WHAT Good IS A Pistol?

By Maj John D. Cooper

IN A previous issue of the GAZETTE, Maj Brooke Nihart continued the discussion of "Pistol versus Carbine." The ideas he expressed were certainly well designed to provoke argument, and I'd like to rise to the bait and air a few opinions of my own on the subject.

For the benefit of those who missed Maj Nihart's article, his answer to the "Pistol vs. Carbine" argument was, "Why not both?," the idea being that each infantryman, in addition to his flat trajectory offensive weapon should carry a supplementary defensive firearm for emergency close combat. In addition to the theoretical arguments supporting his case, Maj Nihart pointed to the numbers of infantrymen in both theaters of the late war who acquired pistols of one description or another and packed them voluntarily as long as they were permitted.

It was then argued that the current U. S. service pistol is unsatisfactory for the purpose and should be replaced by another type offering lighter weight, a quicker first shot, and "sufficient" shock power. It was to be carried in a redesigned holster offering both speed and security, and above all was to be "easy to shoot."

At first glance, Maj Nihart's proposal seems somewhat startling, and after some consideration, I remain no less dubious. The view is widely held that the infantryman has plenty to carry as is, even when he is stripped to the barest fighting essentials, without giving him a sidearm and ammunition as well.

Granted that the pistol is not appreciated properly in modern military circles, and that an entirely new training system will do much to correct this, I still don't believe the handgun's place is among the multitude of gadgets, gizmos, and other impedimenta with which the foot soldier is already burdened.

It is true that a rifle may jam or break, but when this possibility is balanced against the additional bother involved in carrying a pistol, holster, spare magazine and ammunition, I do not believe many will champion the auxiliary sidearm.

It is true that a pistol might quite conceivably save a man's life if his rifle failed. So might a steel plate inserted between him and his opponent. While it is ridiculous to compare the relative portability of a pistol and a suit of armor, the principle remains the same. The result is not worth the effort.

Some consideration must be given to the quite accurate observation that many soldiers voluntarily burden themselves with this extra weapon if given the opportunity. I believe there are several reasons behind this that are not necessarily valid from our standpoint, no matter how important they may seem to the individual. First is the insatiable American urge to acquire souvenirs and loot. An enemy pistol is prized perhaps above all other items by the "battlefield art collector." Second is the feeling of swank that seems to accompany him who "packs a rod." Handguns seem to have a more or less romantic appeal to Americans in general, brought up on stories of Wild Bill Hickok, Jesse James, Billy the Kid, and the Dillinger type of public enemy.

Third is the widespread tendency to believe in the superiority of foreign and unfamiliar weapons. A great many Americans are quite fascinated by something labeled "Luger" or "Nambu" and feel that anything as exotic as this must possess strange and deadly properties.

Fourth, large sums of money may be obtained by trading on the above characteristics present in one's comrades-in-arms. And last is the quite valid reason that many men whose primary requirements are better met by the pistol, find themselves saddled with a rifle and wish to remedy this situation.

So while I believe that there is a wider need for the pistol in our modern organization, I do not believe that the concept of a "two-gun infantryman" is sound.

But, if we discard Maj Nihart's proposal, is there a place for the pistol in modern war? Is there anything the pistol will do that the carbine won't do better? As a pistol bug I naturally believe there is, but I don't think it will be recognized until a more practical training system is adopted.

It seems that the more warfare develops, the smaller is the percentage of troops actually in contact with the enemy. It has been estimated that less than one fourth of a modern ground force is actually involved in close personal combat.

Better training, not a better weapon, is needed to insure confidence in the pistol

