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TRIGGER

L OOKING at the gun control situation today, one gets the impression that it is a gigantic circus. In the center ring are the vocal exhibitionists; the lawmakers who propose regulation after regulation—costs be damned, and don't bother to find out if any of these regulations work or not.

In the bleachers, and most times the cheaper seats, are the millions of shooting sportsmen. They cry out, but their voices are seldom heard.

In the box seats is still another group; these are the judges, state, federal and local, who also cry out. The majority scream, "Pass that law!" A few turn thumbs down, but they are obscured by the multitude of black robes who stand and shout approval of the circus act in the center ring.

It is this group of spectators who are most interesting. They approve the passage of more and more gun control laws, and applaud those lawmakers who put on the best circus act. Then, after the show is over and the laws have been passed, they return to their lofty benches and scorn the very laws they approved. They remove the cartridges from their weapons against crime, and they load the chambers with blanks. They adjudge a defendent guilty of a crime and then release him with a slap on the wrist. In some crime areas, they do this more times than they mete out maximum sentences. Then they go to their homes, read the papers, and mutter to themselves that something must be done to stop the crime in our streets.

There seems to be little that can be done to get the judges to treat criminals as criminals. Even when law-makers propose mandatory penalties, the judicial system raises its collective hackles and spews out a lot of legalistic mumbo-jumbo.

The law says that defendents shall be judged by a jury of their peers. OK, let's get a panel of twelve shooters in the jury box next time a guy uses a gun during the commission of a crime, and then we'll see if the weapons against crime are loaded with blanks!

THE COVER

I don't know if everyone is as interested as I when it comes to cut-away guns; I hope so. This one is an Astra "Condor," and it is covered in an article on page 42. The gun is from the collection of Harold Murtz, and was photographed by Gerry Swart.

DECEMBER, 1969

Vol. XV, No. 9-12

George E. von Rosen Publisher



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Jerome Rakusan	Editor
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E. B. Mann	
Col. Charles Askins	
Maj. George C. Nonte	Handloading
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M. Gross	Ass't Circulation Mgr.
Sally Loges	









EDITORIAL OFFICES: Jerome Rakusan, 8150 N. Central Park, Skokie, III. 60076, ORchard 5-5602 NATIONAL ADV, OFFICES, 8150 N. Central Park Ave., Skokie, III., 60076, ORchard 5-6010.

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News from the... SHOOTERS CLUB OF AMERICA

Dedicated to the Constitutional Right of Every Citizen to Keep and Bear Arms

As the New Year draws near, it seems an appropriate time for all of us to sit and reflect on the activity we have been a part of during the past year. Unfortunately for that specialized breed of man known as the "firearms owner" this task might seem less rewarding than in past years.

The year of 1969 did not treat the firearms owner as kindly as we might have hoped. To be sure, the past year did not see any all-encompassing restrictive legislation as damaging as that of December, 1968. But the constant erosion of individuals' constitutional guarantees by state and local legislation, coupled with the ever-present specter of federal registration, provides legitimate shooting sportsmen with well-founded fears of more troubles in the coming year.

The non-stop campaign against firearms and fierarms owners is a constant headache to all of us. We all spend a lot of time and energy talking, thinking and worrying about the problems — but the S.C.A. proposes we do something other than talk, think and worry. We all make many New Year's resolutions — some kept, many broken. This year the SHOOTERS CLUB OF AMERICA has a proposal for a resolution we should all make — and keep. This coming year, let's all WORK with the S.C.A. to defeat anti-gun legislation and elected officials and WORK to adopt pro-gun programs. To protect our constitutional rights is a long, hard fight, but the end results will justify our sacrifices.

The SHOOTERS CLUB OF AMERICA provides the help you need to keep abreast of legislative action that is relevant to our cause. Constant analyses of voting records are made to see which legislators are the friends of shooting sportsmen and which are attempting to destroy our right to keep and bear firearms. It is extremely important that we all maintain constant vigilance if we wish to protect our rights.

The courts are going all-out to protect the common criminal—hardly a day passes without a mention in the news about a confessed criminal being set free because of an obscure technicality. The big-city police are being hand-cuffed in their jobs by ever-increasing control from citizens boards composed of people more concerned with the "rights" of the criminal than those of decent citizens.

If the current trend is allowed to continue, there will be no more decent citizens — the criminal will see to that. Before we arrive at an irreversible "point-of-no-return", we must make a stand and fight for our constitutional right to keep and bear firearms. At every turn we encounter the enemies of freedom attempting to deprive us of these precious rights. We need our firearms to protect ourselves and our country from criminals and organizations with dubious motives — and you need the SHOOTERS CLUB OF AMERICA to support you in your fight for a sane attitude regarding gun control.

Legitimate firearms owners are being treated worse than criminals. In state after state, firearms owners are required to complete detailed personal information records to retain the right to own firearms. The criminal is granted the privilege of being considered innocent until proven guilty. The firearms owner is considered guilty until he proves himself innocent to the satisfaction of a hard-to-please review board.

Where has our sense of values gone? Why must we tolerate this ridiculous treatment? Take an important first step to do your part to change all this — use the attached postage-free envelope to join the S.C.A. This small effort on your part will reap big dividends in the months and years to come. Join today — your membership is an important contribution to the efforts of thousands of others working to preserve your right to keep and bear firearms!

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CROSSFIRE

Weller Under Fire

I'm a Staff Sargent in the U.S.A.F. and guns have been my most valued hobby and interest for a long time. In Mr. Weller's article on the G.I. .45, he tells of how heavy this gun is and seems to dwell on the subject constantly. Sure it's heavy, but I'd carry an extra 5 lbs. of weight any time if it will save my life and keep on functioning when the chips are down.

I wish Mr. Weller would choose one of the guns he's tested and try submerging it in mud and then try to empty a full magazine or even a single round through it without a jam.

I've seen too many men soak up a chamber load of .38's and keep moving. A soldier wants a sidearm that is going to drop a man with other than a hit in a fatal area. Paper targets are fun to pop rounds at, but it isn't standing there pointing a gun or running at you with a knife or hand grenade hell-bent on snuffing you out. A .45 may not be a fabulous hunting weapon or the lightest handgun built, but, by God, when you're hit, you're going to stay put!

SSgt David D. Easterling Chas. Heights, S.C.

I have just finished reading your indictment of the G.I. .45 M1911A1 pistol, which appeared in the August issue of GUNS Magazine under the title, "Which is the Ultimate G.I. Sidearm."

At first blush, I am tempted to say you are full of beans. On second thought, maybe you don't know what you are talking about!

But, no! You are supposed to be a famous firearms authority, and it may be presumed that you DO know better. As an example of fair, impartial journalism, your piece ranks right up there along with the best works of such great men as Senator Dodd, Senator Tydings, and others of that ilk.

John W. Rockefeller Aurora, Nebraska

Jac Weller's article on the ultimate GI sidearm and the criteria for selecting it (light, compact, double action, and of adequate power) is a very good piece of writing, being accurate and provocative. He is also correct in that very few soldiers ever learn to shoot our Government Model 1911A1 with any skill. So, the case seems airtight for a new handgun for the American soldier. Hopefully we'll never run into the fanatical Moro again. If the oriental enemy gets loaded on some opiate let's hope our choice is right, if it ever comes down to stopping a charge with a handgun.

> Roy Traband Okla. City, Okla.

"Old Pinkey"?

This is an open letter to Mr. Alfred W. Dobras, Stratford, Conn., whose letter appeared in Crossfire, September '69.

Mr. Dobras, your best bet is to dump Old Pinkey Dodd. This is for your own good and the good of the nation's sportsmen.

> Robert Ware Paradise, Calif.

Supports Bill

I have just completed your article in the June '69 issue of Guns and I'm writing to say that I fully agree with you.

I, too, used to say that no legislation was better than some. But after watching the developments over the past years I realized that the antigun people were going to force some sort of legislation upon us. Slowly I came to the conclusion that good legislation was infinitely better than some of the pieces of hysteria that was being passed off on us.

The model I.D. card bill, as you presented, was the best bill I've ever heard of or seen.

I shall support this bill with all the power at my command.

SSG Harold E. Shank Rack Kein, Viet Nam



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HANDLOADING BENCH

By MAJ. GEO. C. NONTE

WE HEAR all sorts of talk about cases, powder, and primers among the handloading fraternity. Often, it seems to me, an inordinate amount of importance is attached to each of those components relative to the bullet. Insofar as accuracy and performance on game are concerned, the bullet is more important. So long as powders and primers appropriate to the cartridge are used, standard velocity and acceptable accuracy can be produced with a wide variety of makes and models. But, it's the bullet that puts down game-and that requires close matching to the species being hunted. Also, it's the bullet that contributes most to accuracy.

Pick a bullet that is suited to your game, and you can select any one of dozens of combinations of case, powder, and primer that will do the rest of the job. This doesn't mean there is only one bullet that you can use, but it does mean that the selection should be made with care and with full knowledge of the bullet's capabilities. And, certainly, the characteristics of the game must be considered, as must be the range at which you expect to be shooting and the terrain in which you'll be hunting.

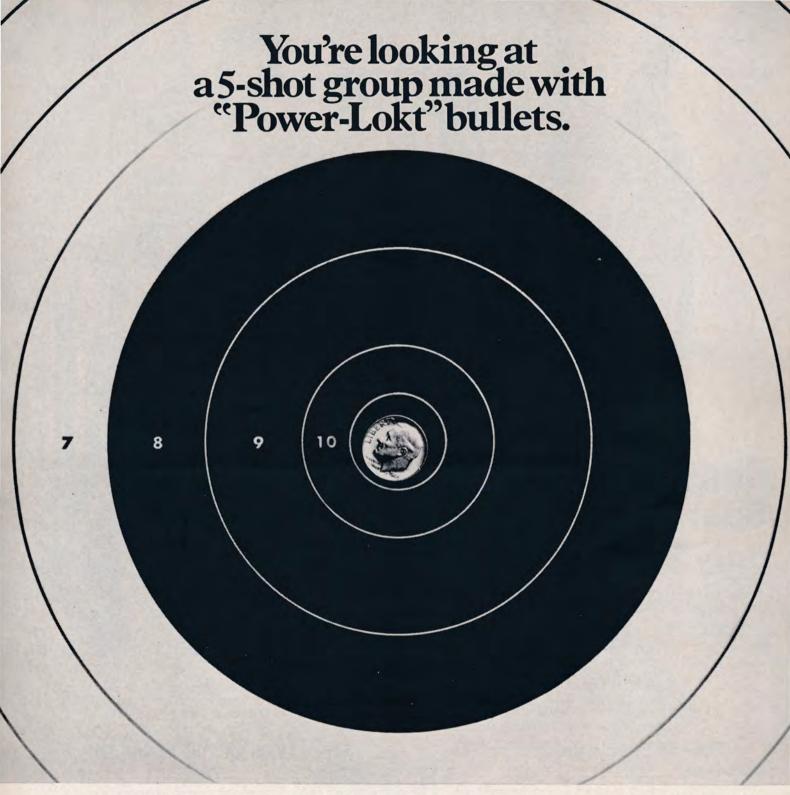
Bullet selection isn't as difficult as the above might lead you to believe. There are three basic types of projectiles, classed by function, with various sub-types classed by design and construction. Discounting target and lead and half-jacket types, we have first the varmint bullet. It must be superbly accurate at high velocity and long range and must produce explosive expansion, even complete disintegration, on the smallest and most lightly-constructed animals. This type of expansion is necessary to provide instantaneous kills on animals which may be only inches from their burrows and would escape to die lingeringly therein if only wounded. In addition, this degree of expansion greatly reduces the probability of ricochets-a characteristic necessary where varmints are shot in relatively heavily-settled areas. Farmers and suburban dwellers take a dim view of hearing ricocheting bullets whine

over their heads or thump into their buildings.

Traditionally, the varmint bullet is a sharply pointed soft- or hollowpoint design utilizing the thinnest jacket compatible with the velocities involved. Sometimes, it becomes a bit difficult to produce a jacket strong enough to stand the stresses involved and yet provide the expansion desired. This becomes more apparent in the smaller calibers, especially those under .22. Because of these performance requirements, varmint bullets are not at all suitable for big game, even of the white tail deer class. They will kill such game, to be sure, but only in an erratic and unpredictable manner. Such bullets will often produce only painful surface wounds on large animals. Such wounds may produce an eventual kill through hemorrhage, infection, or disablement-but that doesn't put meat in the pot. If one is forced to use varmint bullets on big game, they seem more likely to produce reasonably clean kills with lung or neck shots than in any other area. In fact, they will often produce spectacular results when placed in the rib cage providing they do not strike a rib. Nevertheless, varmint bullets are only for varmints. All makers clearly identify this type bullet in their catalogs and literature, so there is no excuse for using the wrong design. Keep in mind, though, that bullets cannot usually be identified merely by appearance, especially when loaded.

Our second class is the general purpose big game bullet. It is characterized by medium-to-heavy weight/diameter relationship, relatively thick jacket, less sharp point, and is usually of soft-point design with more core exposed at the point than is customary for varmint types. This type bullet must be many things to many people and it must expand and penetrate well on game from deer size through elk, moose, and the large bears. These conditions aren't easily met and result in some bullets performing better at one end of the spectrum than the other.

(Continued on page 11)



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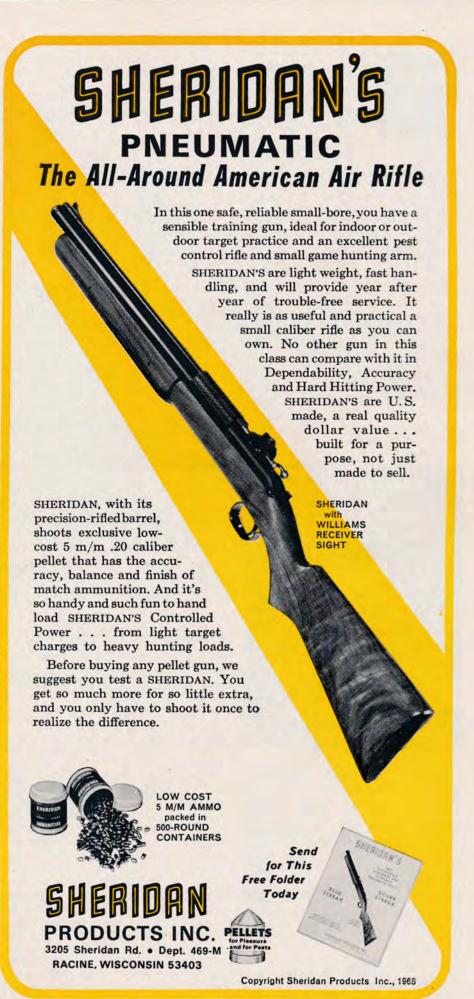
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Big game bullets are generally of simple construction-a one-piece jacket of medium thickness and a one-piece core of slightly hardened lead. Control of expansion is obtained by making the jacket rather thin near the point, tapering to a greater thickness near the base. This permits easy expansion on light animals yet, the thick lower part of the jacket holds the bullet together sufficiently for adequate penetration on the heavier species. The thin-nose jacket also permits reasonable expansion at long ranges where velocity has dropped off substantially. At least one maker, specifically, Hornady, utilizes longitudinal separation line on the inside of the jacket near the point. This appears to produce more uniform "rollback" of the jacket as expansion pro-

Generally speaking, the heavier big game bullets have the thickest jackets, bluntest points and produce the greatest penetration in large animals. However, if these bullets are driven at significantly higher velocity than for which they were designed, expansion increases and penetration decreases. In fact, a number of such bullets behave just like varmint types when design velocities are exceeded. Consequently, if a 150-gr. bullet intended for the .308 Winchester at about 2700 fps is loaded into the .300 Weatherby at, say, 3600 fps, entirely different results will be produced. Under the circumstances just described, the bullet might well produce a large but non-fatal surface wound. It becomes obvious that there is an optimum striking velocity for any given bullet at which a particular balance of penetration and expansion will be produced. Since velocity varies greatly with gun-target range, we can't do much to control this factor. Fortunately, all current designs perform well within a wide velocity range. Point of impact also greatly affects bullet performance. Since bullets are designed to do well under average conditions on a combination of tissue and bone, one striking tissue only (as in a lung shot) will perform differently than if it had to range forward through the heavy muscle and bones of a rump shot.

For all these reasons, and a good many more less-important variables, it simply isn't possible to pick a "perfect" bullet for big game, even a single species. Any design represents a compromise to cover a wide spread of conditions and species. If we knew that we would take only 150- yard shoulder shots on 200-pound deer at a 90-degree angle of impact, a bullet could be designed specifically to pro-





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duce superb results, but it would still be less perfect for any other placement, range or angle of impact.

Our makers have done an excellent job of designing general-purpose big game bullets. It devolves upon the handloader primarily to select the proper weight and shape, then to drive it at it's most efficient velocity. shoot only at reasonable ranges, and take only those shots where the angle and point of impact do not inject further problems. This means simply that in a given caliber, the lighter bullets are best suited for deer class animals, deer, caribou, pigs, etc.; while the heaviest weights are best for elk, medium weights for black bear, large moose, and large bear. It goes without saying, of course, that in the smaller caliber (under .270/7mm) even the heaviest bullets are not suitable for the biggest game-occasional widely-publicized freak performances to the contrary notwithstanding. The reverse is less true because the large bores can be loaded down with lighter bullets to produce good results on smaller animals.

