if the hammer follows the slide, generally the trigger pull is less than 4 lbs. This depends on several things, including recoil spring strength. With a 22 lb. extra power recoil spring, I could not adjust the hammer to less than 5 lbs. without slippage.

Directions also recommend stopping

when you reach 4 lbs. which is usually a good idea. Sometimes, however, you can get 3¾ or even 3½ lbs. with a standard or reduced recoil spring.

Finally, check your thumb safety and be sure it engages as freely as it did with your original hammer. The adjustment screw of the Silva hammer will pivot the sear forward at the top and back at the bottom. If there is any binding of the bottom of the sear against the lug of the thumb safety, or if you cannot remove and replace the safety readily, you need to turn the adjustment screw on the hammer counterclockwise until such problems disappear.

If you want the change to the Silva hammer to be permanent, there is an alternative that will not sacrifice the light trigger pull you have achieved. You can stone the lug of the thumb safety until it fits the new sear position.

* * * *

The Silva Adjustable Hammers are available from Silva Products, 614 S. Gold, P.O. Drawer 270, Deming, NM 88030, Phone 505/546-3335. They are also distributed by Crown City Arms, P.O. Box 1126, Cortland, NY 13045, Phone 607/753-0194. Retail is $21.95 and dealer inquiries are invited.

What is otherwise a tedious, time-consuming job of an hour or more with the danger of ruining hammers at as much as $7.25 each, can now be done in minutes after your Silva hammer is installed.

The beauty of the adjustable hammer is not only in saved time, but in a trigger pull that can be changed at any time in seconds by external adjustment according to your purpose, ammunition used, recoil spring employed, etc.

CUSTOM COMBAT M-19

(Continued from page 49)

The quickest avenue to a *light* double action trigger in the Combat Magnum is via the trigger return spring. The mistake amateurs make is chopping down the standard spring that came with the gun. As simple as they look, springs are amazingly subtle in their design and composition, and a cut-down return spring, more often than not, will cause more trouble than it solves. The pull may be lighter, but it may also feel a little lumpy, especially if you've cut the spring too short and tried to stretch it back out. I've seen home-cut Smiths whose triggers would return with the slowness of an elephant swimming through quicksand—if, like that unhappy elephant, they returned at all.

Your best bet is to part with some small change and ask Smith & Wesson to send you one of their lightest weight, "police combat competition" trigger return springs. Just drop it in, and it will take pounds off the pull, while remaining slickly smooth and—most important—it will snap the trigger back forward almost as fast as the standard duty spring. If you've spent a lot of time doing double-action work, you can feel a slight loss of return speed, but I personally believe the return is quick enough for serious combat use, and would not hesitate to have this spring in my duty 19 or 66.

One bone of contention among S&W specialists is whether or not the hammer block should be taken out. Those who favor removal feel this eliminates one more set of friction points, thus making the action that much smoother, and that in any case, the S&W's design is such that an altered gun couldn't possibly go off by accident unless dropped. More conservative gunsmiths admit that they leave the bar in purely as a defense against lawsuits if a customer does somehow manage to let the gun go off when it shouldn't, but they also maintain that if the whole action has been properly honed, the hammer bar isn't going to grate harshly enough on the surrounding parts to cause noticeable disturbance in the smoothness of the trigger pull.

I tend to go along with the latter. I've had and used Combat Mags with and without the bar, and all other factors in the action work being equal, I couldn't really find that much difference. If the gun is going to run the risk of any abuse at all—and that means any outdoorsman's weapon, any cop's, any serious civilian pistol packer's—then it's wiser to leave it in and stay safe.

As far as slickin' up the parts, the home smith should do nothing more than *very* lightly stone the contact surfaces. You can polish the inside of the frame if it makes you esthetically happier; there is no need, however, to polish anything that doesn't bear against anything else when the action is in motion.

The light touch is important, because if you go too far and remove the case-hardened finish from the trigger or whatever, you're exposing soft metal that is going to wear rapidly and unevenly, quickly ruining the smoothness and ultimately the reliability of the handgun.

The Combat Magnum. It wasn't the first mid-frame .357 (the Colt Trooper was, by a matter of months), but it has certainly been the most successful. It combines superb handling qualities with a size that is ideal for constant carrying, and inherent accuracy that's hard to beat out of the box. I've carried the Combat Mag on and off duty, won competition with it, and never lost my appreciation for a design that is both visually and functionally superb. When you tailor it for your own shooting techniques and habits, it comes even closer to being, for many purposes, the ideal handgun.

THE RETURN OF SUPER VEL

By EVAN MARSHALL

For decades the pleas of American handgunners for more effective ammunition fell on deaf ears. The need of police officers for high performance loads for the traditional .38 Special were also ignored. Those who needed more stopping power were forced to either handload or switch to a larger caliber.