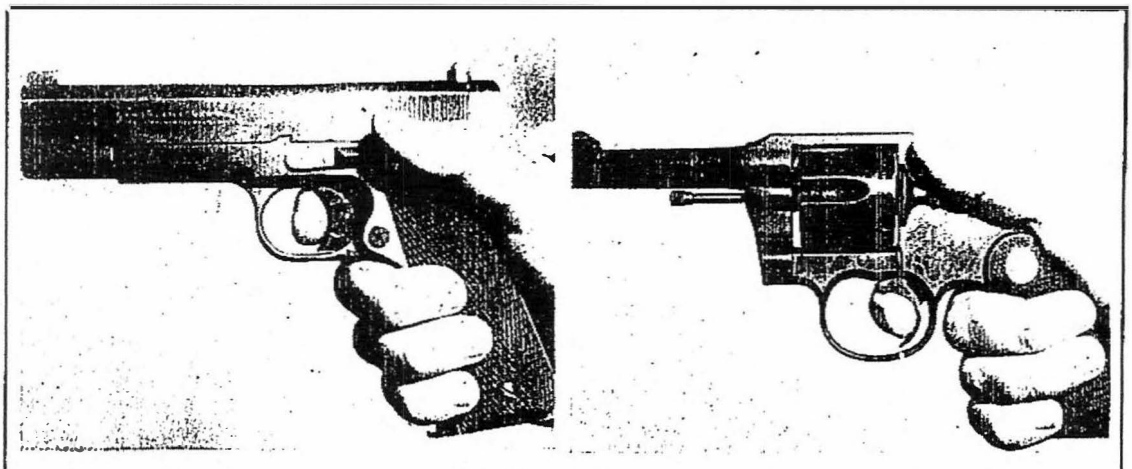
In addition to personnel who are in need of a defensive weapon *only* in the course of their regular activities, there are many men whose principal offensive weapon is crew-served and at the same time is designed to be operated in close proximity to the enemy. Examples are bazookas, flame throwers, machine guns, company mortars, antitank guns, assault guns, and tanks. Operators of these weapons have a definite need for an efficient weapon that is out of the way, ever present, and instantly available in all circumstances. Its effective range need be only the distance an enemy can throw a grenade, for generally at greater distances there is sufficient time to permit the primary weapon involved to be used against personnel. (The mortar is the exception to this and its crew may have to have some flat trajectory, mid-range weapon for defensive purposes.) These men, if they were trained to hit with the pistol, and consequently had confidence in it, would be more efficiently armed for their jobs with the sidearm than the carbine.

There is yet another field in which the pistol is outstanding and that is hand-to-hand combat. Usually, of course, this type of fracas occurs, if at all, as the conclusion of a more conventional fire fight, and it is impractical to carry two types of weapons and shift at the turning point, but occasionally a situation will develop where close combat is deliberately sought by the attacker at the outset of the engagement. Trench raiding in static warfare, patrolling in large ruined cities, combat inside buildings, and certain types of night attacks are examples. Here the pistol in the hand of a practical shot is a formidable weapon. When your first glimpse of your adversary is at a range of about ten yards, the speed, handiness, and, perhaps most of all, the emphatic wallop of the pistol are distinct advantages.

And lastly, police and occupation duty, in which marines have been and will be engaged for quite some time, has many phases in which the pistol is called for. In addition to activities in the line of duty, liberty and recreation in many parts of the world today are distinctly hazardous for the occupying forces. The commander is compelled in such cases to restrict his entire force indefinitely or let his men carry arms at all times. In the latter case I believe no one will deny the desirability of the handgun.

The first stumbling block in the design and employment of pistols is the widely held conception that a pistol is a substitute rifle. This is basically unsound. The two weapons are designed for entirely different purposes and they meet entirely different requirements. Fundamentally speaking, the rifle is an offensive arm, designed to be carried by an individual prepared and intending to carry the fight to his adversary. Therefore its requisites are accuracy, range, power, and rapidity of fire, roughly in that order. As long as it can be carried by one man without undue fatigue, weight and handiness are not too important, and speed in getting off the first shot from a safe carrying condition is a secondary consideration.

On the other hand the handgun is basically a defensive weapon. Western movies to the contrary, a man who knows what he is doing does not deliberately set out to kill, armed only with a pistol (unless of course he is forced to be surreptitious about it.) It must be assumed that the man who carries a pistol is primarily concerned with matters other than immediate combat with the enemy.



Which grip is the more natural? The author claims that Americans prefer the revolver for mainly traditional reasons which are counterbalanced by the more natural position of the hand in gripping the automatic. The author suggests the automatic's grip be reworked to give it more slant and a slight curve.