Our third category is the special purpose big game bullet. Several different types are offered today for the purpose of extending the velocity and animal range over which adequate expansion and penetration are produced. Generally, this is accomplished by strengthening the rear half of the bullet so that it will resist deformation and retain sufficient weight to produce deep penetration while the front half remains frangible enough to expand readily at low velocity and on light game. Probably the best known of this type is the Nosler Partition bullet. It is unique in that the jacket is cold-formed from thick tubing to produce a double-ended cup with a partition in the middle. Two separate cores are inserted from either end. The front cup, forming the point, has relatively thin walls to insure fast expansion. The rear cup and core form, in conjunction with the partition, essentially a full-jacket bullet that penetrates deeply without deformation, even though the entire front half disintegrates during initial expansion.

An earlier design is the RWS "H-Mantle" (H-Jacket) which contains a deep fold near the center of the jacket which forms a partial partition not nearly so strong as the Nosler type. It utilizes soft lead for the front core, hard for the rear, and the rear jacket walls thicker than the front. Another approach was taken in the DWM "D-Mantle" bullet in which the rear of the jacket was made massively thick and contained a two-part; hard-

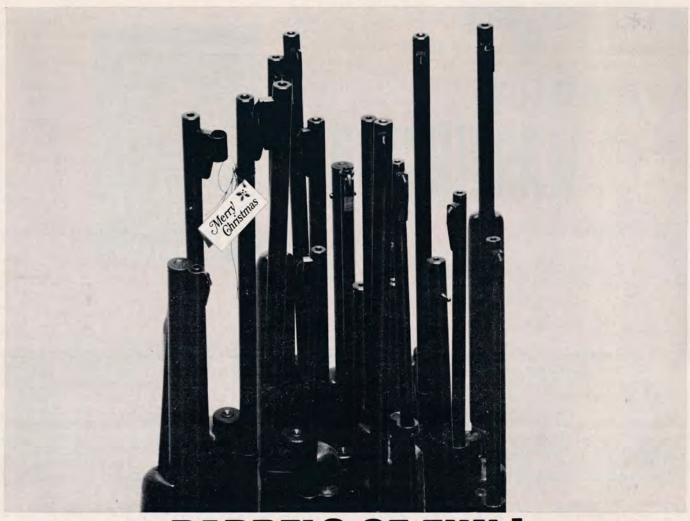
/soft core. Some other European makers went even further, making the rear of the jacket virtually solid. All accomplished the same purpose of allowing easy expansion of the front portion while keeping the rear intact for deep penetration.

Yet another approach has been taken by some small domestic makers. notable Bitter Root Bullet Co. It consists of using a very thick but soft jacket, then bonding the core lead mechanically to the jacket. In short, the core is soldered to the jacket. This prevents free movement of the core within the jacket during expansion. This results in expansion being limited to the extent that the bullet retains most of its weight even though initial expansion occurs rather easily. Consequently, deep penetration is produced. Thus, a given bullet may expand well on white tail deer at 300 yards, yet still drive deep enough in a grizzly to produce a clean kill under adverse conditions.

A special-purpose bullet is the socalled "solid" designed to penetrate without expanding. It is needed only for elephant and African and Asian Buffalo, so is not really of too much interest to the average handloader. This type normally consists of a very thick, hard jacket—often of steel which completely covers the nose. Such bullets will, when properly constructed, penetrate 30 or more inches of hard wood without the slightest deformation.

All of the foregoing approaches to special purpose bullets are costly. They simply cannot be produced and sold as cheaply as the convenient single-jacket, single-core softpoint. Retail prices generally run at least twice as much as for a comparable conventional big game bullet.

ver the years, I have found that the cost of bullets actually used on big game beggars insignificant when compared to the rest of one's hunting costs. Consequently, when going after anything larger than white tail deer, I use the special purpose bullets. Even on a big hunt, I'll need no more than a half-dozen, plus the number required to zero and recheck the rifle. Even at 15¢ each, which many shooters consider exorbitant, I can't save enough by using 6¢ conventional bullets to buy a pint of cheap hootch for after-hunt celebration. To me, that makes bullets such as the Nosler and Bitter Root (the foreign items mentioned aren't readily available) by far the best choice for any real big game hunting. If you try them, I rather suspect you'll agree.



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OUR MAN IN

WASHINGTON





By CARL WOLFF

Congressman John Dingell, Chairman of the House Subcommittee on Fisheries and Wildlife Conservation, will soon hold hearings on two bills of importance to the shooting sportsman—H.R. 1048 and H.R. 12475. Both bills would divert the 10 per cent excise tax on handguns from general revenue to wildlife restoration, hunter-safety programs, and range construction.

At stake is the nearly \$5.5 million now being lost to general funds in the U.S. Treasury each year. The funds would go to the states on a matching basis, so we are in fact talking about \$11 million.

Unlike the 11 per cent manufacturers' excise tax collected on sporting firearms and factory ammunition, which has been devoted to the purposes of the successful Federal Aid in Wildlife Restoration Program since the late 1930's, at the present time the 10 per cent handgun tax disappears into the federal treasury. Tremendous wildlife gains have resulted from the more than \$350 million received under the Federal Aid in Wildlife Act and allocated to the states on the matching-grants formula. The manufacturers' excise taxes have been collected on handguns for more than three decades.

The hunter safety training, including the construction, operation, and maintenance of public outdoor target ranges would be a new federal program. We need it if shooting is to continue as a sport.

Many years ago when game management was a new thing, sportsmen realized hunters were going to have to help themselves if wildlife was not to die off from the land. Civilization and

shooting for food were making game disappear. Now in many metropolitan areas we are pressed for places to shoot.

Then as now, money was needed. The sportsman of the 1930's asked the law-makers to tax the sale of long guns and ammunition to finance game management. The second World War came and manufacturing excise taxes were, following the sportsman's lead, placed on about every item to help pay for the war.

During the Johnson Administration, industry pressured Congress into removing the taxes on most of the goods. They were either removed or reduced. To their credit, today's sportsmen and the shooting fraternity asked Congress to continue the tax on firearms and ammunition. This, too, was done. Not considered was the fact that the tax on handguns never went into sportsmen programs. The legislation by Congressman Dingell would correct the situation.

So, what can Joe Shooter do? Write his congressman and his two senators. Congressman Dingell finds little opposition to his bill this year, but warns that nothing will be done if sportsmen "don't show more interest."

John Dingell can move the bill out of his Wildlife subcommittee, but that is as far as it will go unless lawmakers get interested, and the way to get them interested is to write. Send not one, but three, cards or letters. They should be addressed to your elected lawmakers. Mail them in care of the Senate Office Building or House Office Building, respectively, Capitol Hill, Washington, D. C. Just say something such as "will you please support the Dingell

(Continued on next page)

pistol tax bill?" Then give your name and return address.

On the other side of Congress, the Senate Committee on Finance has a bill pending to modify ammunition record keeping requirements of dealers. This measure, by Senator Wallace Bennett (R.-Utah), has the backing of 40 senators.

If the bill becomes law, purchasers of ammunition suitable for use only in rifles, .22 caliber rimfire ammunition, or shotgun ammunition, or component parts for these types of ammunition, would NOT be required to give the information now required. Now required is the recording of the purchaser's name, address, and age.

It is hoped by the sponsors of the bill (S. 2718) that it can be added to

a measure that has already passed the House. The idea is to avoid the House Judiciary Committee. The chairman of this committee has served notice he will kill the measure by not moving it

If the bill can be added to a Housepassed measure, supporters will request a conference with House members. Members of the conference will then work out differences in the House- and Senate-passed bills.

The bill agreed to by members of the conference will then be presented for a vote directly to the floors of their respective bodies. If approved, the measure will then go to the White House for signing into law. The White House has already commented that it favors enactment of such a bill.

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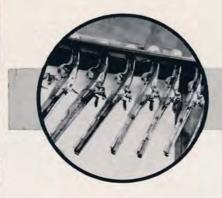
The results: 15 of the top 16 scorers (including 1st place!) used the Norma 6.5MM 139-grain Match Boattail Bullet. This superb pointed match bullet is enclosed in Norma's TRI-CLAD® jacket... and is made with special carbide alloy dies to give exact roundness and bullet to bullet uniformity,

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GUN RACK

New Remington 540X

The Remington Company has developed an outstanding light target .22 rifle in their Model 540X. This is a good one for the teenager. It should instantly catch on with schools, clubs, and those groups who are looking for a better-than-average target model. The 540X is too light for the serious big time smallbore marksman. For all that it is a remarkably good shooting rifle and I recommend it most especially for the junior rifleman.

Built around the newly designed 580 series of actions, the rifle locks up with 6 lugs. These are not at the head of the bolt but are located midway of the piece. These turn into recesses in the bridge of the receiver which is reinforced. The striker fall is only 3% inch and is the fastest of any .22 caliber rifle. Trigger pull on the test model sent me was 2½ pounds. It is adjustable although the action must be pulled out of the stock to make changes in the pull. The trigger is fast, sweet and clean and there is no perceptible movement or creep.

The rifle is a single shot. The barrel is 26 inches in length, with a diameter at the receiver ring of 78" and at the muzzle of 34", the latter is recessed—milled to protect it. Sights are first class; an aperture front, the Redfield #63, and the Redfield #75 microm—etered rear. It is movable on a rail mount. The receiver is grooved for a tip-on mount and the barrel has been tapped and drilled for scope blocks. The rifle weighs 8½ pounds with sights and sling. The sling is the old fashioned military type, 1¼" in width, and there is only a front sling swivel.

The stock is strictly utilitarian. It has a broadness and thickness about it which feels good to the target man. The comb is high enough for the iron sight line but a bit too low for a forward mounted target scope. The forestock is a good handful. It has a built-in rail and a front swivel block which is movable. The barrel is free-

floating in the forend. By the addition of a novel adjustable buttplate, the stock length can be comfortably varied from 12¾" to 15½ inches. This ideally suits the rifle to both growing kids and mature shooters. The buttplate is further adjustable for angle. The stock adjustments are made with an Allen wrench. The stock has a cheekpiece and a grooved thumb cut behind the pistol grip. The rifle has no



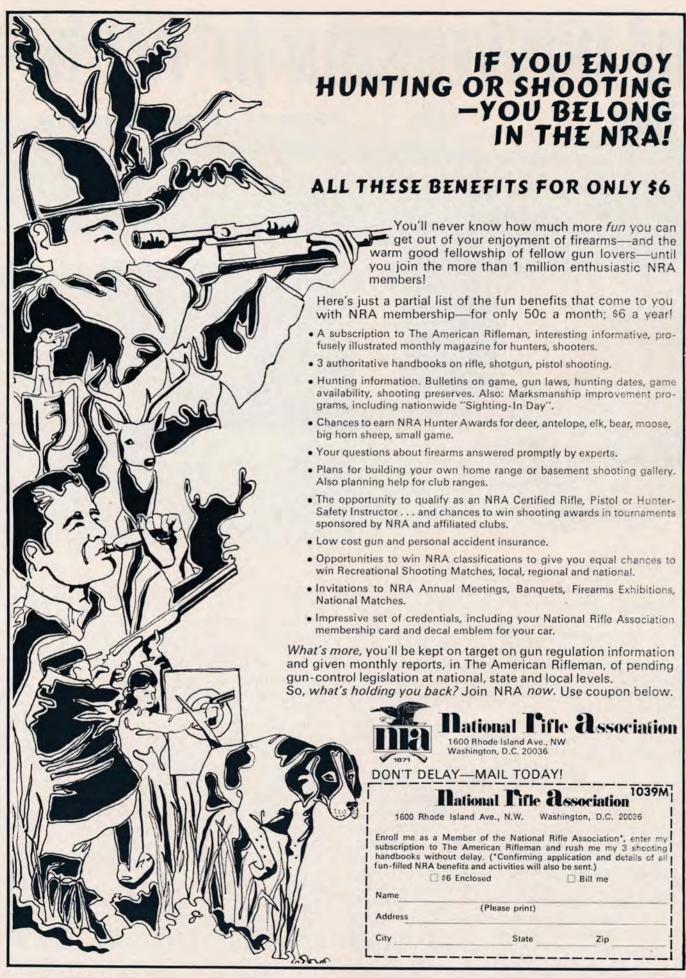
checkering and the trigger is not grooved. It sells for \$109.95 with sights.

Fired at 50 yards from the bench, groups ran consistently under .40". A total of 10 groups were fired and the ammo was Remington Rifle Match. At 100 yards, again from the bench, five groups, each of 10 shots, measured .84, .92, .76, .82 and .80 inches. Again the cartridges were Remington. This is a top-drawer light target rifle mostly because of an accurate barrel, fast striker fall, excellent trigger and a good fitting stock.

Cartridges of the World

"Cartridges of the World" by Frank C. Barnes (Published by Gun Digest Co., \$6.95) is in its 2nd edition. First appearing in 1965, this second printing has enlarged the text by some 32 pages. This is a remarkably valuable contribution to our knowledge of rifle, shotgun, pistol and revolver cartridges, going back as it does to the 1870s, and including not only American cartridges of all kinds (metallic, paper, rimfire and centerfire), but

(Continued on page 63)



THE CONVERSION OF THE M-I



The M1 Carbine becomes a formidable light rifle when rebored and chambered for a larger capacity cartridge that shoots 9mm pistol bullets. Using bullet weights of from 125 to 90 grains, the altered Carbine is then capable of delivering velocities of from 2350 to 2800 feet per second respectively, with muzzle energies in excess of 1500 foot pounds.

foot pounds.

The conversion that accomplishes this is simple and effective and will be of interest to every Carbine owner and gun buff. The author has conducted a month-long load development program complete with velocity and pressure data for the best loads published herein.

In terms of what is gained for the amount of effort involved, this has been the most successful of three conversions of the Carbine by the author. The first of these three major Carbine conversions was publicized in a national gun magazine in 1966. This involved rechambering an M1 Carbine for the .30 Kurtz cartridge, a .30 caliber version of the WWII 7.9 Kurz German assault rifle round.

This first conversion performed quite well. The only real objection was that the receiver had to be rebarreled with the gas cylinder assembly moved forward to accommodate a longer peak chamber pressure developed from the bigger case capacity, lower expansion ratio, and slower burning powder. This rework cost about \$65 which made it prohibitive for many shooters.

From analyzing the performance of the .30 Kurtz, it be-

came apparent that all the rebarreling and other complications could be eliminated if a cartridge was used that had a similar expansion ratio to the .30 Carbine round. Keeping in mind the inherent short-range capabilities of the Carbine, a simpler and more efficient conversion could be had by simply redesigning the Kurtz case to shoot 9mm pistol bullets.

Fred Huntington of RCBS made a set of forming and loading dies with the .30 Kurtz reamer by opening the neck and bullet seating diameters appropriately. Three sample cases from these dies were sent to Keith Francis, the reamer-maker from Talent, Oregon, who made a finishing reamer for the new 9mm Kurtz cartridge. (Please note: The author is aware that kurz is the proper German word for "short." The Kurtz moniker was applied by the originator of the antecedent .30 caliber design; as a practical matter, it serves to avoid confusion with similar cartridge designations.)

The 9mm Kurtz case is made from .30-06 brass; forming is accomplished in one step in the appropriate die. Case necks are cut off in the die with a small hacksaw. The author used a Forester-Appelt power trimming device in a drill press to mill the case mouths to 1.295 inches in length. Trimming the cases about .005 inch short of specifications promotes reliable functioning when cartridges are to be reloaded and fired in a self-loading mechanism.

The finishing chamber reamer and the loading dies were

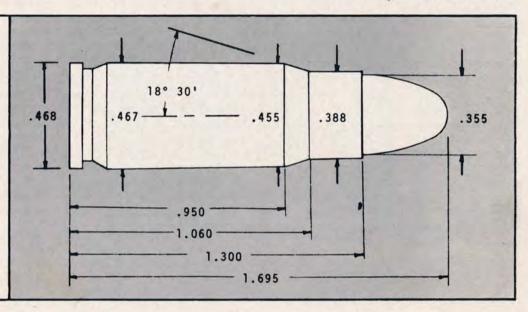
CARBINE TO 9mm KURTZ



By JAMES D. MASON

9mm KURTZ

Match .30-06 cases are best for forming Kurtz cartridge. Care must be used when seating bullet for smooth, troublefree feeding and operation. Measurements are from author's RCBS dies.



designed to accommodate unreamed brass. However, it became apparent that a few cases in a given batch had thicker neck walls than others and caused some problems in chambering finished rounds. This is understandable, since the original .30-06 brass is shortened down so far. Case walls show greater variance in thickness as forming gets nearer to the case head. Because of this, cases for these experimental loads were run through the sizing die, without the expanding plug, then inside neck reamed to be .002 inch under bullet size. This means that the expander plug just clears the neck walls on normal resizing operations. Uniform neck wall thickness contributes to uniform pressure performance and accuracy of loads.

For economy, once fired .30-06 GI Match cases provide the best answer for forming 9mm Kurtz cases. .308 Winchester or 7.62mm NATO cases have much thicker walls at the critical point where the Kurtz neck forms, and will have to be reamed. .30-06 commercial and GI Match brass will make Kurtz cases that do not have to be reamed.

There is a big selection of good quality commercial bullets available for the 9mm bore. Nominal bullet diameter of .355 inch for jacketed projectiles is suitable for use in the Kurtz Carbine. Lead bullets should be sized to .356 inch and should be of at least lino-metal hardness, and preferably gas checked in all but medium loads. A case mouth expanding die should be purchased if lead bullet reloads are to be used.