This is how things stood in the mid-1960's, when Lee Jurras introduced the Super Vel line of ammunition. The initial loads were for the .38 Special, but other calibers soon followed. Whether or not you agree with the Super Vel approach to stopping power, there's no argument that this ammunition became very popular. By the time Super Vel ceased production in 1974, virtually every manufacturer of handgun ammunition was producing comparable loads.

A couple of months ago, however, I began to hear rumors that Super Vel was resuming production. It took a bit of work, but one of my spies informed me that H&H Cartridge Corporation (P.O. Box 294, Greensburg, Indiana, 47240) would be the producers of the Super Vel line. A letter to Bob Hamilton, President of H&H, produced samples of this new ammunition for testing and evaluation.

H&H is producing Super Vel in the following calibers; .380, 9MM, .38 Special, .357 Magnum, .38 Super, and .45 ACP. The samples they sent me included;

Super Vel 9mm 112 gr. JSP

The .38 Special 110 gr. JHP

.38 Special 110 grain JHP, 9MM 112 grain JSP, and .357 Magnum 150 grain JHP.

The proof of any ammunition, of course, is in the shooting. I loaded up my guns chronograph, and ammunition, and headed for the nearest precinct range. Velocities were checked on my Chronograph Specialists Model CS-100, while expansion was checked by firing into clean, dry sand. While sand does not duplicate the resistance of flesh, it is an inexpensive test medium that produces consistent results. Furthermore, it is readily available so that readers can conduct similar tests of their own.

The .38 Special and .357 Magnum loads were tested in 2" and 6" barrel lengths, while the 9MM was tested in a early production S&W Model 39 with four inch barrel.

The results of these tests are listed below;

.38 Spl. 110 gr. JHP
2" bbl. @1087 fps expanded to .623"
6" bbl. @1293 fps expanded to .691"

.357 Mag. 150 gr. JHP
2" bbl. @1156 fps expanded to .672"
6" bbl. @1346 fps expanded to .813"

9mm 112 gr. JSP
4" bbl. @1253 fps expanded to .667"

The original Super Vel ammunition was noted for its fine accuracy, and the new version hasn't seemed to suffer at all as the photos show. The Model 39 I used for the 9MM tests has always been extremely sensitive about its diet, but fed the 112 grain JSP load without a hitch.

Bob Hamilton informs me that H&H intends to add additional loads to the Super Vel line from time to time. If your dealer doesn't have this ammunition in stock yet get him to order some, because it's worth
waiting for.

25 yard accuracy of .38 Spl.

Accuracy of 9mm load from M-39

GENESIS OF THE COMBAT MAGNUM

(Continued from page 41)

15/16" back of it.

In July of 1971 the Stainless Steel Combat Magnum Model 66 was introduced at serial number K900000. It was furnished with 4" barrel only and in other respects designed the same as the current Model 19, except that all parts were of stainless steel and the only finish is no finish, so to speak. Actually it is called satin but is natural stainless exterior with polished surfaces. Beginning in July of 1975 a 2½" semi-square butt version became available. Also at about this time the rear sight was changed to black stainless steel and the front to red insert.

In 1974 a "U.S. Border Patrol" commemorative model was produced in the Model 66 series with special casing, and with a special commemorative seal roll engraved on the side plate. The seal was a reproduction of the Border Patrol badge. These were numbered in their own series with USBP prefix from 1 to 3243. This is the only non-standard Model 66 known at this time. Barrel length was 4".

The reader has no doubt noted all the Combat Magnums (except the two commemoratives) are serialed in the same series beginning with the prefix "K". It has also been mentioned that the Masterpiece revolvers were also numbered in this series. It should be further noted that all target-sighted K frame revolvers produced since 1946 are numbered in this series. This represents a large number of Models and a large number of guns. When serials reached K999999 the prefix was changed to 1K and numbers restarted. This system repeats as numbers reach 999999 again.

The writer gratefully acknowledges receipt of serial number and chronological data for the preparation of this article from Mr. Roy G. Jinks, Factory Historian and noted S&W authority.

THE .22 LR MINI REVOLVER

(Continued from page 23)

ther side of the frame, but the cylinder pawl makes loading from the left side more difficult.

After firing, the cylinder is again removed and the empty hulls punched clear with the help of the long cylinder pin.

The five chambers are partially counterbored, but the rims of the ammo still protrude from the rear of the cylinder. Make sure you don't drop a loaded cylinder (as I once did), or it *could* result in an accidental discharge.

The little gun features a fixed firing pin, and a "safety" half-cock notch that should be engaged to keep the firing pin from contacting cartridge rims. The hammer must be manually drawn to the "full cock" position each time a shell is to be fired.