It is at once apparent that handgun requirements are different. I would list reliability, speed of first shot, maximum shock power, and rapidity of fire, in that order, as essentials. Speed of reloading is next. Range and penetration are secondary considerations, and if we discard Maj Nihart's conception of the pistol as an auxiliary to the rifle, light weight is not particularly important. Accuracy sufficient to hit the vital zone of a man at 50 yards is adequate. (And this is arbitrary since the weapon is almost never used at this range.)

NOW it is obvious that either weapon can be used for purposes other than those intended. No law prohibits quick draws with a rifle or sniping with a pistol, but best results are not obtained this way. The "substitute rifle" complex previously mentioned is responsible for a form of training and competition requiring men to hit small, stationary, round black spots at fixed ranges, starting with the weapon out and unlocked, and given much more than enough time. I don't wish to convey the impression that target shooting is easy. On the contrary, it is so difficult as to be impractical. Even the relatively simple pistol qualification course is apt to discourage beginners and destroy their confidence in the weapon. The fact is that the pistol is just not a sniping weapon, and the ability of a few individuals, using special arms, to do wonders at this kind of shooting does not alter the matter. Shooting at a bull's-eye at 50 yards with a .45 automatic is quite comparable to hauling a plow with a Ford convertible coupe. It can be done—you may have to do it—but it is rather silly to make an issue of it.

When the pistol is properly used as a rapid fire defensive weapon and training is pointed toward this type of employment, truly astonishing results can be obtained, and even the relatively unskilled beginner is given a feeling of confidence in his weapon and in his ability to defend himself.

In series of tests carried out during the past few months, the following capabilities were established as completely practicable with the service automatic as it now stands. The shooter involved was familiar with the pistol but by no means an expert shot on the conventional course. A total of about 24 hours, in two-hour stretches, was spent on the range. This is not an unfeasible expenditure of time on a peacetime schedule. In all cases the holster used was a spring type shoulder model which will be described later.

1. With the pistol cocked and on safe, it was found possible to draw and hit a man in a vital zone *every time*, at a range of 25 feet, in from 3/5 to 4/5 of a second.

2. From the same condition of readiness, it was possible to draw and hit each of three silhouettes twice in four seconds. This central silhouette was 15 yards from the gun. The two side silhouettes at a 30 degree angle of divergence.

3. It was possible to draw and hit four silhouettes at different angles and ranges from 5 to 20 yards, using the sights, in four seconds.

4. In the FBI practical pistol course, which involves shooting with and without sights, right and left handed, quick draws, and reloading against time, at ranges from 7 to 60 yards, it was possible to hit the vital zone of a man 48 out of 50 shots.

These tests lead me to believe that the awkwardness and unwieldiness attributed to the service automatic are largely a matter of personal idiosyncrasy. For every man who thinks the service pistol is muzzle heavy, one can be found who hangs weights on the barrel of his Woodsman to produce what he personally regards as better balance. I do not believe that the service pistol is perfect—I will give my suggestions for its improvement shortly—but I do believe that excellent results can be obtained with it, *provided a proper training system is used.*

As to handling qualities, it is my belief that most critics of the service pistol have been brought up on a revolver, and to a man used to a revolver, the automatic does seem awkward. However, a glance at the illustration contrasting the grips of the two weapons should convince the open-minded observer that the hand is definitely more relaxed and natural gripping the automatic pistol than gripping the revolver.

IF, however, most Americans are brought up on a revolver and consequently more used to it, there must be a reason. I believe the reasons for the preference of the revolver to the automatic in this country are as follows:

The revolver is capable of being carried in a safe condition and fired by simply pulling a trigger. This double action feature, permitting a much faster first shot, is *the* big advantage of the six-gun. This feature has now been incorporated into one military and at least three pocket model automatic pistols. As Maj Nihart suggests, it should definitely be adopted in any future sidearm to be developed.

Second, revolvers are thought by many to be more reliable than automatic pistols. This argument was once valid, but pistols have been developed to a point today where it is largely academic. It is true that an automatic will jam if it is oiled and then rolled in dry sand. So will a revolver. It is true that parts may break on an automatic. They will also break on a revolver and they are less easily replaced in this weapon. The revolver does provide a degree of "misfire security" not obtainable in any known form of automatic pistol. That is to say, a cartridge with a bad primer does not force the revolver user to clear his gun—he simply snaps it again, firing a new cartridge. However, the need for

this type of security is almost entirely eliminated in modern ammunition.