Four commercial bullets were selected for load development to explore the performance range of the new cartridge. Lee Jurras' Super Vel 90 grain bullet was the light-weight projectile. Jurras' 108 grain soft point and Norma 115 grain hollowpoints filled the mid-weight category; while Speer's softnose 125 grain design was on the heavy end. The use of pistol bullets is fully in keeping with the limited range aspects of the Carbine's design configuration. Also, normal pistol bullet seating in the Kurtz cases makes the completed rounds of proper length for smooth functioning the Carbine magazine.

Bullets of relatively low sectional density accelerate faster in the bore and "absorb" more energy from a given pressure level than bullets with moderately high to heavy sectional densities. It's all a matter of the area of the bullet base compared to the mass or weight that has to be pushed up the tube. Obviously, if bullets of low sectional density are accelerated faster in the barrel, then they also slow down faster when subjected to wind resistance on the way to the target. Pistol bullets lose their "steam" rapidly compared to longer, heavier rifle bullets in the same caliber.

When applied to short-range shooting situations, the added internal efficiency with low sectional density bullets works favorably. Fast moving pistol bullets transfer energy to the target more rapidly, giving maximum hydrostatic shock. Stepped-up velocities give maximum expansion to softnose and hollowpoint designs.

For police work, pistol bullets will not carry or penetrate as far from the scene, as do rifle bullets, to endanger people or property. The power and performance demonstrated in tests make the 9mm Kurtz well suited for use out to 100-150 yards range.

A number of relatively fast burning powders were used in load development. Preliminary calculations showed 2400 and 4227 to be efficient propellants for the 125 grain Speer bullets. Other powders such as Hodgdon H-110, Alcan's AL-8, DuPont 4756, Hercules Herco, and Winchester Western 540MS all showed promise for loads with lighter bullets in the Kurtz case.

Powders had to be considered for their effect on the Carbine gas system. Bullet energy is a function of breech pressure; because the 9mm Kurtz was to be shot in the Carbine, breech pressure had to be limited to 40,000 psi maximum. Preliminary ballistic calculations showed that about 1500-1600 foot pounds of energy represented an optimum level of performance for loads in this conversion. These figures would not approach maximum potential for the cartridge, but it would not strain the structural integrity of the Carbine, either.

The Carbine operating slide is actuated by a single, sharp ½" push from the gas piston. Since gas piston motion is limited, effective operation depends on the gas pulse pressure rather than

gas volume in the barrel; the higher the gas pressure, the sharper the blow (impingement) on the piston, the greater the force transmitted to the slide. The slide then retracts to the rear, opening the breech and effecting extraction and ejection.

In the Carbine as with many other self-operating small arms, the mechanism gets an assist from remaining or residual pressures left in the bore after the bullet has exited. These pressures tend to force out the case and aid the rearward movement of the breech block. It is not hard to see how improperly balanced loads can be critical in upsetting operational timing and inducing malfunctions.

If pressure levels in the barrel are too low, insufficient energy will be transmitted to the slide to complete the cycle. But, if pulse pressures are too high, two things occur that can cause increased stoppages.

High pulse pressure impinges on the piston, transmitting too much momentum to the slide; this means that the breach opens earlier than it should. Higher chamber pressure also means higher residual pressure with earlier opening. These higher residual pressures (in excess of 12,000 - 15,000 psi) will tend to stick the case to the chamber walls. Increased cartridge friction takes energy from the slide, reducing momentum and increasing the likelihood of a short cycle, leaving the case in the chamber.

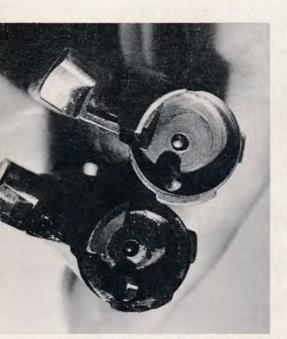
None of the loads shown in the data tables exhibited any early opening stoppages. But some other loads, especially those using 540MS, were not well-balanced for reliable functioning in the GI gas system. Properly loaded, the 9mm Kurtz seems to show the same ballistic design proportions as the original M1 Carbine cartridge, and so it functions within the operating limits of the gas system. Pulse pressures on the piston are roughly the same, unlocking time is the same, residual pressures are similar to those in the regular M1 Carbine round.

Close inspection was made of operating parts after firing several hundred rounds. No battering of critical counter-recoil surfaces was observed, evidence that velocities of operating

Table 1 9mm KURTZ BALLISTIC TABLES

Bullet		llet	Powder/Wt.	Velocity*	Energy**	Pressure***	
125	gr.	Speer	2400/24gr	2373	1563	37,250	
115	gr.	Norma	H110/24gr	2525	1627	38,500	
108	gr.	JSP	H110/26gr	2575	1590	33,000	
90	ar.	JHP	H110/28ar	2770	1534	35,000	

*In feet per second-measured on an ITCC chronograph
**Calculated from Powley energy tables-Speer manual %7
***Crusher equivalent psi-taken from York-Cantrell BPMS



Extractor claw and bolt face must be machined to accept new shell.





Fat Kurtz cartridges normally tend to find the center of the magazine. Lips of GI magazine must be pinched for case alignment with the breech.

parts are not exceeding the limits for which they were designed.

A long series of load tests were conducted to wring out the most effective load combinations. The results are shown in table 1.

These four loads were distilled from a large group of combinations. The design of the self-loading action calls for optimum loads for regular use. However, while these loads were safe in the author's gun, anyone using data should start 10-15% low and work up. Different loading components will produce varied results as will different barrels, unreamed brass, etc. In fact, the 125 and 115 grain loads shown above would be more suitable for volume consumption in the Carbine if they had ½ grain less powder.

The use of magnum primers is recommended. With 2400, it promotes thorough burning of powder grains. Standard primers left those familiar half-burned grains in the barrel and chamber. This kind of residue is exceptionally bad in self-loading arms, causing chambering and/or extraction problems. A few half-burned grains in the chamber will bind the next case and cause a malfunction.

Some difficulty with stuck cases was experienced with 2400 using 125 grain bullets with standard primers on full loads. This stoppage was traced to residual pressure timing problems, that were cured (Continued on page 50)

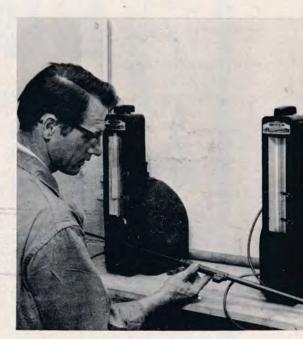




Top: 90 gr. Super Vel, 108 gr. Super Vel, 115 gr. Norma HP, 116 gr. Norma FMJ, 125 gr. Speer soft point. All used in tests. Above: Test loads used by author in working up ballistic data. Performance with these is in text.







Bo Clerke of Clerke Technicorp inspects the set-up on a boring machine. Bore diameter being checked for consistency with air gauge for accuracy.



TWO BULLETS at PETERSBURG

By LOUIS WILLIAM STEINWEDEL





The two bullets, welded into a single mass, in a million-to-one chance. From the display at the U.S. Ordnance Museum at the Aberdeen Proving Ground, Aberdeen, Md.





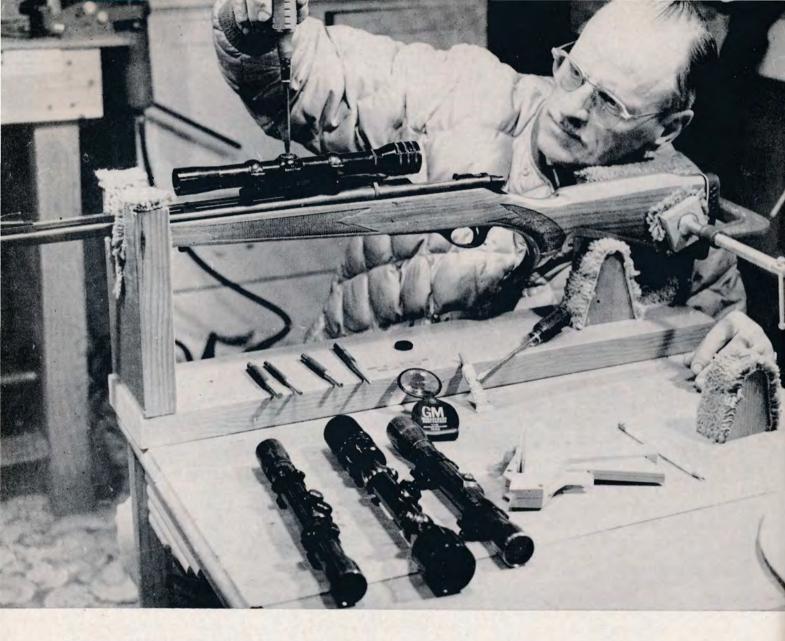
FOR THIRTY SIX MONTHS Americans had been systematically killing with an efficiency and pace un-paralleled in the history of man. Within the space of little more than a decade military science had moved from the muzzle-loading smoothbore musket, which in over two centuries had changed only from flint to percussion ignition, to vastly more deadly machines of war. The American Civil War—the last of the "gallant wars" in the opinion of Sir Winston Churchill—introduced improved breechloaders, repeating rifles, machine guns, organized guerilla warfare, battleships, and the quite un-gallant concept of total war.

But the deadliest weapon of the war in terms of casualties inflicted was the least awesome, the simple muzzle-loading rifle-musket which was obsolescent when the war began and which became obsolete as it progressed. Rifled weapons had had limited military use long before the Civil War. But it was not until the 1840's when a French army captain named Minié devised a simple hollow base conical lead bullet which could be easily slipped down a rifle bore that the rifle became universal military issue. When the powder charge exploded it expanded the hollow base of the bullet into the rifling grooves of the barrel and sent the big soft lead projectile on its way, nearly as accurately as any modern cartridge rifle. Governments all over the world adopted the simple, inexpensive idea. The British, who paid Captain Minié \$100,000 for the use of his idea, evolved the superb Tower-Enfield .577 rifle musket, and in America the Springfield Model of 1855, slightly revised in 1861 and 1863, became the "standard" weapon of the Civil War. A good rifle-musket was said to be accurate up to a thousand yards. When combined with smoothbore Malboroughian tactics of massed ranks of men firing at each other, the rifled musket produced slaughter on an unprecedented scale.



In those thirty six months a divided nation had suffered shocks and sorrows from Bull Run to Cold Harbor. By the summer of 1864 the Confederacy was crumbling, but still resolute. Grant was now in command and pushing hard for the Confederate capital. But first the great defenses of Petersburg had to be breached. Grant sent waves of bluecoats against the well entrenched Southerners and fruitlessly lost a thousand men a day for over two weeks. Then, less direct means were tried. A tunnel was secretly dug under the Confederate defenses and nine thousand pounds of gunpowder fired at dawn on July 30th. The famous "Battle of the Crater" followed, and the Union lost nearly four thousand men in less than an hour. Massive exchanges of rifle fire ensued, and somewhere in the midst of the smoke and fire, a curious and improbable thing happened. At the same split second a Union and a Confederate soldier pulled the triggers of their muskets, and by some cosmic coincidence the trajectories of their big, lumbering Minié balls intersected perfectly and the two bullets collided in flight, each firmly welding itself deep into the heart of the other.

Today, this unique Civil War souvenir is on display at the United States Army Ordnance Museum at the Aberdeen Proving Ground, where it competes successfully for attention with more flamboyant exhibits. Ironically, not far from its display case Army scientists are causing similar, deliberate collisions of projectiles to study the disintigration of ballistic missiles at 20,000 feet per second velocities for anti-ballistic missile research. To the mathematician or ballistics expert the welded bullets from Petersburg are merely a curiosity; a case of the improbable becoming reality. But perhaps in a broader, more poetic sense they had a deeper meaning; a symbol that a divided, warring nation would also be welded into one.





YOU CAN REDUCE THE CHANCES
OF SPOILING AN EXPENSIVE
BIG GAME HUNT WITH AN
UNNECESSARY MISSED SHOT
BY KNOWING THE BASIC STEPS OF...

SCOPE AND MOUNT INSTALLATION

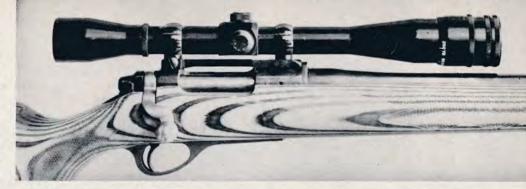
T ODAY'S SPORTSMEN have available for their use the largest and best group of sporting items ever assembled. For the shooter, the selection of a particular type of gun, ammunition, scope and mount is merely a matter of knowledge and preference. In fact, a complete list of items available to a shooter, may easily be a bit confusing to the novice, and even the experienced shooter will spend some time before making a final selection.

However, I believe not quite enough attention has been given to certain components that make a good rifle a complete firearm. Carelessness in the selection of these accessories often causes dissatisfaction with the basic product, although this is not where the blame should be put.

I am referring to the installation of the scope mount, the installation of the scope itself, and the proper adjustments and sighting in procedures. A review of the various troubles experienced by many of our numerous hunters show that mount installation was number one, scope installation was number two, and improper scope adjustment and use was number three. This, in spite of the fact that most of them had the most excellent equipment available,

I do not operate a commercial workshop. My shop here in town is an experimental one for private use only. However, many of our outfitter friends bring their hunters here, with a request for me to try and find the reason their gun will not perform properly, before they start out on that expensive hunt. Usually, the equipment is certainly first class, and externally everything looks okay. However, from past experiences I know that I just better pull the mount and scope off the gun and start from scratch. I usually check the bedding with the collimator before doing this as it only takes a minute or so and eliminates this angle as a possible source of trouble.

A conversation with one of these hunters normally goes about like this. "Who put the scope on?" I ask. "The sporting goods store man in Koshosk." the owner answers. "Have you used it much since then?", I query. "Oh yes," he'll answer, "I sighted it in and it was dead on when I left home." Well. I proceed to pull the scope off, and I find the mount base screws loose enough to turn with your finger tips. Often the owner says he installed the mount and sight himself and swears he tightened everything up very solidly,





Top: Example of too much front overhang. Above: Example of too much rear overhang. Both ailments could have been solved by special scope mounts. In both cases the scopes were positioned correctly for right eye relief.

although I find them very loose.

Manufacturers of scope mounts have a natural tendency to insist that their mounts will be able to hold against the recoil of the gun. They tell about the tests they have made on .458's and other large caliber guns and how the mount reacted to these but I haven't heard much about a test being made before and then after a long trip in a car or jeep, or after a long hard trip in a saddle scabbard aboard a saddle horse and sometimes on top of a pack saddle on a pack horse.

It really doesn't take much of a mount and rings to be able to withstand the recoil of a large bore gun. Often a rather small bore light rifle using a cartridge that produces a sharp "rap" instead of the "push" will loosen a mount much faster. The various 6 mm's are good examples. There are many ways of loosening a mount, like an unexpected bump, a rifle knocked over from a stand, or a sharp blow from the side of a tree while it is being carried in a saddle scabbard. Any of these things can happen without the owner being aware of it.

Many scopes are mounted so that they have excess unsupported overhang on one or both ends. Any extra pressure put on either end may loosen the scope, and can even bend the tube. To correct this condition nearly all mount companies now make rings or mounts to take care of excess overhang. Mounts with off-set ring bases that can be turned for ward or backward add inches to the distance between rings on the scope. A hunting scope should never be installed with more than three inches of overhang, on either end. I have seen some with up to 5 inches on one or both ends.

The location or positioning of a scope on a gun is a very important element in accurate shooting. If properly installed it enables a shooter to get off a fast accurate shot, but if improperly done it can cause him to fumble around, stock crawl and be so slow in finding his aiming point that his target (Continued on page 72)





BERETTA GR-2 SHOT GUN

By WALLACE LABISKY

BACK IN THOSE dim and distant times when Rip van Winkle was quietly promoting the extended siesta, the Italian firm of P. Beretta had already logged nearly a century and a half of gunmaking experience and was rated as one of the leading arms manufacturers on the Continent.

Founded in 1680 by Pietro Beretta, the then small workshop specialized at first in turning out smoothbore barrels for pistols and muskets. Today Beretta is best known for its fine shotguns, principally over-under and side-by-side guns, and also for a rather extensive line of autoloading pistols.

Early in 1968, the Garcia Corporation (heretofore known for its quality fishing tackle) became gun minded and took over U.S. distribution of the Beretta scatterguns. Previously the Beretta guns had been brought to these shores by J. L. Galef and Sons, Inc.

The current Garcia-Beretta shotgun line-up ranges full circle. There is a folding single-shot for hunting purposes that goes for \$65; a single-barrel smokepole for the trap enthusiast at \$160; classic side-by-sides that start at \$250; and elegant over-under guns wearing price tags that run from a bit under \$200 all the way up to \$1,500. Nor has the "corn sheller" following been neglected. There is a sleek pump repeater at \$185, and as its teammate a racy-looking gas-operated autoloader that goes for \$200.

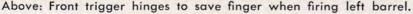
All of these Garcia-Beretta firesticks have been designed with the American shooter's preferences firmly in mind. Although the twin-tube guns parallel the former Galef "Hawk" and "Snipe" models in respect to such basics as action design and bolting, there have been changes—principally in styling and finish.

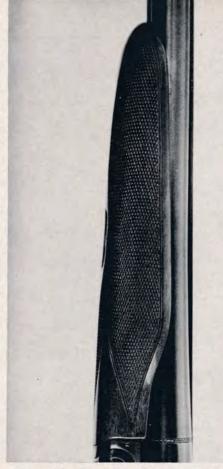
Another change involves the matter of gauge availability. The Galef "Hawk" doubles were offered in 20 gauge up through 10-gauge magnum, but the Garcia-Beretta GR side-by-side series is offered only in 12 gauge, including a magnum model. For these, gun weights run about the same as they did for the Galef-Berettas, as do stock dimensions.