The spur-type trigger has a pull that is fairly light and crisp. In actual use, only the thumb and the first two fingers are employed to hold and operate the gun. The small grip can be completely enclosed by a man's middle finger, while the thumb cocks the hammer and the index finger handles triggering chores.

With high-speed .22 Long Rifle ammo, this mighty mite makes a lot of noise and recoils sharply upward in the hand. It's not just a cute noisemaker, either. High-velocity hunting ammo generates a surprising 780-800 fps at the muzzle, making this gun lethal at close range.

As the rudimentary front sight is higher than the hammer notch that serves as the rear sighting equipment, the bullet prints well below point of aim at any distance to speak of. While this gun is obviously not intended for use on small targets at long range, I was pleasantly surprised at being able to put all five rounds inside a 6½-inch circle at 10 yards.

For last-ditch self-defense or just plain plinking fun, the stainless-steel mini gun offers a unique package of pint-sized power. It's *not* a toy, but a fully functioning handgun capable of doing considerable damage, and it must be treated with respect.

The North American Arms wheelgun comes in a fitted velvet jewelry case, and retails for a respectable $109.50 (the .22 Short version costs $89.95).

NSL MONEY SHOOT

(Continued from page 22)

but as to the National Shooter's League and its purposes, there is no longer any doubt. All it needs is a little more PR, a little more media expertise. The industry has professionals who can contribute much of that needed, specialized talent.

Those were the thoughts in all our minds as we left the range that Saturday afternoon. We had that deep, silent satisfaction of having seen history in the making. Athletes and sportsmen of the day must have felt the same surge of pride when they left Cooperstown, N.Y. after the first 1839 baseball game.

The quaint little fenced off range in its dishpan of Wyoming farmland looked so insignificant, so innocuous, the way Plymouth Rock must have looked before the Pilgrims landed.

It was still high noon when we left that place, but to all of us, it seemed that we were looking into a bright new dawn.

Editor's Note

For more information on the 77 match, write: National Shooters League, 504 Lyons, Laramie, Wyoming 82070. Please send a stamped, self-addressed envelope, and just for the hell of it, why not send a buck or two as your contribution to keep this match going.

THE .22 FLEA

(Continued from page 26)

Browning gun as well as in the Contender, but no attempt was made to work up special loads for the latter gun. Cases were primed with CCI 500 primers, and chronograph data, obtained from my indoor range with Avtron equipment, tallied very closely with those Dave obtained.

Aside from having a Contender barrel chambered for this wildcat, you can have most of the .32 ACP and .380 ACP guns converted for the Flea. Corbin will not undertake custom work, so your gunsmith has to get reamers and chamber data from Corbin. Loading dies, suitably modified, bullets and formed cases, and later on, even ammo can be ordered from Corbin. With the exception of the dies, all other items must be ordered by FFL holders. There are a number of rifles which are also suitable for the .22 Flea, including rolling blocks and small actions based on the Mauser design.

If you are already swaging your own bullets, you can get .224 dies from Corbin, and all the other stuff you'll need to make your own bullets. If you are not into the swaging scene, you can either buy 37 grain bullets from Dave or use any of the commercial 40 gr. Hornet bullets.

How good is Dave's Flea? Well, considering the fact that I was in the process of dreaming up my own wildcat in .22 centerfire, it speaks well for Dave's wildcat that I had that T/C barrel chambered for the Flea. After burning up about 200 of Dave's bullets and an equal amount of old Hornet bullets, I can only repeat that now-banned TV commercial: "Try it, you'll like it!"

IN REVIEW

Books of Interest to Handgunners

HANDGUN HUNTING, *by Major George C. Nonte and Lee E. Jurras. Winchester Press, 205 E. 42nd St., New York, N.Y. 10017. Price: $8.95 plus 35¢ postage.*

George Nonte and Lee Jurras are two of the most knowledgeable people in the world when it comes to handguns and handgun ammunition. This book is the first of its kind; profusely illustrated and dealing only with the subject of hunting with the handgun. Both of the authors have participated in this sport for quite a number of years and in this book they relate valuable information and experiences gained while hunting big game in numerous countries.

Handgun hunting is covered in detail; guns and ammunition, where, why and how to hunt anything from varmints to big game. Numerous short hunting stories are included along with a few humorous incidents experienced by the authors. All things considered, the subject is thoroughly covered.