Third, revolvers are older in America than automatic pistols and have more tradition. The old western six-gun looms large in the subconscious of most Americans when they are discussing or handling firearms.

Last, revolvers perform better on conventional target ranges as rifle substitutes than do automatics. The chief reason for this is the superior trigger mechanism turned out by most factories on their revolvers. A Smith & Wesson police revolver, right off the assembly line, has a better trigger pull than is usually obtainable on most automatics even after considerable doctoring. This is not an absolute factor. It can be changed by better manufacturing methods.

The fixed barrel of the revolver does provide somewhat better long range accuracy than the sliding barrel of the automatic, but here again we are discussing abstractions. If a man wants to punch small groups in a paper target, he can use a rifle, not an arm designed primarily for instantaneous self-defense.

SO we may conclude that a properly designed automatic pistol is superior to a revolver in almost every way, if we are talking about defensive weapons and not toys.

Since we have brought up the matter both here and previously of a properly designed automatic pistol, let's look at what we mean by "proper design." First, we should by all means retain the service cartridge. It may take a little more effort to handle the larger pistol, but it pays off in paralyzing destructive force, which is necessary in emergencies.

Around this cartridge, we should build a double action automatic pistol. Double action is now found in the German P-38 and could easily be adapted to our needs. The pistol should possess a double column Mauser type magazine as Maj Nihart suggests. This will work just as well with the .45 cartridge as it does in the Colt-Browning model of 1935, designed for the German Luger cartridge. We already have such magazines for our Thompson, Reising, and M-3 sub-machine guns. The frame of the grip could easily be thinned down so that its over-all size would not be too great. This would give the weapon a magazine capacity of about 12 cartridges. As I have stated before, I believe that the pitch and general grip in the service automatic is satisfactory, but for the benefit of those who are more used to revolvers or the Woodsman-Luger type of automatic, the grip could be reworked, given more slant and slightly curved. This is really unimportant since, within limits, whatever the shooter is used to will perform well for him.

Next I would like to incorporate a slightly more reliable feeding mechanism into this hypothetical pistol. As all shooters know, the sheet metal magazine of the conventional automatic pistol is the weak point in the entire feeding system. Nine jams in ten are caused by bent lips or dented sides in the magazine. There are three ways this problem can be met. The first is to eliminate the removable magazine entirely and charge the weapon from above, as is done in the case of the Mauser military pistol, the Steyr-Hahn pistol, and more familiarly, in the '03 rifle. This system has the disadvantage of being slow and rendering the pistol inoperative during the loading operation. The second system is to make the magazine, or at least the open end of it, out of a machined forging rather than stamped sheet metal. This was done in the obsolete Mars pistol manufactured in England in the early part of the century. Its disadvantage is greatly increased expense. The third system has been worked out by the Russians in their Tokarev pistol. The cartridges are contained in a sheet metal magazine but the feed bearing surfaces are machined into the frame, eliminating the danger of deforming the magazine lips outside of the pistol. This is possibly the most practical solution. It was so regarded by the Russians who built the Tokarev with reliability always foremost in mind.

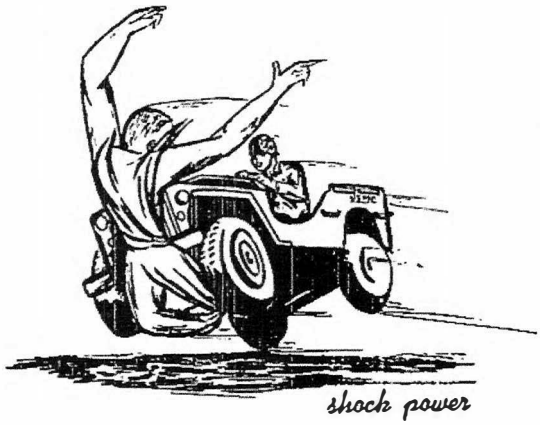
ON this point of reliability, it seems to me that Maj Nihart has neglected a critical aspect of pistol design when he recommends the abandonment of the Colt type tilting lock on the grounds that it is inherently less accurate than the straight sliding barrel of the Luger, P-38, and Nambu. If a weapon can group its shots in the vital zone of a man at 50 yards and gives an edge of even 20 per cent reliability over a more accurate type, I would recommend it in every case. It is interesting to note that of the three modern military pistols, the Colt-Browning 1935, the P-38, and the Tokarev, two use the tilting barrel system because of its increased reliability. The P-38 alone does not and it has yet to be proved that this weapon is as dependable as the other two.