About a year ago, when I first contacted Garcia's Dick Wolff regarding a test gun, the situation was tight. The GR side-by-sides were being grabbed up by hunters faster than Garcia could bring them across. But finally, as the '68 gunning season was heading into its waning days, my test gun arrived—a GR-2 non-ejector with 28" tubes bored modified and full, and with 2\frac{3}{4}" chambers and double triggers.

Ordinarily, I don't like to wade into battle with a new gun without first trying it at the pattern board, then augmenting those findings with a workout on clay birds. But in this instance there simply wasn't time.







The wide forend is fully checkered.

Those South Dakota ring-necked roosters hadn't been too plentiful to begin with, and the few survivors were shrewdly sitting on college degrees. It very nearly cost me a pair of good boots, not to mention the affection of a winsome senorita, but I managed to put 19 cock birds to wing and to chalk up a proficiency rating of 73 per cent. Considering that the Beretta and I were still almost total strangers, I was more than satisfied with that end of the performance spectrum. I doubt that I would have shot one whit better with one of my own double guns.

In this Beretta GR-2 there is to be found a blending of the new and the old. Chrome molybdenum steel, which offers the desirable combination of great strength without excessive weight, is teamed with modern technology and time-tested design-namely the Anson & Deeley type boxlock action and a bolting system that likewise is of British origin.

Also on the design side, double-gun buffs will find other features to applaud. There is the monoblock breech; coil mainsprings of Swedish steel; a hinged front trigger on the two-trigger guns; and the action/buttstock joint is strengthened through the use of a husky, hex-head bolt running longitudinally.

The monoblock breech, which Beretta first used back in 1934 on its over-under guns, represents the ultra-modern approach. This system of barrel joining and lump fixing imparts exceptional strength where strength is needed, and it also provides a means for precise barrel alignment.

The monoblock section, which includes the rib extension and the barrel lumps, starts life as a single lump of forged steel and the breech ends of the barrels are turned down to mate with cavities that are machined into it. The block is then heated and the barrels are inserted cold, resulting

SPECIFICATIONS

ACTION TYPE: Hammerless, side-by-side, boxlock double with plain extractors

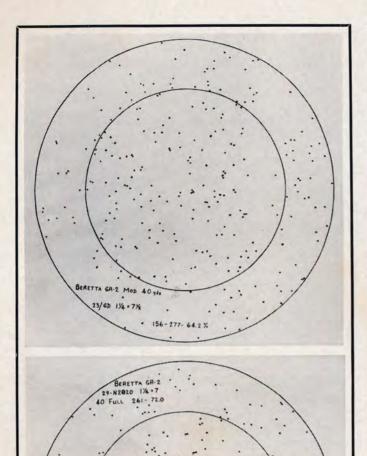
GAUGE & CHAMBERS: 21, 23/4 inches

BARRELS & CHOKE: 28 inches, FULL (left) and

TRIGGER: Double, with hinged front trigger SAFETY: Thumb-slide on upper tang, automatic SIGHTS: .113-inch white metal bead on ven-

WEIGHT: 71/4 pounds, empty (test gun) BUTTSTOCK & FORE-END: European walnut; pistol grip; beavertail fore-end; hand-cut checkering on grip and fore-end; plastic buttplate TEST GUN STOCK DIMENSIONS: Length of pull (from front trigger) 141/8 inches; drop at comb 11/16 inches; drop at heel 21/4 inches; downpitch 13/8 inches; cast-off at heel approximately 1/8 inch

U.S. DISTRIBUTOR: Garcia Sporting Arms Corp., 329 Alfred Avenue, Teaneck, New Jersey 07666 REMARKS: GR-2 offered only in 12 ga. with 23/4-inch chambers. Other available barrel lengths and chokes are 30" MOD/FULL and 26 inches IC/MOD



in a shrink fit that is bank-vault tight. There's not a chance that the barrels will ever separate at that point or that the lumps and rib extension will loosen.

Breech lock-up is handled by a conventional under-bolt which bites into both barrel lumps, and additionally there is a round Greener-type cross-bolt that passes through the rib extension. The cross-bolt is the concealed type, in that it does not protrude from the side of the standing breech when in its retracted position.

Triple bolting, as found in the GR-2, is frequently touted as something vastly superior, and doubtless this is a good sales pitch. But with these multiple systems it is not at all uncommon to find that the extra locking surface serves merely as window dressing.

This is the case with my test gun. The cross-bolt makes proper contact, and the under-bolt bears evenly in the rear bite. But contact with the forward bite is non-existent. However, I cannot fault the gun on this account. If the cross-bolt had been sloppily fit, I'd grumble—and loud. But contact with the forward lump isn't all that important when both topside and under-bolting are employed.

The GR-2 wears a ventilated top rib of excellent design. In keeping with present-day practices, it offers a level sighting plane, tapers in width from 7/16" at the breech to 1/4" at the muzzles. But unlike the ribs seen on most of today's imports, the surface is slightly concave rather than flat—a feature which I favor—and it is deadened by knurling which does a fine job of suppressing glare.

The hinged front trigger rates as a very worthwhile touch and one that all double-trigger guns should have. It's foremost advantage is that it protects the trigger finger from heavy-load bruises stemming from recoil when firing the second barrel (rear trigger).

Trigger spacing on the GR-2 is roomy, being 11/8" toe to toe. This broadens to a very generous 13/8" when the front trigger is pushed forward, making it possible, when wearing gloves, to get on that rear trigger a shade quicker when the need arises for a fast second barrel.

The front trigger on the test gun lets off at 4\(\frac{3}{4}\) pounds, the rear at 4\(\frac{1}{4}\). Neither is free of travel, and the rear one in particular has a rather spongy (Continued on page 66)

Test patterning the GR-2 proved quite gratifying with the Modified barrel giving 64.2% and the Full, 72%.

		HANDLOAD PATTERN TEST SUMMARY Garcia-Beretta GR-2 12-Gauge 2¾ "Chambers, 28" Barrels Modified (right), Full (left) Range: 40 Yards (Avg. of five shots)						
BARREL	POWDER	SHOT	WAD	DENSITY 20" CIRCLE	DENSITY 30" CIRCLE	30" CIRCLE	EDV 20" CIRCLE	EDV 30" CIRCLE
Right	19/N-2010	11/8 x 8	Unisleve "A"	206	338	69.6%	51	63 (13.0%
Right	23/Green Dot	11/4 x 71/2	Champion Pell. Prot.	158	272	63.1%	18	25 (5.8%)
Right	28/N-2020	11/4 x 6	Air-Wedge +	61	131	49.6%	25	38 (14.3%)
		-1/ -	Filler + Sleeve	148	246	68.0%	45	34 (9.4%
Left Left	29/N-2020 32/AL-7	1½ x 7 15/16 x 7	Shaped Charge Vandalee (Shot cup slit)	132	232	60.1%	21	35 (9.1%
Left	32/AL-7	15/16 x 6	Vandalee	116	200	71.8%	28	21 (7.5%

Congressman John P. Saylor:

"The Gun Control Act of 1968 is unworkable and should be repealed"

EDITOR'S NOTE

The following are remarks made by Congressman John P. Saylor, Republican from the 22nd District of Pennsylvania, as published in the "Congressional Record" of August 13, 1969.

MR. SPEAKER, for the first time in the many years of public debate over gun registration, control, and licensing, the public has started to recognize that the thrust of all these proposals has been, and is, gun confiscation. The July 30 statement of Dr. Milton Eisenhower on behalf of the National Commission on the Causes and Prevention of Violence has brought the issue to a head as never before.

The Commission's recommendations were not watered down or obscured by technicalities, but were direct and unequivocable. The Commission has advocated gun confiscation by the U.S. Government.

What the Commission has done is to polarize the debate. As one of those Members who has consistently fought what I consider to be unconstitutional proposals for gun registration, I can only state my delight and surprise that the gun confiscators have decided to come out from under the cloak of respectability in which they wrapped themselves after the Kennedy-King-Kennedy assassinations. We, the opponents of gun confiscation, have cried "wolf," and sure enough, but unlike the fable, the wolf appeared. In the fable, the neighbors came running to fight the wolf and that is what is happening today. The citizens are beginning to fight these unnecessary, unwarranted, and unworkable recommendations that would destroy their right to self-protection.

It is interesting that some representatives of the press are also beginning to see the light, but most important, one of the leaders of the confiscation forces has drawn back from the Commission's statement. He said:

I don't think the American people are ready to go that far.

With that statement, I find for the first time that I am in agreement with the senior Senator from Connecticut. The Commission has truly gone too far, but I fear that the gentleman from Connecticut was showing more concern for the detrimental impact of the Commission's report and recommendations on the carefully constructed image which the gun confiscators have built up over the years than on the substantive issue of gun control. The Commission's report may have given hope to some, but its blunt and uncompromising tone has finally shown the true colors of those in the forefront of the gun control debate. With the issue now out in the open, with the battle lines firmly drawn, with the American citizen aroused as never before, I believe it is appropriate to say that the turning point has been reached. The direction now is toward realism. The sob sisters and do gooders have had their day, now the voice of reason-the voice of the American people, the voice of the American sportsman—will prevail.

That voice of reason has been heard by the administration, although acknowledgment has not come from as high up as I would have expected considering the statement of candidate Nixon and the mandate of the people as expressed last November. If you will recall, candidate Nixon said on July 9, 1968:

Gun control . . . disarms law-abiding citizens . . . merchants, cab drivers and bus drivers who are unarmed because they have obeyed the gun law become the easy prey of the criminals who have evaded it.

Candidate Nixon went on to call for a mandatory sentence of up to 7 years for the use of a firearm in the commission of a major crime.

Even though I do not believe the Nixon administration's current position is strong enough in opposition to gun control legislation, I am pleased with the indication that the administration is willing to slow down the heretofore headlong rush into gun confiscation. This position was stated by the Associate Deputy Attorney General on July 24 before the Senate Subcommittee on Juvenile Delinquency.

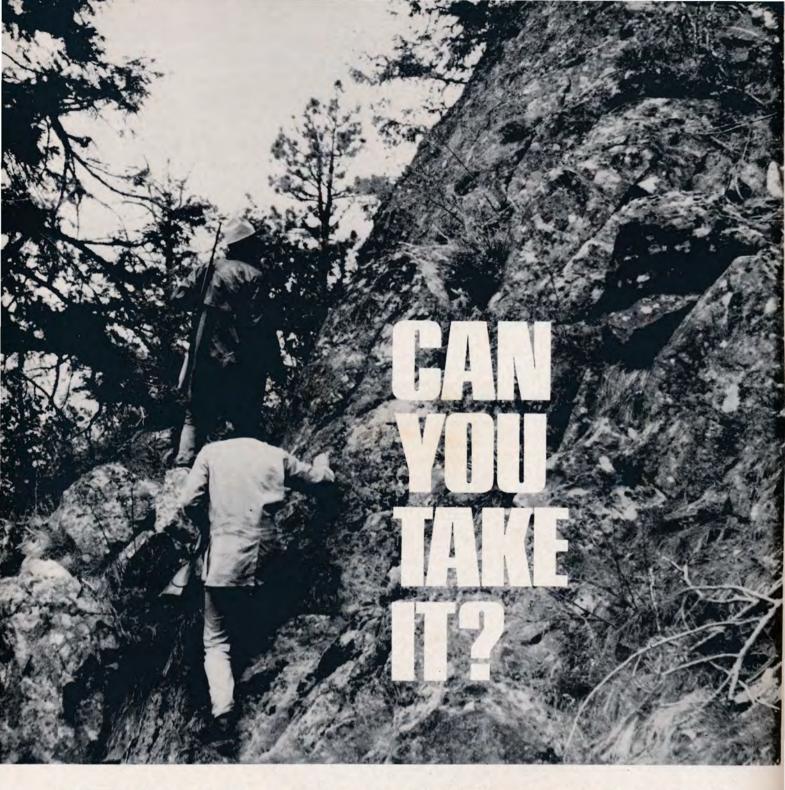
The Justice Department and the Treasury Department are, in my opinion, faced with an impossible situation. They must attempt to enforce a law which is basically unworkable—the Gun Control Act of 1968. The administration spokesman has not come right out and said that the law is useless, but he did put the law in perspective concerning attempts to revise it this year. He said:

Since the (Act) did not become effective until the end of 1968, we have had only approximately seven months of experience with its enforcement.

In short, knowing that the law is basically unenforceable, the administration is hoping that the Congress will not further complicate the problem of enforcement by adding more rules and regulations. Naturally, you know my reaction to that—if it is a bad law, repeal it.

In the same statement, the Justice Department expresses what I take to be the philosophy of the administra-

(Continued on page 53)



STIFLING HEAT, ROUGH TERRAIN AND BITTER COLD ALL CALL FOR FITNESS.



LEE HOLEN, one of Alaska's leading big game guides, crashed his light plane through the ice of the Chukchi Sea. He was hunting Polar bear off the Siberian coast, a hundred and fifty miles from his base. He had with him a sportsman from Missouri, a man 56 years of age, who was a building contractor. The pair had spotted a bruin, landed, stalked the great target, took him, and after peeling off the skin had gone through the ice when Holen attempted to take off. The plane settled in the frigid waters of the Chukchi until only the top of the fuselage and the wings were above the hungry waves. It was a precarious situation.

The pair clung to the ship for 36 hours. After the first day other guides commenced a search for them in their Piper Cubs. Holen and his dude saw them and waved





frantically but were never spotted. The weather hovered at 22-35 below zero. After the second night ice had formed about the little ship and Holen hacked the gas tanks out of the wings. He stretched out his six-foot bulk on a flattened tank and commenced to scoot across the thin ice. After about 40 yards he reached the permanent ice. His companion, the old man, tried the trick with the second tank. He also made it to Holen's side.

The guide returned to the plane on his gas tank sled and came away with the compass, a sackful of rations and one of the rifles. The pair then struck out across the ice toward Alaska. Six days later they reached the mainland and an Eskimo village. It was a remarkable feat, notable for the determination of the two hunters. But equally

remarkable for the physical conditioning of the men. In temperatures which were never warmer than minus 25 degrees, with only a can or two of cold beans each day, with scant sleep and little rest, plus abominable walking conditions in the pack ice, the two had persisted. Holen, an athletic outdoorsman was about 42 at the time. His companion, however, was 56, a businessman who ordinarily would get little physical conditioning during the year. Could you do as well?

My pardner, George Parker, is a big game guide. He frequently takes parties into Lower California to hunt the Desert Bighorn. A few years ago he had a sportsman with him and they spotted a handsome trophy ram. They commenced the stalk and when (Continued on page 54)



GUNS and the LAW

THE MOST VERSATILE POLICE WEAPON



Counter-sniper shotguns can be equipped with scope, as is the High Standard at left; or with rifle type sights as the Ithaca, right, with Raybar front sight.

THERE IS NOTHING that engenders more respect on the part of the dangerous criminal, or rioter, than looking into the bore of a 12 gauge riot shotgun. Aside from the psychological, deterrent effect on the law breaker, the individual confidence engendered by this weapon in the police officer, so armed, is a very significant factor. The American made 12 gauge riot shotgun is the most useful, dependable and versatile of all police firearms. Realization of this fact, gradually, is becoming more evident to law enforcement as the current serious violent crime and riot situations continue to escalate. Significantly, most departments in the urban areas of the east and mid-west have finally begun equipping their partrol cars with riot shotguns similar to the common practice in the west and southern areas of the U.S. Special dashboard gun locks are now developed to the point where these arms can be carried safely and openly in squad cars, while at the same time permitting rapid deployment. Thus a long favored weapon of the western lawman has been moved up by the urgency of the times, from a special issue category, to standard police armament status.

The recurrent reasons for the increased necessity for policy adoption of the riot gun are obvious, but few police officials are as yet fully aware of the entire scope of this weapons' tactical capability. New arms design, reintroduction of old tried and true models, and a complete new array of munitions, projectiles and grenade launching devices have surfaced during the past few years. Almost all

these developments have been directly related to military and police needs that have arisen during the immediate period of mob and international violence. It is estimated that over 90% of all current police operations and situations involving the use of shoulder type firearms can be best served by use of the riot shotgun. Due to urgencies, real and estimated. many major police departments that are now engaged in quantity purchase of military type carbines and rifles. submachine guns, light type semi and full automatic weapons, and special tear gas weapons could best solve their tactical, training, and some public relation problems by placing their principal reliance on the more publically acceptable riot shotgun. Aside from special scope equipped countersniper and barricade rifles, all other firepower demands can be fulfilled by this smooth bore weapon. The basic police need for a relatively limited range weapon or great penetration power and 'scatter gun' crowd and mob control effectiveness at ranges seldom exceeding 100 vards can be best supplied by the riot type shotgun. Simplified training, a reduced acquisition and training cost, and more general police combat efficiency will result.

All three basic types of riot guns are now under police procurement. The semi-automatic, the slide action (pump) and the double barrel "Wells Fargo" model are all now in manufacture. The slide action supplied by all major producers, like its sportsman counterpart, is the preferred police model. The semi-automatic, because



By COL. REX APPLEGATE

of jam minimizing plastic ammunition is gaining favor in some departments, that contend that the semi-automatic feature necessitating only pulling of the trigger for repeated shots is more instinctive and simplifies training. The side by side double gun favored by many departments in the west, has long been considered almost a fool-proof, psychological and practical weapon.