Anyone considering taking up this fascinating sport could well save himself a good bit of time and money from what they could learn from this book. Experienced handgun hunters should find the book both enjoyable and informative. It's certainly a welcome addition to my library.—J. D. Jones

HIGH STANDARD AUTOMATIC PISTOLS 1932—1950, *by Charles E. Petty. Distributed by Morris Lawing, 1020 Central Avenue, Charlotte, NC 28204. Price: $12.95 postpaid.*

Although not thick by some standards, the material in this book is not readily available in any other text. In fact, this is the only text on High Standard pistols known to this reviewer. Starting with the founder of the firm—Carl Gustave Swebelius—the reader is presented with information on the various High Standard pistols. Serial numbers, takedown types, barrel lengths, boxes, Hartford models, exposed hammer designs, U.S. Martial models, the H-D Military and other lesser known models. The text is printed on good quality slick paper and the photography is excellent, permitting the details of the various models to be examined. Patent specifications are illustrated, and so are a number of the experimental pistols, many of which have never been shown before.

Some collectors and shooters know of the .380 High Standard pistol known as the G-380, and a few even know of the 9mm Parabellum design developed shortly after World War II, as they do of the electric free pistol. But there were also experimental models chambered for the .25 ACP, .32 ACP, .32 S & W Long, .38 Special, and the .45 ACP cartridges. One of the .38 Special designs, marked the P-38, resembled the G-380 model, while the .45 ACP pistol resembled the current Auto Mag pistol in size, and the old Grant Hammond pistol in basic construction. That it never reached the production stage is not really surprising.

This book is not the final answer to collecting High Standard pistols, and definitely not to the various shotguns, rifles, revolvers, and machineguns produced by this firm. It definitely is a good beginning, covering well the period 1932-1950, plus brief coverage of the period up to about 1958. The data is based on the research of the factory records, and the photographs are of actual pistols, including the experimental models, making it a very worthwhile book for the library of any firearms student, gun collector, or handgun dealer.—Larry S. Sterett

COMBAT HANDGUN SHOOTING *by James D. Mason. Charles C. Thomas, Publishers. 301-327 East Lawrence Avenue, Springfield, Illinois. Price: $24.75.*

Like javelin throwing, fencing and many other sports, combat shooting has grown out of a martial skill that continues to place physical coordination and mental discipline at a premium. With this as a starting point and without apologies to anyone, Jim Mason delves deeply into combat shooting. Few people, much less the traditional match shooter, have any conception of the vastness and scope of the handgun shooting game. It is unfortu-

nate that the phrase, combat shooting, has been so watered down in recent years that the connotation ceases to mean what it should.

Regardless, Jim Mason has explored the entire field of combat shooting as it exists today and he has done a remarkable job. This is a book of facts. The pros and cons are all there. The decisions are up to the reader. Jim Mason has not attempted to produce solutions to anything. He has laid out the facts. The reader must make his own decisions. He must evaluate. He must chew and worry facts and then decide. This is one of the major assets of this book. It is fascinating and stimulating. It is fortunate that a man like Jim Mason wrote this book. Most so-called authors would have turned the book into a disaster.

I am an old time pistol shooter. Therefore, I read the section on Revolver vs. Pistol with interest. This is about as impartial and factual an evaluation as I have ever read. Even I cannot fault the author's logic. Which is better? Read the book and then make up your own mind.

The match target shooter will need a lot of orientation when he gets into this book because this world of combat shooting is an entirely different ball game from conventional NRA matches and registered competition. As Bill McMillan states in his introduction, "The competition was tough and the style of pistol shooting was quite different from anything I had done before." Not only is the style of firing considerably different, but the handguns and their ammunition must be completely revalued because what works in traditional match competition will often get the shooter nowhere in combat shooting. Jim Mason devotes a lot of space to combat ammunition plus handgun alterations. All of it a must for the potential combat shooter.

He also gets into the physiology and psychology of shooting. These areas have been overlooked by most handgunners but are vital to anyone learning the use of the handgun for hunting or self defense. The match attitude of "relax, stand easy, take your time, take a deep breath" has no place in even the most rudimentary type of combat shooting or hunting.

Hunting places a premium upon muscular control, top physical condition, complete physical coordination and instant reflexes. These, in turn, are activated by training and by having learned the correct methods of fire control, stance and two-handed firing. All this is covered in fascinating detail. Much of the information is applicable to both defense and hunting, even though the book has as its base or purpose the study of combat shooting. Combat shooting is a very practical business, just as are fencing or horseback riding, because both have evolved from self defense, martial arts and the desire to stay alive. The rapier and the cavalry have gone their way, but the lessons they taught the human race continue to live on in world wide sports.

I could continue indefinitely extolling the virtues of this book. Instead, let me merely advise—Go out and buy it. If you are willing to acknowledge that there is a lot more to handgun shooting than registered match shooting under NRA and ISU controls, then read this book and learn the challenges of an entirely new phase of the handgun shooting game. This book is for both the novice and the professional.—G. C. Nonte

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