As much attention as possible should be paid to a trigger mechanism permitting a reasonably light, crisp, single action let-off, similar to the factory pulls now turned out on Colt and Smith & Wesson police revolvers.

One more feature I would like to incorporate into the ideal sidearm, and that is a system of field stripping which will allow such critical moving parts as the mainspring, firing pin, and trigger mechanism to be thoroughly cleaned, dried, and oiled. Here again the Tokarev pistol is outstanding. By means of a slide sub-assembly all moving parts are readily available for field cleaning.

A pistol, built as outlined, would possess the following desirable characteristics: maximum reliability; maximum defensive stopping power; maximum speed on the first shot from a safe condition; large magazine capacity; improved ease of maintenance and cleaning, and possibly superior handling and pointing characteristics. It certainly would be superior to any sidearm manufactured as of the present date as a weapon of self-defense for military personnel.

One thing that interested me particularly about Maj Nihart's article was his reference to a small bore pistol's "sufficient" shock power. I confess I don't know what is meant here. Short of a Third Avenue taxicab, very few weapons can guarantee to render an enemy harmless with one blow every time, and this is the only definition of "sufficient" shock power I can think of. Of course some weapons approach this ideal closer than others — the battle axe or mace in the hands of a strong man was probably almost perfect —but practical military firearms do not give 100 per cent or even 75 per cent performance in this respect. Anyone who believes the old theory about a .45 bullet's "knocking a man off his feet wherever it hit him" should try out the weapon on jackrabbits or marmots.



This does not mean that we should abandon the idea of "stopping" or "shocking" power in sidearms. On the contrary we should endeavor to use as much as is practically possible, certainly not decrease it. The word "practically" is where Maj Nihart presumably takes issue. In this he follows the current thinking of the British army, whose claim is that a man hit with a .38 is much less dangerous than a man missed with a .45, and since they believe it easier to train the average recruit to hit with the lighter gun, they have switched from the excellent, if somewhat cumbersome, .455 Webley revolver, to the newer .380 revolver which is similar to the .38 Colt "Super Police."

Carrying this theory to its extreme would result in the adoption of the .22 rim fire as a service cartridge—anyone can hit with that. The point where maximum effectiveness with minimum effort is reached is impossible to determine accurately, but I firmly believe that the slight extra effort involved in mastering the large caliber sidearm for practical, high-speed, defensive shooting, is more than compensated for by the greatly increased shock power it provides.

Gen Julian Hatcher, USA, in his excellent work *Textbook of Pistols and Revolvers* sets up a system for calculation of the "stopping power" of various pistol cartridges, based on momentum and modified by a caliber factor and a bullet shape and material factor, using various standard loads as the basis for a system of coefficients.

This system has been applied to the various cartridges listed in the table of relative stopping power which accompanies this article. It will be seen that there is a very good reason for retaining the .45 A.C.P. cartridge, *which has the highest rating of any load using a legal military bullet.*

In the range of pistol velocities (700-1400 f/s) very considerable changes must be made in speed to produce a decisive change in shock power. Thus, increasing the speed of the service cartridge to the safe limit of the weapon only increases its stopping power by 8½ points, while changing the shape and material of the bullet, with no change in velocity, steps up its effectiveness 23½ points, or some 35 per cent.

Hence it is clear that in providing a small caliber weapon which can equal the service cartridge in stopping power means such a drastic increase in velocity that the weapon will be just as hard to shoot as the bigger gun, if not harder. The perfect illustration is the .357 magnum, which incidentally derives much of its destructive effect in tissue from its "Keith" type bullet which is illegal in military circles.

A glance at the table will show that a reduction in cartridge power from the .45 service cartridge to the .38 special police cartridge, cuts the stopping power of the weapon exactly in half, where the weight of the pistol has been decreased by perhaps a fourth. The pistol being a defensive weapon, a man does not want to toy around when he is faced with instantaneous mortal combat. I personally would rather carry a slightly heavier weapon in all cases, if I could double the wallop it would provide me.