It is the custom of most manufacturers to supply their riot guns with 20" barrels, although legal 18" barrels can be secured on special order. Why the 20" length is the one in use by the majority of departments is not entirely clear. Many departments apparently are not cognizant of the fact they can legally use, for duty purposes, barrel lengths of less than the federally prescribed 18" length. The shorter the barrel and stock, the more concealable, manueverable and practical the weapon becomes. The High Standard Model 10 is favored by many departments for this reason. Although this weapons' barrel remains at the legal 18" length, the stock has been replaced by a yoke making the overall length 26" in place of the normal 40" of conventional riot models. There is really no official reason, other than a departmental one, why shotgun barrels for law enforcement use have to remain within the 18" limitations of the Federal Firearms Act. Tactical use of the weapon using all conventional rounds is little effected by reduced barrel length. As far as the writer is concerned, the barrel of police 20" riot shotguns could well be 5-6 inches shorter, still allowing at least one inch beyond the end of the five shot magazine tube, for attachment of grenade launchers, etc. The cutoff barrel would have a straight cylinder bore, but this is not objectionable, especially when plastic

(Continued on page 59)

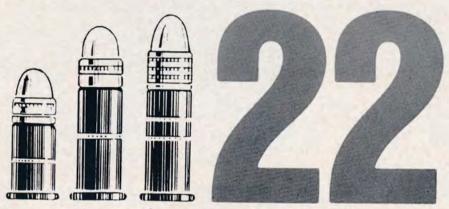


Rex Applegate's latest book, "Riot Control Material and Techniques" is now available. This is a complete revision and up-dating of his earlier book "Crowd and Riot Control." Published by Stackpole Books, Cameron and Kelker Streets, Harrisburg, Pa., it is priced at \$6.95, and is available at book stores throughout the country.



Variety of shotguns available for police use include, left to right, Savage 69R-H; Ithaca 37 with rifle sights; Winchester 1200 with an AAI grenade launcher; Ithaca military model; Remington 1200 with an A&W Pattern Diverter installed; High Standard with Bushnell 2.5 X scope; Stevens 311 double; High Standard Model 10 semi-automatic; and the new Auto-Burlar 20 gauge double made by Holland Firearms.





RIMFIRE MILITARY RIFLES

BY GEORGE C. NONTE JR.



BACK IN THE days when high-velocity, smokless-powder cartridges were still in their infancy, extensive efforts were made to reduce the cost of marksmanship training. Those hot, new-fangled calibers possessed a mighty surplus of power for shortrange practice, and their cost was such that only a relatively small amount of ammunition could be allotted yearly for practice. So-called "gallery" cartridges utilizing round lead balls or light, stubby, conical bullets with reduced powder charges were developed and issued especially to units of the National Guard for whom funds were limited and whose range facilities couldn't handle full-charge service ammunition.

Some time around 1900, the famous barrel maker, Harry Pope, made .22 caliber barrels and fitted them to Krag M1898 Actions for the New Jersey and Pennsylvania National Guard units. They were chambered for the .22 Rimfire Long cartridge. The bore

was drilled eccentrically at the breech at the twelve o'clock position, and emerged concentrically at the muzzle. Eccentric placement at the breech permitted the Krag center-fire firing pin to strike the lower portion of the case rim while the extractor could grasp the upper portion. Thus, no bolt or extractor alterations were required. This constituted a single-shot conversion, and no attempt was made to provide magazine feeding. Pope is reported to have made many of the barrels personally. Clark Campbell, however, in his book, "The '03 Springfield," states that New Jersey units obtained such barrels from the Stevens Arms Company with whom Pope was associated for a few years beginning in mid-1901. Some of the Pope Krag barrels were chambered for the .22 Long cartridge as indicated, some for the .22 Short. And, according to at least one report, the New Jersey barrels were chambered for the "Pope-Stevens Armory Special." This, in reality, was

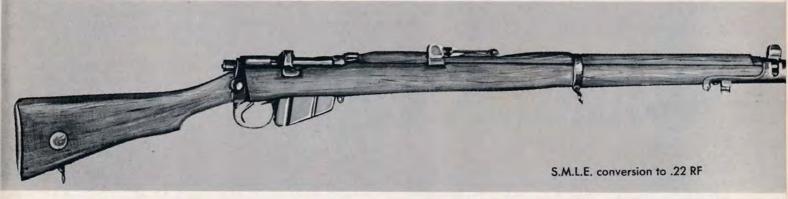
an early form of the .22 Long Rifle.

In 1905, the Chief of Ordnance recommended to the Secretary of War that a .22 caliber Gallery rifle be standardized for Army use. The outgrowth of this was the U.S. Gallery practice rifle, Cal. .22, Model of 1903. This rifle differed from the service M1903 only in that it utilized a .22 caliber barrel and .22 Short cartridges loaded into a steel adaptor similar in size and shape to the .30 caliber service cartridge case. The adaptors were first loaded with cartridges, that could be fed from the standard '03 magazine. Apparently somewhat over 3,000 of these rifles were issued late in 1907.

Concurrently with this project, a .22 caliber version of the M1898 Krag was designed for National Guard use. The Krag receiver was considerably modified, part of the ring being cut away to facilitate loading and extraction, and the barrel was fitted with a separate extractor plate riding on guide rods and held in place by springs. At least







one lot of 500 such barrel/receiver assemblies were manufactured at Springfield Armory in 1906. It was intended that the barreled receivers be issued to units which could then fit them to bolts and stocks of M1898 service rifles for gallery practice. These barrels were chambered for the .22 Long cartridge.

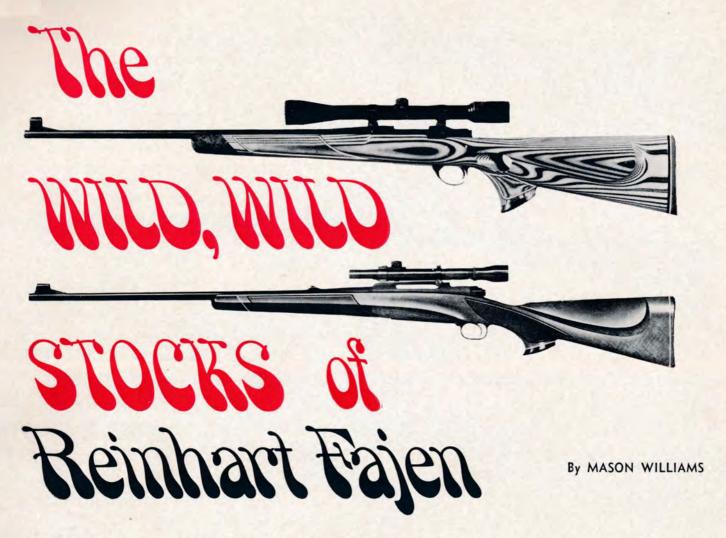
The 1903 Gallery rifle did not prove satisfactory. After moderate use, the adaptors became extremely difficult to load and the corrosive residue of chlorate priming mixtures eroded chambers and bores very quickly. Incidentally. the chamber of this rifle was purposely made short enough to prevent the insertion and firing of a standard .30 caliber cartridge. It has been reported that a considerable amount of consternation resulted when a quantity of this model was inadvertently shipped to France in WWI. During that conflict. the supply of 1903 Gallery rifles was inadequate, so quantities of the Winchester "Winder Musket" were procured. It was chambered for the .22

Short cartridge and was not actually a "standard" U.S. rifle. It falls in that "Secondary Martial" classification of many other arms procured in relatively small quantities by the Ordnance Department. It was simply the regular Winchester Single-Shot fitted with military sights and stock.

In 1919, the Army reverted to fullbore gallery practice with the reduced load "Cartridge, Gallery Practice, Cal. 30, M1919." In that same year, work began to develop an accurate and reliable .22 caliber training rifle. The first experimental rifles were identical in appearance to the standard M1903 service rifle but contained a .22 calibersize, single-column box magazine protruding below the floorplate. Bolts were modified and fitted with separate head and extractor, and utilized the existing ejector. This proved unsatisfactory, and a complete new two-part bolt was designed which dispensed with the original locking lugs and relied upon the safety lug ahead of the bolt handle for locking. After testing, this design was further revised into the "U.S. Rifle, Cal. 22, M1922." It was fitted with a sporter-type stock, standard '03 front sight, and Lyman 48 micrometer adjustable rear sight.

During its production life, the M1922 rifle was produced with a variety of stocks and barrels of different lengths and weights. A few were made up in International Match Style with palm rest, hooded front sight, double-set triggers and hook butt plate.

By 1925, numerous improvements had been made, principally in a new firing mechanism which gave more uniform ignition and better accuracy. The improved version was designated "U.S. Rifle, Cal. .22, M1922 M1." later to be shortened to "M1." The new rifle also incorporated a new bolt head assembly and a five-round magazine whose bottom was flush with the floorplate. The stock also differed slightly, and a new ¼-minute Lyman 48C Receiver Sight (Continued on page 45)



IN THE LAST thirty years, Reinhart Fajen has tried to get out of the stock business twice, but his customers would not let him go and it would often appear that his claim to fame has rested squarely on the offbeat stocks that he has been turning out commercially for over fifteen years. The first one that I saw shook the traditionalist in me. There is no denying that these stocks have set a trend that has been copied around the world. What's more, anyone who says that a Model 1917 Enfield cannot be smooth, slick and sexy should take a long, hard look at Fajen's Enfield Thumbhole Sporter of Sycamore wood with fancy walnut fittings and deluxe high gloss finish. This rifle is enough to send a traditionalist screaming down the street and a liberal to selling his car to own one. Even if we did not have these widely differing tastes. Reinhart Fajen would

still be top man in the stock business.

He and John Bishop joined forces before the war to merchandise both machine-made and custom-finished stocks. The idea was latch onto some of the cheap, machine-made stock business and also to furnish a good, custom-made stock with hand checkering at a reasonable price. Bishop had pioneered in the field of producing semi-fitted and shaped gunstocks, whereas Reinhart Fajen had always been a precision and detail man, so the combination worked well but unfortunately World War II put a stop to this partnership.

After the war, Fajen went back into business specializing in hand inletting and finishing regular gunstock blanks and during the next few years he built up quite a reputation as a fine custom stockmaker. John Bishop again joined





with Reinhart Fajen to set up a custom department under Fajen for the production of completely fitted and finished gunstocks. A short time later, John Bishop succumbed to the lure of the far West, sold out, and bought a ranch in Idaho.

This completely changed Fajen's plans so he went out of the business. But due to the flood of letters from customers and potential customers for stocks for their military rifles, he finally set up shop again on twenty acres outside of Warsaw, Missouri, where he now has seven factory and dry kiln buildings; the business office is in town. His staff has grown from seven employees to over 85.

Reinhart Fajen, Inc. produces gunstocks in all designs from the old classical styles to the modernistic, functional designs that have set this business apart from other stock makers. Both Fajen and Fred Wenig, his Custom Department Manager, design and develop new stocks. They work as a team, and the results have been sensational. Today Fajen's wild stocks do not stop with rifle stocks. They go on to include stocks for the Remington XP-100 caliber .221 Fireball pistol as well as for fine trap shotguns. If you want special checkering on your gunstock Fajen will give it to you, as well as hand carved birds and animals that appear to move right out of the wood. This work is both alive and anatomically correct.

A lot of people prefer mesquite or fancy screw bean mesquite to walnut. Others choose maple or sycamore or black cherry or birch or even California madrone. Many of these woods used in a wild stock design combine to produce a stock that should make the wildest shooter happy. And it appears to do so judging from the fact that Fajen's custom department runs consistently behind on orders. A lot of shooters want the laminated stocks that cannot warp or twist or move and which will hold zero in any climate. One of these, fitted to a Remington Fireball action, will make any shooter pull up short. The wild stock designs



Other fine examples of Fajen stockwork include hand wood carvings such as (left) the running deer scene and the Quail scene (left, bottom). The rifle at right is stocked with Fancy Screw Bean Mesquite, a rather scarce variety of wood and quite beautiful. 37



did not suddenly spring into being or into production. They were the result of small, tentative steps taken right after the last war. Shooters, as a class, are really quite conservative—or were until Reinhart Fajen made them realize that they could buy a radically designed stock that was comfortable, easy to shoot and handle and which was basically pleasing to the eye. That's right. These wild stocks have some of the most graceful, smooth flowing lines of any stocks ever created. Combine this with some of the laminated wood or with some unusual maple or mesquite and you can really jolt an old time conservative shooter—but then let him handle it, look it over, and you will note a sly crafty look come into his eyes as he decides that it is not quite as bad as he originally thought!

Because stock bedding is such an important accuracy factor, Reinhart Fajen has studied this phase of stockmaking for close to 40 years. His stocks have been bedded the conventional way until recently, when he developed a new method of bedding a rifle action. He concentrates first upon the recoil shoulder, next upon the rear tang, and third upon the fore-end tip. These are the key bedding areas and



by leaving high flats in these areas the shooter receives a more perfect contact of wood to metal where it counts.

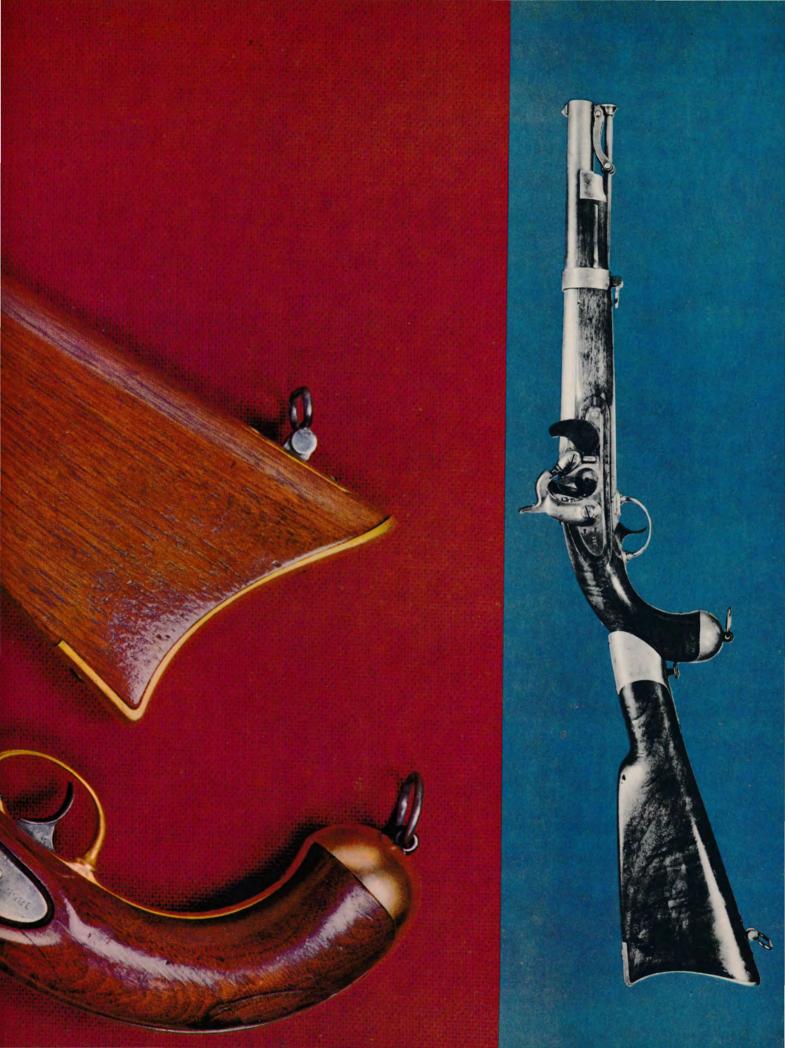
When Fajen furnishes one of his Acra rifles he goes even further, and provides a perfect fit of metal to wood by using AcraGlass for the precise mating of wood to metal at the recoil shoulder and for perhaps two inches ahead of the shoulder. A touch of AcraGlass mates the rear tang with its wood base, thereby providing the ideal two point bedding. If necessary, AcraGlass is used in the fore-end tip. As handled by Fajen, this type of bedding, using high flats rather than fully bedding the entire barrel and receiver, ensures accuracy as proven on my two hundred yard range.

The rifle I tested, in caliber .300 Winchester Magnum, gave me 3½" five-shot groups at two hundred yards from sandbags and benchrest that would show up any faults in either bedding or stocking. I used the smooth, sweet Conetrol mounts and the new, small Redfield 2X-7X scope. A rifle in this caliber can deliver brute punishment to the shooter if the stock design has not been carefully thought out. I am glad to say that the (Continued on page 66)









COVER STORY THE ASTRA CONDOP



- -Cut in slide showing barrel bushing assembly.
- -Cut in slide showing barrel.
- -Cut in barrel exposing chamber and rifling.
- -Loaded chamber indicator.
- E-Firing pin and spring.

- -Safety latch pin.
- -Hammer strut.
- -Safety latch.
- -Hammer spring.
- -Magazine release button.
- -Cuts in magazine exposing spring.
- -Magazine safety.
- -Cut in trigger.
- -Cut in frame exposing trigger mechanism.
- -Cut in slide showing slide rails.
- P-Recoil spring.

TEARLY three-quarters of a century ago a Spanish nobleman designed an automatic pistol that would be carried over in it's basic configuration for almost fifty years. Naturally the design has been modified a number of times to improve it, but the original thoughts of its creator are still quite evident.