We have a good pistol. It could be considerably improved but an improved model will give no better field service if we continue to train as we do now. I believe that the sidearm's efficiency will never be realized until we cease discouraging a recruit with bull's-eyes and start showing him how to defend himself in an efficient manner.

As an example take the current pistol qualification course or the NRA course. In either case a mediocre rifle shot could pick up a carbine and shoot near possibles every time. This would lead us to believe that we only carry a pistol because there aren't enough two-handed weapons to go around, since the latter is so much more efficient as a weapon.

This thesis is of course not true—there being quite a few situations in which the pistol meets requirements more satisfactorily than any other weapon. In running ten "combat reaction" courses at Camp Pendleton, it was found that a practical shot could consistently outpoint the rifle and carbine users due to the superior speed and handiness of his weapon.

It is impossible here to describe a complete course of training designed to emphasize the merits of the weapon and develop efficient, practical shots. Several law enforcement agencies now have such courses well worked out for the revolver. The Federal Bureau of Investigation has pioneered in this field and the Kansas City Police Department has developed a fine course of its own. It is high time the military forces of the nation adopted similar methods if they intend to retain the pistol at all. This type of training is admittedly a little more expensive and somewhat more dangerous (most strings start with the weapon in the holster), but results are what count and *it brings results.*

In closing this discussion I would like to dwell for a few moments on the subject of holsters. Maj Nihart referred to a suitable holster which would presumably combine security with speed. Unfortunately these two characteristics are antithetical. If a holster is fast, it cannot offer adequate protection or security against jolting out. On the other hand, if it does offer such security and protection from the weather the weapon cannot be reached in time to be of any value in an emergency.

One solution to this problem is the commercial spring holster illustrated. This is the arrangement used for the tests previously described. It offers a large degree of protection, considerable speed, good security against jolting or knocking the weapon out, and another point—comfort. It can be worn longer with less fatigue than any other type, due to its two point suspension and

"Stopping Power"

Based on Hatcher system of momentum modified by cross-sectional area and coefficient of shape and material.

$$\text{Momentum} = \frac{\text{Weight in grains}}{7000} \div 32.16 \times \text{velocity}$$

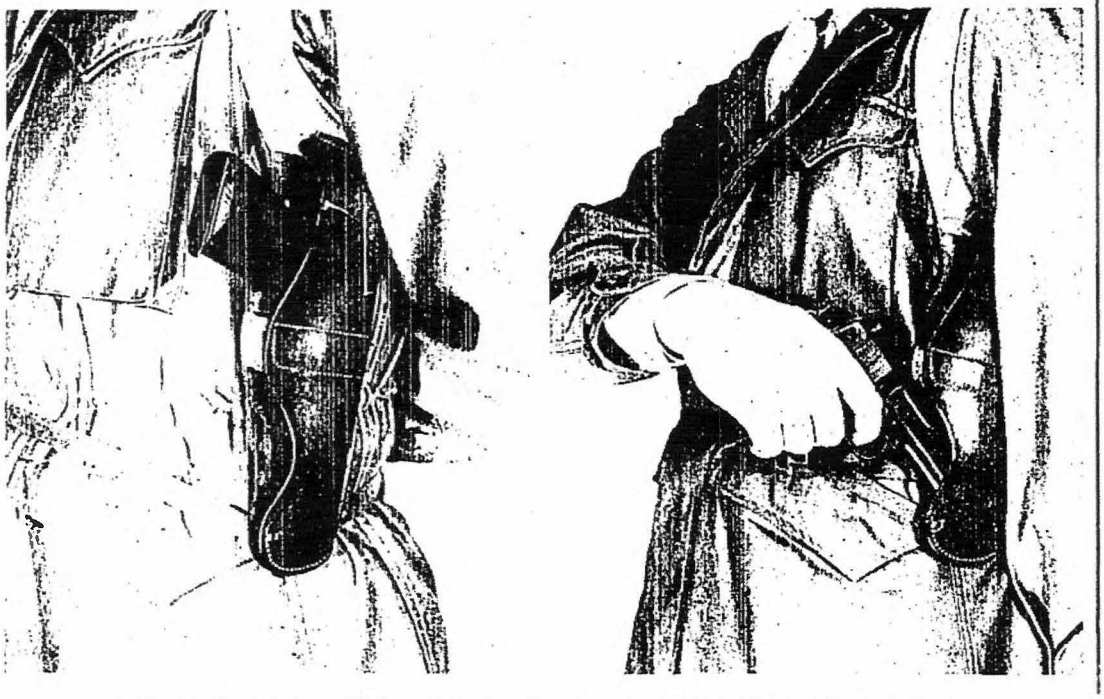
	Cartridge	R.S.P.	Remarks
1	7.62mm Russian Pistol	17.7	Also SMG
2	9mm Parabellum (Luger)	29.4	P-38, C-35, Sten, etc.
3	.38 Special (Standard V)	30.8*	Standard U.S. Police Cartridge
4	Super .38 Auto	31.8	
5	.38/44 Spec H.V. (Keith Bullet)	49.2	This is the most you can get out of a standard .38
6	.30 U.S. Carbine	54.7	
7	.45 U.S. Auto Pistol	60.0	Standard velocity, Military bullet
8	.455 British Revolver	62.8*	Lead bullet
9	.357 Magnum (Keith Bullet)	67.9	
10	.45 U.S. Auto Pistol (Super X)	68.5	Standard bullet increased to 940 F/S
11	.45 Colt Revolver (Standard velocity)	73.6*	This is the old Western "peacemaker"
12	.45 U.S. Auto Pistol (Keith Bullet)	83.5	Standard velocity
13	.45 Colt Revolver, H.V.	87.4*	"Peacemaker" stepped up to 910 F/S