The Campo-Giro Model 1913-1916 was the forerunner of the Astra line of automatic pistols that have been sold at quite reasonable prices for the past few years. After a few modifications the pistol was officially adopted by the Spanish government and was used until another model of the same basic design was adopted, the Model 1921. This pistol was known commercially as the Astra Model 400 and was sold throughout the world. The Model 400 is most unusual in that it will chamber and fire the following cartridges: 9 mm Largo, 9 mm Parabellum, 9 mm Steyr, 9 mm Browning Long, and the .38 Super Automatic. A later model that was never used as a Spanish service weapon, the Model 600 in 9mm Parabellum, was manufactured for both the United Kingdom and Germany during World War II and differences between the 400 and 600 were very minor. Those pistols intended for German

use were proof marked with the usual German marks. The Model 600 was chambered for the 9 mm Parabellum cartridge only.

Continuing to improve on the original Campo-Giro. Unceta and Company produced a post World War II pistol designated the Model 800 Astra Condor. This pistol, also in 9 mm Parabellum, differs from the two previous models in that it has an exposed hammer, a pin-type loadedchamber indicator which protrudes from the rear of the slide, and a slightly different grip configuration that is more comfortable to the hand. The heavy recoil spring that wraps around the barrel, the sights and slide are all part of the original Campo-Giro design. Although not a standard service weapon, the Condor could be easily adapted for such use.

Almost all weapon manufacturers, when coming out with a new model, make up a few of their new guns into cutaway models purely for the purpose of demonstrating the interior workings and the craftsmanship of their new piece. The Condor on our cover was probably intended for use by one of the Astra salesmen to show the improvements made over the previous models. The weapon bears



no serial numbers and was most likely pulled off the assembly line before arriving at the numbering station or point of production.

Just how this example got out of the hands of the salesman or the factory is a mystery. The production models of the Condor were released in a blue finish with hard rubber or composition-type grips. This cut-away is finished in either nickel or chrome with the right grip of simulated pearl.

In all, there are eleven cuts on the gun. Each cut has been carefully finished and smoothed and it was definitely done at the Astra factory and not by some collector who wanted a "fake" cut-away. Probably the most revealing

cut was made on the slide and into the barrel. The pintype loaded-chamber indicator can be seen in it's entirety and the same applies to the firing pin. With the barrel cut from almost the rear of the chamber to nearly three-quarters of an inch into the rifling, one can see not only the mere fact of how and where the round is positioned, but also the marvels of modern day engineering and manufacturing practices. The exact fit and the tolerances involved in the manufacture of a gun are all the more evident when giving a cut-away close inspection. At the business end of this Condor there is a cut that exposes the barrel bushing assembly that is under spring tension from the main, large spring that (Continued on page 58)



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RIMFIRE MILITARY RIFLES

(Continued from page 35)

was standard. As original M1922 rifles came into Springfield Armory for repair, they were fitted with the improvements and so identified by stamping "M1" after "M1922" on the receiver.

Shortly after issue of the M1 rifle began, a further development program was initiated. In 1932, this resulted in the standardization of the "U.S. Rifle, Cal. .22, M2." The new design was simplified by redesigning the receiver bridge so that it could be machined from the standard M1903 receiver forging. The firing mechanism was again improved, and now utilized a knurled disc screwed on the rear of the firing pin rod instead of the old headless cocking piece of the M1. The enlarged disc was intended to deflect powder gas from the event of a burst case. In addition, the new firing mechanism permitted unlimited dry firing without damage to firing pin or chamber. Firing pin fall was reduced to 0.23". Bolt travel was reduced to only 1.95", less than half of that of M1903 service rifle. A slightly longer magazine was designed to facilitate removal-the "flush" magazine could sometimes be difficult to grasp for withdrawal. The new bolt assembly and magazine could be inserted together only in the M1 rifle and function correctly making for a simple up-dating of the older guns. Production of the M2 began in 1932, and where previous models had been "blacked" and "browned," new guns carried a parkerized finish and were fitted with a further improved stock.

In about 1934, the M2 was further improved by incorporating an adjustable headspace feature. This consisted of a hardened steel plug threaded into the rear of the locking lug. The face of the plug functioned as the locking surface, and could be turned in or out to regulate headspace. Incidentally, when M1 rifles were returned to Springfield Armory for repair, they were fitted with the new bolt and magazine and, sometimes, stock. They were then re-marked by adding a second Roman Numeral "I" after the "M1" designation, making it read "MII." Guns produced originally as M2 carried simply the letter M and Arabic Numeral 2. Through fiscal year 1942, slightly over 7,900 M2 rifles were produced though serial numbers as high as the mid-18,000's have been noted, indicating later production.

By the time the U.S.A. had entered WWII, requirements exceeded production at Springfield Armory. It was

deemed more practical—as in WWIto procure existing commercial .22 Rimfire rifles than to expand production of the rather costly M2. Consequently, large quantities of Winchester M75 and Remington M513T target rifles were purchased. As requirements increased, other models were produced including Savage-Stevens and Mossberg Models of comparable characteristics. Following WWII, all Springfield .22 rifles were eventually withdrawn from service. Many were in the hands of ROTC and National Guard Units, and were, therefore, left in service until such time as they were turned in for repair. In most instances, they were then disposed of as surplus military property or, in some instances, destroyed. It appears that the Remington and Winchester rifles remained in service until the late 1950's or early 1960's, while other commercial models phased out earlier. This writer personally conducted gallery practice in regular army units in the late 1950's with freshly-issued Winchester and Remington rifles. Incidentally, the commercial rifles procured carried the "U.S. Property" stamp and the appropriate Ordnance inspector's stamp. They carried typical parkerized military finish on the metal, and plain linseed oil on the wood.

Since that time, there has been little U.S. Army interest in a .22 rimfire training rifle. I have personally discussed the matter with many Army Reserve and National Guard Officers who would like very much to see a contemporary semi-automatic .22 Rimfire military training rifle developed and issued. The extreme shortage of anything but indoor range facilities makes it virtually impossible for them to conduct meaningful marksmanship training without such equipment.

With this in mind, Harrington and Richardson developed what it called a "M14 .22 Caliber Simulator." During the late 1950's, H&R was actively involved in the production of several hundred thousand M14 rifles. Concurrently with this program and at its own expense, H & R developed a selective-fire .22 rimfire training weapon which embodied the physical and functional characteristics of the M14. Manipulation and operation were, for all practical purposes, identical to that of the M14 service rifle. For various reasons, this rifle was not adopted and today there is no standard

(Continued on page 48)

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And, since trap and skeet are truly family sports, it should follow that the gun club ought to be a complete family recreational center. That the gun club ought to be and can be a complete recreational center is admirably demonstrated at the new Salt Lake Gun Club, in Salt Lake City, Utah.

Like so many other gun clubs, the original 1932 site of the Salt Lake Gun Club was gobbled up by urban sprawl. The astute management of the club relocated the club near the I-15 freeway between Ogden and Salt Lake City, 18 minutes from Salt Lake City, and twenty minutes from Ogden. Not only did club management give a lot of thought to site selection, but they decided to epitomize the concept of complete family recreation in the new facility, and they did it admirably. Busy club president Mary Gallenson took time from his 1969 Utah State Trap shoot duties to give me a grand tour of the new club, and it is impressive!

First of all, spectators can look down at all the action from a comfortable veranda on the second floor of the two-story clubhouse, Squadding room, entries, shell house, etc., are all located in a separate area of the first floor, and do not interfere with any of the social or spectator activities.

Another innovation which will be profoundly appreciated by shooters is a glass-enclosed control booth, which overlooks the entire shooting line of nine traps and four skeet fields, and which is connected by phone with every trap, and with every department of the club. There need be no blaring loudspeaker to distract shooters, because the range officer can

communicate directly with each field to see if squads and/or shooters are ready, or to give any needed information.

A fully enclosed play yard for the toddler set is completed, with toys and play equipment in place. A swimming pool, next to the play area, is in the overall plan, but not completed as I took the guided tour. A lounge with fireplace and picture window is separate from all the other rooms, yet provides a view of the firing line action. The club's dining room is leased, and Mary was pleased to report that two month's bookings for dinners were recorded when I saw the club. The dining room is also designed to double as a room for parties, sport shows, lectures, bingo games, hunter safety courses, etc. There is a separate snack or lunch counter for the shooter who wants to grab a bite on the run, and is not ready for formal dining. Although not complete, there is space provided for a pro shop, to be used for rental of guns, clothing, reloaders's supplies, and shooting needs.

A locker room, with showers and sauna bath is nearly complete, and should be in operation by the time this is written. Naturally, with such magnificent facilities, Mary Gallenson and his cohorts have mapped a comprehensive plan of shooting events. Four of the traps, and two skeet fields are lighted for night shooting. Tuesday, Wednesday, and Thursday nights are scheduled for league shooting, shoots with Ladies Day every Wednesday, and Kid's Day shoots every Saturday. All these programs are in addition to monthly registered shoots in ATA, PITA, and NSSA categories, along with mixed double shoots. and monthly merchandise shoots.

Salt Lake Gun Club offers two types of memberships, a shooting membership at a very reasonable fee, allowing the shooter to take full advantage of the club's great shooting program, and an equity membership with voting and financial privileges. And, during the Utah State Trap Shoot, as if to complement the beautiful new clubhouse, my eye was taken by a display of Phil and Marilyn White's "Bigfoot" shooting garments. I have always felt that trap and skeet shooters need not look like fugitives from a rag bag, nor did every shooter have to wear the same drab shooting garments, which almost take on the appearance of a uniform. Not so Marilyn and Phil's Bigfoot shooting vests, which look great, fit great, and feel great. I don't know what Bill's contribution to their Bigfoot Ventures, at Route 4, Box 209, Nampa, Idaho 83651 entails, but Marilyn personally sews the garments, when she isn't smashing trap targets. It was a toss up at Salt Lake City whether she was more excited by the reception of shooters for her handiwork in the form of shooting garments, or her handiwork on the trap line, when she cracked the ninety barrier for the first time, with a very respectable 92 in the handicap event.

I would strongly recommend that any group planning a new gun club, relocating an existing one, or remodeling an existing club see the new Salt Lake Gun Club. And, I will remind all gun club operators that no longer are you competing only with another gun club, you are competing with all other forms of recreation for the consumer's patronage, and dollars.

It will take the new look in gun clubs to effectively compete for the consumers affections. Bowling alleys and pool halls, for one, demonstrate this principle. The old time bowling alley, pool hall, or gun club, with a purely masculine atmosphere, which excludes the family, is not long for today's world. With more money, more time, and more selectivity on the scene, any activity which takes Dad way from Mom and the family, and effectively excludes them, as do some gun club lay-outs, can't be expected to thrive and prosper.

Also, very practically, as I learned from experience, when Mama and the kids are hooked on shooting, it's a lot easier to get to the gun club. And, if Mama can look sharp in her shooting garments (along with Dad) she is more likely to be interested in the game than in a game for which she must look like a frump in which to compete. Big Foot shooting vests can take care of this little problem. Who knows, maybe the little woman might just want to go to the gun club to show off her new shooting clothes to the rest of the girls.

. . .

Shooting records are made to be broken. So says Pat Haywood, from Taylor, Michigan. Haywood, a relatively new and unknown skeet gunner, broke four hundred straight in the four guns during the annual Thunderbird Invitational in Bellevue, Michigan.

Haywood, as this is written, is only the second skeet gunner in recorded and registered competition to break one hundred straight with each gauge. Kenny Barnes, from Bakersfield, California first fired the four hundred two years ago.

Haywood is forty three years old, and has been shooting skeet five years, but started shooting the 28 gauge and .410 events only two years ago. To make for even more of a "man bites dog" skeet story, the hundred straights in 28 gauge and .410 which made up the perfect 400x400 were his first perfect centuries in either gauge.

So, there is hope for an hour in the sun and limelight for every skeet gunner who has been plugging away without perfect scores. Who knows, you, the reader, may be next.

Speaking of Kenny Barnes, the first shooter to break 400x400 in registered competition, he hasn't lost much of the skill that brought him the perfect 400. He broke 398x400 in the California state event at Fresno, and won three of the four gauge championships, winning shootoffs in both 20 and 28 gauge after breaking centuries in the regular distance. His .410 score was 99x100, which means he dropped one target in this event, and one in 12

gauge, the only trophy he didn't win. The 12 gauge trophy went to Rex Liggett, of San Diego.

Along with catering to the family concept of recreation, gun clubs should always be alert to new methods of publicizing the clay target sports. Incidentally, I am pleased to report that the Utah State Trap Shoot in Salt Lake City received excellent news coverage, including live television. I'm pleased to pass on another publicity gimmick, reported by the Albuquerque, New Mexico Trap Club. One week prior to the big Ernest Love Memorial shoot, the club hosted a Radio Invitational meet. Local radio personnel challenged each other via the air waves, and competed in a trap event, coached by club members. Station KRZY won the race, with KQEO the runner-up. Publicity from the three competing stations drew attention to the big event, and it is reported that the club gained a dozen new members from the publicity.

Bill Blackwell, president of the club, whose address is P. O. Box 1213 Albuquerque, New Mexico, said that he strongly recommended the radio promotion, and will be happy to answer questions about the program from interested gun clubs.

Shooting is like any other sport or commodity in that it must be properly merchandised. Here is one more way to sell more recreation. (You are not selling shooting—you are selling recreation).

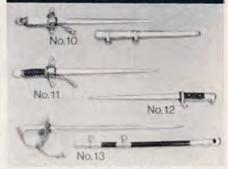
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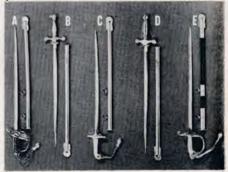
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(Continued from page 45)

.22 rimfire training rifle of modern configuration. Today, the .22 Rimfire sees little use insofar as purely military training is concerned. Marksmanship requirements, not to mention tactics and weapons types, have changed immensely since the days of the bolt-action magazine rifle. The requirements of our current war dictate fast, accurate shooting at very short ranges and massive firepower. Reduced-caliber training of this type is supplied with BB guns and the so-called "Quick-Kill" system.

During the 1920's and 30's, .22 caliber conversion units were developed for other military weapons. If it was too costly to supply fullcharge rifle ammunition, the problem became even more acute in training machine-gunners. Consequently, a special .22 Long Rifle unit was designed for the Browning M1917A1 water-cooled .30 caliber machine gun. It consisted of a new barrel and breech mechanism which would be assembled inside the receiver and water jacket of the standard gun. The .22 Long rifle cartridge did not generate sufficient back-thrust to actuate the recoil-operated feed mechanism of the Browning. In order to overcome this, the .22 cartridge was chambered in an adapter of the same diameter as the standard .30 caliber cartridge. This also permitted use of the standard Browning extractor. This adaptor functioned in the same manner as the Williams-designed "floating chamber" and multiplied the back-thrust to a level sufficient to operate the conversion mechanism. Feed was from a canvas web belt quite similar to the one used with the gun in .30 caliber. The belt differed in that it was fitted with spring clips in each cartridge pocket. The adapters were inserted into the pockets from the rear and retained by the clips in proper position for feeding. During firing, the adapters (with chambered .22 Long Rifle cartridge) were extracted from the belt, chambered, fired, extracted, and ejected in the same manner as .30 caliber cartridges in the full-bore gun. While not issued to Regular Army units after WWII, this conversion unit was still in the hands of some National Guard Units in the middle 1950's. My rather limited personal experience with it indicates that while its reliability might not be as great as the .30 caliber, it was entirely adequate for the purposes intended.

Another interesting .22 caliber conversion unit intended for military use was produced experimentally during the 1930's for the M1928A1 Thompson

.45 caliber sub-machine gun. Apparently, this device was never adopted by the U.S. Army, and very few were manufactured. Far more successful was the Williams-designed "floatingchamber" conversion of the U.S. pistol, Cal. 45, M1911A1 procured in considerable quantity by the Army. This device consisted of a separate barrel, slide, magazine, and recoil spring which could be assembled to the standard .45 caliber receiver. The chamber was located in a separate bushing seated in a recess in the rear of the barrel. The "floating chamber" and fired case recoiled together a short distance before the former was halted. imparting sufficient momentum to the slide for normal cycling of the gun. This device was of straight blowback design, and eliminated the locking ribs of the .45 caliber pistol. It was produced as a complete gun under the name, "Service Ace" and was also sold commercially by Colt in both complete gun and conversion unit form.

Rimfire training guns were not peculiar to the U.S.A. At an early date, the Mauser Werke produced rifles in .22 caliber that paralleled the M98 in use by many Nations. Both single shot and magazine-fed versions were offered with complete military stocks, hardware, and sights. Operation and handling was identical to the M98. A more popular solution to the problem consisted of a conversion kit in .22 Long Rifle which could be assembled



to the Mauser military rifle. It consisted of an insert barrel and new bolt, often also parts necessary to permit magazine feeding. Such kits were produced by various makers, among them Erma and the Czech Brno plant. I once encountered many of the Brno conversion units in Iranian warehouses, still in factory grease.

Great Britain also got into the act. Thousands of condemned .303 Lee-Enfields were converted to .22 during WWI by "Parkerifling" (relining) the barrels; others by fitting new barrels. All are reported to have been single shot and required a new bolt head. These conversions were designated Rifle No. 2 Mark IV (also IV*). When the Improved No. 4 rifle series became available, both single shot and mag-

azine .22 conversions were produced and called, "Rifle No. 7." It was developed at Long Branch, and also produced by BSA. The No. 8 Rifle is of new manufacture, but resembles the No. 7, while the No. 9 is a Parker-Hale single-shot conversion of the No. 4 .303. Mauser and Lee-Enfield .22 conversions and look-alikes will be encountered all over the world due to the wide distribution of the basic rifles. At one time, most could be purchased new from various commercial and government sources. Today, though, only the British No. 2 Mark IV is readily available. Century Arms Inc., 3-5 Federal St., St. Albans, Vermont, offers at \$29.50 each a large supply in used condition.