All calculations are based on muzzle performance.

All cartridges except .30 carbine are here recorded as fired from pistols (4" to 5"). The 7.62mm Russian, 9mm Parabellum, Super .38, and .45 Auto would show somewhat better performance when fired from S.M.G.'s or machine pistols.

These figures bear no relationship to range, accuracy or penetration.

*A plain lead, unjacketed bullet was at one time considered legal in war, but during World War II several powers arbitrarily classified them as unlawful and this ruling seems to have become accepted.



The spring type shoulder holster. A commercial holster, it offers a large degree of protection, considerable speed, good security against jolting or knocking the weapon out, and comfort. In drawing, the hand hits well up on the grip, the gun is pulled forward, while the right thumb unlocks safety.

large supporting surface. It also carries the weapon where it can be rapidly and conveniently drawn from a sitting position, as in a vehicle or behind a desk.

In summary, then, I'd like to reiterate the following points:

1. The pistol is *not* a substitute rifle. It is a weapon of definite characteristics which should be exploited more fully.

2. Our present service pistol, while not perfect, is better than any other current weapon for our purposes and is capable of very much higher performance in the hands of an ordinary shot—if he is trained along more practical lines.

3. Rather than changing the weapon, we should completely revise the training and the competitive courses, profiting by the example of the FBI.

4. A new method of carrying the pistol should be adopted.

5. The two-gun concept is unsound.

The above conglomeration of ideas is mostly my own, though much has been learned from the writings of Gen Hatcher, Maj Charles Askins, and the very helpful staff of the FBI Academy at Quantico, Virginia.

The shooting mentioned is that of an average shot, capable of making expert with considerable effort, but definitely not in the competitive category. It is this that convinces me that we are not getting the most out of our sidearm, and that this is a mistake that can be remedied with comparative ease. USMC

A NEW lightweight sleeping bag for use in cold, wet climates and a new squad shelter tent housing 12 men are among the latest subjects of experiments by the Army Quartermaster Corps.

The sleeping bag weighs 7½ lbs and consists of layers of resin-coated nylon separated by fibreglass insulation. The outer layer of the newly developed bag prevents moisture from entering, while the inner layer, next to the occupant, overcomes the chilling effects of body vapor.

The new shelter tent is revolutionary in design, employing no center poles, ropes or stakes. It is 16 feet wide, 32 feet in length, 8 feet high at the ridge and 6 feet high at the eaves. The frame is made of steel sections which fold and nest together. The roof is of corrugated sheet aluminum which can be nested for packing.