Official interest in the use of the lowly .22 Rimfire cartridge for military training, and the subsequent development of special weapons to accommodate it-seems to wax and wane according to the economic situation of the military establishment, and also according to the requirements for training vast numbers of new soldiers. Actually, the .22 Rimfire always has and always will offer a sufficient economic advantage that the cost of special arms can be more than justified. For example, fullcaliber service rifle and machine gun ammunition these days costs upwards of 10 cents per round, even in the multi-billion quantities which national defense requirements generate. On the other hand, in million-plus lots, the standard .22 Long Rifle round can be obtained for as little as 1/2 cent each, sometimes less. Add to this the fact that the .22 can be used almost anywhere that a fairly substantial backstop can be erected at the end of 50 feet of cleared space, and far greater savings can be realized. Virtually any U.S.A.R. or National Guard unit can find adequate space in which to conduct .22 caliber marksmanship training. However, those same units must often travel hundreds of miles to find ranges that will handle the standard service cartridge. The Harrington and Richardson "M14 Simulator" would certainly offer both practical and economic advantages for basic marksmanship training. If one considers the M16 .223 (5.56mm) rifle, a comparable simulator or even a selfcontained conversion unit could well be developed and produced at relatively moderate cost.



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KURTZ CARBINE CONVERSION

(Continued from page 21)



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merely by substituting magnum primers.

H-110 really needs the magnum primer for efficient ignition. Standard primers developed maximum chamber pressures late in regard to bullet movement. Consequently, obturation (gas sealing) was insufficient and sooty blow-by was seen on the outside of case necks and shoulders. Only a few rounds of this built up sticky carbon residues that stuck cases in the chamber. Again, the use of magnum primers solved all these ills.

The 115 grain Norma bullet gave the most efficient performance. This midweight pistol bullet seems to be well-suited to balanced loads in the Carbine using H-110. The burning rate of H-110 is probably not fast enough for the lighter weight bullets in this test series. (Notice the increased powder weight but decreasing energy output for the last two loads.) But H-110 was the only powder that had an acceptable burning rate plus the proper density for maximum loads in the Kurtz case.

Powders such as AL-8, 4756, and Herco were tried with the 108 and 90 grain bullets, but they were so relatively bulky that a case full was still insufficient powder to reach desired chamber pressures. Winchester 540MS is a dense ball powder, but was found to produce sharp pressure gradients even with the light 90 grain bullets. Unfortunately, there was no Hodgdon HS-6 available for testing. This might have been a more efficient powder, especially with 90 grain bullets.

H-110 will perform well with 125 grain bullets, but it is such a dense powder that a significant air space is left below the bullet base with the proper charge weight. Whereas, 24 grains of 2400 filled the case to the bullet base and provided an ideal loading density, 2400 also shot well with the 115 grain bullets but was not as

efficient in maximum loads as H-110. Winchester 680BR might also work well with 125 grain bullets.

There appears to be a bit more loading headroom with the 108 grain bullet. Another grain of H-110 would put the energy well past the 1600 foot pound mark without registering undesirable pressure levels. This load was lef alone because it fell within the performance criteria and shoots very well in terms of functional reliability and accuracy.

Several series of five-shot test groups were fired to determine accuracy. Table 2 summarizes the results,

Magnum primers significantly improved the accuracy of all loads tested where both standard and magnum priming were used. The 115 grain Norma bullets shot about as well as the 108 grain Super Vel projectiles; these two types were the most consistently accurate.

There are many variables that affect bullet accuracy. Surely the mild-steel Tri-Clad jackets on the Norma 115 grain bullets account, in part, for the good performance.

The 90 grain Super Vel bullets stabilized very well in the 16-inch twist barrel and would probably shoot much tighter groups with a faster burning powder. The muzzle blast is quite potent with 28 grains of H-110. This fact probably causes greater dispersion with the low mass bullets.

All of the loads tested gave acceptable accuracy for the intended purpose. Because of the coarse adjustments on the GI peep sight, the testing range was kept to 50 yards.

At 100 yards, group sizes can be expected to expand by a little over double the measurements shown here, under the same shooting conditions. However, the use of a telescopic sight should about duplicate at 100 yards, the group sizes shown in the above data. Performance like this is better

Table 2 ACCURACY DATA

Bullet	Powder/Wt	Primer	Group Size*
125 gr. Speer	2400/24gr	CC1200	3.75"
125 gr. Speer	2400/24gr	CC1250	2.87"
115 gr. Norma	2400/25gr	CC1200	2.35"
115 gr. Norma	H-110/23.5gr	CC1250	1.75"
108 gr. JSP	H-110/26gr	CC1250	1.50"
90 gr. JHP	H-110/28gr	CC1250	3.00"

^{*}Extreme spread, center-to-center, average of three groups. Carbine on sandbag, range 50 yards. Standard G1 sights.

than that produced from most GI Carbines.

It must be obvious to most readers by now that the 9mm Kurtz is quite a handsome performer and a "natural" for conversion in the Carbine. The changes wrought by the cartridge are even more dramatic when the following performance comparisons are made:

COMPARATIVE DATA

Cartridge	Bullet	MV	ME
M1 Carbine	110gr	1950	928
9mm Kurtz	115gr	2525	1627
.44 Rem Mag	240gr	1736	1606

The 1950 fps load given above represents a good working maximum with 110 grain bullets in the M1 Carbine cartridge. The .44 Magnum data is a factory 240 grain load shot from a Ruger Carbine (18-inch barrel). Notice that the 115 grain load from the 9mm Kurtz is in the same league with the .44 Magnum energy-wise, but tops it by nearly 700 fps in the velocity department! The Kurtz load demonstrates a 30% increase in velocity and a whopping 75% increase in energy over the original M1 Carbine load. All this is accomplished with no alterations to the original gas system.

The whole idea of the new conversion was to use all the original GI parts in the Carbine. GI Carbine components are good stuff, being fabricated from chrome-molybdenum alloys. Be that as it may, the conversion called for reboring the original barrel and this created some concern over bursting strength of the barrel walls. The Carbine has a nominal .600-inch constant diameter tube ahead of the gas cylinder assembly. Would reboring create a dangerously thin barrel wall?

The simple hoop stress formula for tubes closed at one end was applicable for analyzing the problem. The formula:

$$S = \frac{pd}{2t}$$

shows the relationship between tensile stress and the physical conditions inside the tube where: S = tensile stress; p = expected chamber pressure in psi; d = inside diameter of the tube; t = wall thickness of the tube.

Substituting we see that:

$$S = \frac{(40,000 \text{ psi } \times .356)}{(2 \times .112)};$$

$$S = \frac{14,240}{.244};$$

S = 58,360 pounds.

The results of this analysis means that 58,360 pounds of tensile stress could be expected on the barrel walls of the thinnest section of the rebored barrel if 40,000 pounds internal pressure was applied. The ordnance steel from which the barrel was made has a nominal 100,000 pound yield strength in tension. Nominal chamber pressures of 40,000 psi were not to be exceeded and the actual pressure at the gas port before stress was put on the thin barrel section would be no more than 1/2 to 1/3 of the maximum. This analysis indicated there would be no pressure bursting problems from reboring the GI barrel.

Bo Clerke of Clerke Technicorp, 2054 Broadway, Santa Monica, CA 90404, did the reboring, chambering, and barrel fitting. Several problems are involved in drilling and rifling a forged carbine barrel. Special tooling is needed to hold the barrel concentric to the drill spindles. Bo has complete barrel-making facilities and turns out some of the finest big-bore target barrels in the world. Anyone interested in having a Carbine converted to 9mm Kurtz should write to Clerke Technicorp for an estimate.

Reboring was done to 9mm pistol specifications; $.351 \times .3545$ inches bore to groove measurements, with a 1-in-16 inch twist. Accuracy indicates that the barrel runs true; usual bore inspection shows no kinks or bends. Firing of several hundred rounds has smoothed out the rifling and resulted in a first-class barrel, considering the antecedents. But, reboring is not all that has to be considered in converting a Carbine to 9mm Kurtz.

The bolt face and extractor have to be opened to accommodate the .30-06 head diameter. Machining has to be accomplished so no undercutting or raking angles are created; these imperfections will cause shaving of brass case rims during operation of the mechanism. If a precision tool post grinder is available, it works well for the job of bolt face opening, the bolt is made from deep hardened steel and is difficult to cut even with carbide tools.

Cartridge conversions on self-loading arms often lead to feeding difficulties. Magazine lips have to be bent slightly inward for this Kurtz conversion to make the cartridges feed singly into the breech from a center position. The feed ramp has to be carefully ground in a convex contour to accommodate center-fed rounds.

Blunt bullet points with exposed lead tips cause the most feeding problems when they intercept the lip of the barrel at the chamber opening. It is possible to grind a contour on the lower edge of the chamber opening similar to the lead bullet modification on a .45 ACP barrel. This operation





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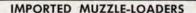
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must be done carefully, however, since if support is removed from the case wall, burst cases could result.

If conversion kits ever become available commercially for this cartridge, a redesigned magazine would be a worthwhile project. A double row feed with Karl Gustaf-type convergent feed lips would be best. Increased magazine capacity would also appeal to law enforcement organizations.

Since the Carbine was designed to handle a cartridge a little more than half as powerful as the 9mm Kurtz, some attention had to be given to the fitting of the action to the stock. Most Carbines have what might be called charitably a "loose-fitting" stock. Shaking an assembled Carbine will illustrate this point. While this slackness of fit is of little consequence in a regular Carbine, it was a source of trouble in the conversion.

While the regular recoil plate is fully capable of absorbing the added energy from the Kurtz round, the rest of the stock takes a beating. The action tended to rebound off the recoil plate and shift forward. The action literally did a double or triple shuffle with each shot.

This shuffling motion would push the barrel band forward after a dozen shots and cause the hand guard to dislocate. It is not hard to imagine what all this motion was doing to ac-

Some tubes of epoxy resin and oneinch surgical gauze corrected this situation. Epoxy saturated gauze pads were applied under the barrel behind the barrel band, under the receiver ring, under the front slope of the trigger housing, behind the recoil plate and on the sides of the receiver by the spring housing. In addition, a pad was placed forward in the handguard barrel channel and resin was cast in the barrel band ferrule where the handguard is secured.

These glass-bedding techniques tightened up the stock-to-action fit, eliminated any shuffling, and contributed significantly to the improved accuracy.

Shooting the 9mm Kurtz is an enjoyable experience. It has all the handling virtues of the original Carbine plus the added sense of confidence that increased energy and velocity give. Recoil is minimal and the shooter maintains control of the piece at all times.

With 125 grain bullets, this conversion should be adequate for deer in brush country within its range limitations. Any of the loads will turn a coyote inside out, and the accuracy performance should make it usable for any of the larger predators. As a knock-about gun in a pick-up or jeep for a rancher or stockman, it should be perfect.

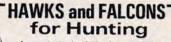
Law enforcement agencies will be interested in this conversion for a number of reasons. The added energy output is useful at close ranges, but low sectional density of pistol bullets reduces the danger of injury or damage outside the area of the scene. Added velocity aids in penetration of auto bodies with plenty of energy left to stop a fleeing felon inside. The 116 grain Norma FMJ bullet would be especially useful for highway patrol duty.

For handling and storage inside police cars, the type M4 telescoping stock is available from John Bianchi, 212 W. Foothill Blvd., Monrovia, CA (10016) at \$26.95. With this stock glass-bedded to the action, the steelrod butt piece telescopes to a compact 271/2 inches. The use of a 30-round "banana" magazine will increase ammunition capacity.

A few words of wisdom are in order here. It must be realized that this is a wildcat conversion. Anyone considering altering his Carbine should be prepared to iron out procedures for case forming and loading techniques if he expects the conversion to function smoothly. All too often, inexperienced shooters become quite enthusiastic about converting a gun, but they are not willing or patient enough to acquire the skills necessary to make it shoot well. The result can be bitterness and disappointment. Cartridge conversions are challenging and rewarding to those people who have the gumption to pioneer; otherwise, stick with the factory job where all the standards have beeen worked out for the shooter.

The 9mm Kurtz conversion probably represents the simplest answer to making a respectable shooting-iron out of the M1 Carbine. For large varmints, woods hunting, and law enforcement applications it holds a big potential.





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REPEAL THE 1968 GUN LAW!

(Continued from page 29)

tion concerning the further attempts to push gun control and registration, to wit:

We agree with the representatives from the Department of the Treasury that registration and licensing proposals represent a distinct departure from previously held concepts of Federal controls of sporting firearms and would constitute an unwarranted invasion into the province of State and local governments.

Earlier, the Justice Department spokesman gave a succinct statement on the "why" of this position:

I believe it is necessary to emphasize that each State faces different problems and conditions in the area of firearms control. The problems and conditions peculiar to the populous urban Northeastern States are not those peculiar to the sparsely populated Plains and Mountain States. Thus, the legislatures of these diverse States are likely to adopt different measures in dealing with firearms."

You will notice that the department mentions "firearms," not long guns, or handguns, but "firearms." The distinction which the Commission has endeavored to make is very weak. Unfortunately, the administration seems to play into the hands of the gun confiscation advocates when its spokesman prefaces "firearms" with "sporting." At the present time, I am willing to give the administration the benefit of the doubt on this issue and hope that the distinction between types of weapons will not become a new wedge upon which to mount a campaign to legislatively deprive the citizens of their firearms.

The gun confiscation advocates, having failed in their attempts to confiscate or control every gun in the United States last year with the emotionally spurred Gun Control Act, are now relying on the press notices generated by the Commission on Violence and the Commission's distinction between the relative "harm" caused by the ownership of one type of weapon over another. This false distinction is not likely to be palatable to the American public, and for a change, it is not left to a member of the loyal opposition to gun controllers to point out the absurdity of the distinction.

In an editorial entitled "More Gun Control Nonsense," in the July 30 edition of the Washington Evening Star, the point was made more dramatically than I could hope to do. The importance of that editorial requires its full reading and I incorporate it here for the convenience and edification of all Members:

More Gun Control Nonsense

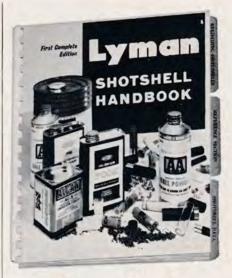
As an introductory note to this editorial comment, an item in the crime news is worthy of attention. On Monday there were 22 armed robberies in Washington. This brought the July total as of that date to 450, compared to 332 armed robberies in all of July of 1968.

In the face of this a task force of the President's Violence Commission (appointed by President Johnson) comes forward with a wacky recommendation. Its proposal is, except in a very small number of cases, that all Americans should be required to surrender any hand guns they own to the government.

Here is the task force's reasoning: This is the only way in which the United States can break "the vicious circle of Americans arming to protect themselves from other armed Americans." Now what does this really come down to? Even the task force. we suppose, would concede that criminals are not going to surrender their hand guns. So what they are saying is that no homeowner, to cite one example, should be permitted to keep a hand gun in his own house to protect himself, his wife, and his children against the night when some armed criminal might break into his home. Their argument is that home owners "may" seriously overrate firearms as a method of self-defense against crime. The "loaded gun in the home creates more danger than security."

This strikes us as blithering nonsense. How many members of this task force have been awakened in the middle of the night by a scream for help by some member of his family? Probably not one. But thousands of Americans are exposed to this dreadful experience every year. And in such a situation what is an unarmed householder supposed to do against an armed intruder? Hide under his bed, and never mind what happens to his family?

The major thrust of this soft-inthe-head report is that the requirement to surrender your hand gun, of which there are an estimated 24 million in the country, would reduce crime. This is absurd, for the criminals are not going to surrender these guns. A better and much more realistic way to deal with this problem will



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be found in legislation now being considered in Congress.

The intent of this legislation is to provide tough, really tough, mandatory penalties for criminals who use guns in the commission of a felony, such as rape, robbery or burglary. For a first offense the penalty generally favored would be a mandatory jail sentence in a federal jurisdiction. which includes Washington, of from one to 10 years. A judge would be forbidden to suspend this sentence or to make it run concurrently with the sentence for the primary offense. In case of a second offense, much stiffer jail sentences are proposed, and they should be written into law.

A similar bill passed the House last year, but was watered down in the Senate before becoming law. The argument then was that mandatory sentences deprive judges of discretion in imposing penalties. And so they would. But in one week at the time the watered-down bill was passed 17 criminals in this city were found guilty of crimes in which guns were used. In six of these cases, more than one-third, the judge imposed suspended sentences, which means that no jail terms were served for using a aun.

So we say let's make the sentences mandatory. And let's not deprive the law-abiding citizen of hand guns in his own home while the criminal element will remain armed to the teeth.

One point in that editorial is worth repeating over and over:

The major thrust of this soft-inthe-head report (of the Commission) is that the requirement to surrender your hand gun, of which there are an estimated 24 million in the country, would reduce crime. This is absurd. for the criminals are not going to surrender their guns.

This is what I have always stressed -we must attack the criminal problem with an attack on the criminal, not with a broadside against the law-abiding citizen who owns a gun. The President has suggested that mandatory sentences be handed down for those using firearms in the commission of a crime and the administration has already shown support for bills which would provide this.

I am introducing a bill today which would amend the penalty provisions for crimes committed while armed. The bill would provide mandatory, additional consecutive sentences for persons who carry or use firearms during the commission of felonies in violation of Federal law. Under the provisions of the bill, sentences could not be suspended, nor could offenders be given probation. The purpose of this bill is to attempt to convince the man who sets forth on a criminal venture to think twice about being armed.

We know that the Gun Control Act of 1968 provided for minimum mandatory sentencing, but that law has a loophole big enough to drive a truck through. The result is that the intent of the provision of that act may be thwarted by the very persons to whom it is directed. What good does it do to tell the criminal that if he commits a crime using a firearm he would, if convicted, receive a mandatory sentence, and then have a judge put him on probation? No use whatsoever, but that is what is happening under the 1968 act and is one more reason why it is unworkable and should be repealed.

CAN YOU TAKE IT?

(Continued from page 31)

within 300 feet of shooting range, a spot where the sheep would be in easy killing distance, his dude gave out. It was a steep climb and he was in such miserably poor physical condition he could not force himself up another 100 yards for a crack at the Bighorn. This hunting is expensive and why a hunter would pay his money and then neglect to get himself ready physically is beyond explanation.

One of the best spots in North America to hunt elk is in the Selway-Bitterroot Wilderness Area of Idaho. There are no roads into this area which is kept in a primitive state by the U. S. Forest Service. Outfitters are permitted to set up

their camps in the Selway during elk season. The incoming sportsman is met at the airport, is then loaded aboard a pickup truck and hauled to the end of the road. There he is boosted aboard a horse and must ride 65 miles to the main camp.

It is an every-season occurrance to have the sportsman fold up before the ride is finished. Surprisingly large numbers come out to hunt who have not been on a horse before arrival. And yet they are made to understand it is a horseback hunt. Not infrequently the outfitter has to radio for a helicopter to meet him at the halfway camp and lift the sport out via chopper. This comes pretty high at a hundred bucks per hour for operation

of the whirlybird.

I manage a hunting company, sending sportsmen to Africa, Asia and Alaska. The average age of the huntsman who can afford a big game soiree on the Dark Continent, or to Madhya Pradesh in Central India, is over 55 years. It takes that long before the average man has accumulated sufficient of these wordly goods to afford such a hunt. And during a part of that career he has usually gotten badly desk-bound and his physical being has suffered. This does no great harm on the African safari or the Asian shikar, for this shooting has now been so organized that it demands little of the physical.

The ambitious among our big game sportsman must now shoot a Marco Polo sheep. This is probably the most coveted trophy in the game world today. It is indescribably difficult to hunt. Living at elevations of 16,000 feet in the Himalayas it represents some of the most rugged hunting man ever undertakes. Last year, an American sportsman stalking the elusive Ovis Poli died in camp. He had a cardiac attack that proved fatal. Between the tremendous exertion, the lack of oxygen, and the cold, he succumbed. Subsequently it was discovered this man had a heart condition but had ignored it and gone ahead with his plans for this high mountain hunting. That showed a lack of judgment.

The sportsman who plans a big game hunt should know his state of physical health. Most hunting is in mountainous country and this means the sportsman must go it either afoot or horseback or both. Hill climbing is a tough chore and puts heavy demands on muscle, heart and lungs. It is only common sense to be sure you are in condition for the hunting you will do. If you are past 40 you should have a complete medical exam. This to include an EKG (electrocardiogram) series to be sure your heart is sound. A friend had such a physical and all the medicos could find wrong with him was a case of hemorrhoids. His physician suggested that these should be surgically removed but my amigo objected. That fall he hunted elk in northern New Mexico via jeep. After three days of banging about mountain trails in the hard riding jeep he had to be flown out of the mountains on his stomach!

If the physical examination finds you fit you are then ready to take stock of your muscle tone and general conditioning. No one walks anywhere these days and this means leg muscles, back and abdominal muscles are



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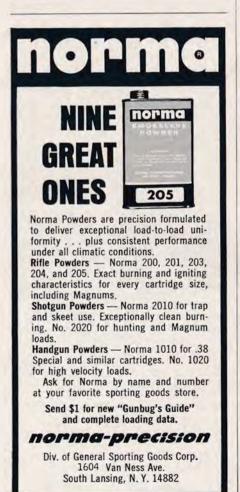


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in poor condition. Most hunting, even bird shooting, places considerable demand on the walker. You have to hike to fetch the game in range and unless something is done to harden these muscles used to get you there the hunt can be a dismal failure.

The recent fad for jogging, a very comfortable low-speed trot, is a marvelous conditioner. It beats walking all hollow and a one-mile jog is better than a 4-mile walk. The only thing about jogging is that if you are over 50 you'd better be sure your medic approves. Some joggers have suffered coronary attacks from the exercise. Walking is safer but it requires more time and distance. The sportsman who is going to condition himself for a fall big game hunt should walk for not less than 60 minutes daily. He should travel not less than 4 mph and if he can walk at 5 miles per hour this is even better. Once weekly he ought to lengthen the walk to a two-hour stint. Covering not less than 8 miles and closer to 10 if he can maintain the pace. If the hike can be done across country this is much better than down a street or road.

You must wear the same hiking boots for these daily stints that you will wear on the upcoming hunting soiree. Do not go out with light shoes and then expect to swap these off for a pair of mountain climbers when the cards are down. The daily hike should begin not less than 60 days before the commencement of the big hunt. The hunting boots will be properly broken in by that time. These boots should be of heavy leather. Not bird shooters, the famous shoe-pac so favored by bobwhite hunters, but a pair of boots that will weigh, per boot, at least 2 to 3 pounds. The sole can be of reinforced Vibram and the uppers of toughest cowhide. These boots want to be not less than 8 inches in height, and 10 inches is even better. In the mountains your feet come in constant contact with rocks, both underfoot and on the sides, and unless the footgear is heavy a lot of harm will be done the feet. The height is necessary to not only strengthen the ankles but to protect them from rock outcroppings. Wear the boots on your daily workout.

Ordinarily, the hunter is burdened with his rifle and ammo, a pair of binoculars, a hunting knife, an extra coat or rain parka, and his lunch. This all adds up to about 12 pounds. When walking as a conditioner, quite obviously the sportsman cannot step out in the street with all his gear about him—he might be mistaken for a militant student going over to the local campus to commence a riot. What he should do is to get a 12 lb. barbell or

dumbell and carry this with him as he walks, shifting it from hand to hand or carrying it in both hands as he moves out.

When hunting mountain sheep, freely acknowledged the toughtest of our big game to bag, the sportsman and his guide haul themselves into the tops of the mountains and there after a successful stalk and a winning shot have the prize before them. Of all North American game none is so succulent as sheep meat. It stands in a class alone, completely different than domestic sheep, and highly prized in camp and larder. The problem facing the huntsman and his guide, once the ram is brought to bag is the matter of getting off the mountain with a hundred pounds of finest steaks, a set of prized horns, and the cape. It is a proposition of the hunter shouldering the horns and cape while the guide back-packs the meat off the moun-

If you are one of these moderns who has a slipped disc, a hernia or hemorrhoids, you are going to be of scant assistance to that guide when it is time to fetch home the trophy. Getting off a mountain with a Big Horn ram is the ultimate example perhaps, but it is rare on a big game hunt when some heavy lifting does not become a requirement. On horse hunts for elk and deer, the game, once it has been brought down, must be loaded on the pack animal and this can run into a deal of heavy lifting. The hindquarter of an elk will weigh a hundred pounds and to pick this up and throw it up on a pack horse, a critter that very probably will stand 16 hands, and then hold it in place while the guide moves around and leisurely makes a tie down, calls for good muscle tone.

What all this is leading up to is that to really be ready for a big game jaunt the sportsman has got to get all his muscles in tune and not just his legs. There should be a regular session daily with barbells to strengthen, arms, shoulders, chest and back muscles. And don't forget the abdominal sheath. Swimming during the summer months, if it is the strenuous sort, is excellent for all the muscles, and is highly recommended.

Probably nothing ruins a big game expedition quite so rapidly as the horseback portion, unless the sportsman is thoroughly prepared. It is a never ending source of amazement to me how hunters will come out to the end of the line and there expect to climb aboard a strange horse and ride some 20 or 30 miles daily and not be prepared for this kind of travel before they arrive. There are a lot of tender portions of the human epidermis that,

when exposed to the hard unyielding surfaces of a western saddle, get almighty tender in a matter of a few hours and even less miles. Once the hide has been rubbed raw it takes several days and complete rest to heal. This can very well halt the whole party while the tenderfoot rubs kitchen lard on his sore spots. You have got to ride and do aplenty of it before you touch down in the hunting country.

Like the jogging and the daily session with the barbell, the riding should be commenced not less than 60 days before the hunting dates. The horse-and-rider twosome should cover not less than 5 or 6 miles and over this distance he wants to walk, trot and canter the mount. I keep 3 horses in the corral behind my quarters and I ride every day. This serves to keep me in shape for the fall hunting. I ride one horse and lead another thus giving all three of us needed conditioning. I ride 6 miles each morning and this swing takes only 50 minutes. A part of the distance is done at a swinging trot, a further distance at the gallop, and the remainder at a fast running walk. This is not a long ride but because it is an every day affair it serves to keep my saddle muscles and my hide in shape to do the usual 20 or 30 miles daily when in the game fields.

The western saddle is all you will ever see on a big game hunt. Around riding clubs the usual saddle is the English flat. For the really dedicated big game huntsman the answer is to buy his own hunting rig. This is pretty expensive and a further part of the cost is the transportation via air when he makes the plane journey from his home to White Horse or Anchorage. But to own your own saddle and to ride it daily will solve all the problems of conditioning.

While the English flat saddle has little of the feel about it of the typical western hunting rig, it is better to climb on its skimpy outline and get your riding done than not to ride at all. It will teach you horsemanship, will toughen those muscles of the legs used to grip the horse, and just as importantly it will develop those necessary calloused parts where all the wear and tear comes. You should ride not less than 60 minutes every day and do this for 60 days before you keep that date with your outfitter.

Quite apart from horsemanship, but important, is the fact that the outfitter will furnish you with a saddle scabbard. This sheath will be buckled to the saddle he provides. More times than not it won't fit your rifle, or if you can get your prized shooting iron in the leather it fits very poorly. If

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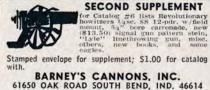
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you don't feel you can afford your own western saddle at least get a good saddle sheath, fitted to your pet hunting arm. Then when you arrive on the scene you attach your scabbard and are assured it will hold your rifle properly.

There are other matters of preparation which are not as critical as getting in good physical condition but still must not be forgotten. If you wear glasses, how long has it been since you had your eyes examined? Ar you sure the present spectacles really fit you? Do you see distant targets as clearly as you should? If it has been as long as 3 years since you had an examination better check in with a reputable oculist and be sure your specs really fit. Have a second pair made with the same prescription and take these spares on your hunting trip. Nothing is more serious than to smash your hunting spectacles when you are several hundred miles from any manner of help.

If you are on any kind of medication, as for diabetes, gout, peptic ulcer or other ailment, be sure your supply of pills is divided into two packets. An acquaintance, suffering from diabetes, had his pills on a packhorse which went off the side of the canyon. The

horse was killed in the fall and the packs were lost; and along with the packs, the medication. Within 3 days he had gone into shock and had to be evacuated by helicopter. Camp fare is strong stuff, consisting mostly of meats, and along with the game killed such dishes as beans and mulligan. If you are a sufferer with indigestion be doubly certain your supply of tablets is adequate to see you through.

Physical conditioning is important for the success of a big game foray but it isn't everything. I once had a close friend who was a bosom comrade on many a big game jaunt. He had no hip joint. When he walked, the bum leg rocked up and down in the socketless hip as much as six inches. This made his gait an awkward and necessarily slow one and it was quite tiring. Despite this handicap this nimrod never asked for quarter. He could sit up on a horse all day, day after day, and ride as far as the toughest cowpuncher in the crowd. And if a mountain was to be climbed, or a day of hunting afoot had to be done, he was right there at the finish. He made it on guts and determination. So can you but it is better to get into shape before the hunt and thus enjoy it the more.

ASTRA "CONDOR"

(Continued from page 42)

surrounds the barrel. This is the major factor involved in the disassembly of not only the Condor, but also the Models 400 and 600. With the slide withdrawn to it's rearmost position, and looking straight down from the top of the weapon, the locking lugs on the bottom of the barrel can be seen through a small cut next to the barrel in the slide. Above and slightly to the rear of the trigger is a cut in the receiver that show the rails on which the slide travels. The work done around the trigger area brings out the entire trigger mechanism and the magazine safety which is the angular part just to the rear of the trigger. Inside of the trigger is the small trigger return spring that rides on the trigger bar. Directly to the rear of the trigger, past the magazine, is another open area in the frame that highlights the hammer strut, sear, trigger bar, and sear spring. The safety catch has been left hanging loose for the photograph to show these interior workings. Where the normal seven small round holes were originally drilled in the magazine, two full length cuts have been made in their

place to reveal the magazine spring. Also in the rear portion of the grip the hammer spring can be seen directly above the magazine release button.

The entire right side of this pistol has been left in the original form to give the customer, or whatever, a look at just what the gun in it's normal state looks like. Marked on the barrel at the ejection port is "9 mm Parabellum".

Cut-away guns, while not only being interesting and informative, are not often seen. A few lucky collectors may have the original, complete model of the gun, and an identical, but cutaway model. This not only helps him understand the gun better, but it also adds considerably to the value of both.

For a period of years between The Great War and World War II, Spanish guns were considered to be "boobytraps" of sorts because of the poor workmanship and inferior quality of materials. World War II brought large military export orders and tighter proof laws and the quality of fine weapons that came out of these new laws is still in existence today.

GUNS AND THE LAW

(Continued from page 33)

shrouded shot columns control patterns. The many advantages to be achieved by the shorter overall length would far outweigh any one time temporary inconvenience of registry of departmental weapons with the U.S. Treasury Department.

Game loads of all shot sizes have been used successfully by police, although it is true that many times they are used as expedient ammunition when conventional buckshot loads are not available. However number 2, 4 and BB game loads have proven effective in police work. Number 71/2 birdshot has also been recently used by some departments in serious crowd control and police mob confrontations. The use of small shot in the shotgun minimizes its lethal potential at ranges other than point blank, direct fire while at the same time a good degree of crowd and mob dispersal effect is maintained.

The standard 12 gauge, 2³/₄ inch high velocity loads are as follows:

Police Loads	Shot Size	Pellets per Load
	00 Buck	9
	0 Buck	12
	1 Buck	16
	4 Buck	27
BB		63

GAME LOADS

#2	Shot													110
#4	Shot													170
#5	Shot													215
	Shot													
#7	1/2 Sho	t												437
	Shot													

For all around police purposes the writer favors the No. 4 buck load with 27 pellets 1/4" in diameter. This load enables a greater hit factor and still retains penetration qualities. Fifty yards is considered to be about the maximum effective consistent hitting range for all buck shot loads on man size targets. Up to this distance, the nine pellet 00 Buck round is most potent. At twenty yards, all nine pellets will impact in a 20" circle. At 40 yards, the nine pellets of a 00 Buck shell will begin to spread out so that less than half will hit a silhouette. The U.S. Army specifies that at least 3 hit a silhouette at 40 yards. The No. 4 Buck load will impact approximately 20 of 27 pellets in a forty inch circle at the same yardage. Many progressive departments train their men in the use of 'skip' firing techniques for use against crowds and mobs. This firing method involves aiming the gun so that the pellets hit the ground, or pavement, close in front of the rioters. A ricochet effect is produced that causes spectacular but generally not fatal wounds, in the lower extremities. The deflected pellets lose a great deal of their velocity and energy prior to impact. All shotgun loadings can be used at close range in this maneuver to minimize serious casualties.

Commercial shot shell rounds are now available that will launch small burning capsules of tear gas at ranges up to 150 yards. Muzzle dispersion tear gas rounds are also advertised in police equipment catalogs. The limited capacity of the 12 gauge shell generally makes is advisable to shoot a salvo of such rounds to achieve best tactical results.

Only recently have police begun to inventory and train with the rifled slug, so long favored by hunters in some areas of this country and Europe. The one ounce rifled slug has tremendous penetration at ranges of up to 100 feet. It will penetrate floors, walls, car bodies, ceilings and doors. The soft, lead, hollow base slug distorts or flattens out after initial penetration and rapidly loses its velocity. This makes it an ideal load for use in congested areas where its penetrating and "knockdown" power is concentrated and protects innocent persons outside the target area. The rifled slug has an initial velocity of 1600 feet per second and develops 2485 ft. lbs. of muzzle energy. The 158 grain, .38 special service revolver load has an initial velocity of 855 feet per second and a muzzle energy of 255 foot pounds by way of contrast. It is sufficiently accurate for almost all police purposes, including counter sniping and barricade situations, at ranges of up to 100 yards. Rifle type sights or low power, post-cross hair reticle, scopes are recommended when this round is used in a shotgun in such shootout situations. The rifled slug-riot gun combination is definitely superior, in almost all respects, to police arms such as the frequently inventoried .30 M1 carbide, for combat type police situations.

Recently, due to military needs, very efficient, highly visible 12 gauge flare and colored smoke loads have been developed for day and night signaling purposes. These rounds are









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available in various colors and reach altitudes of 300 feet. During police raids and riot actions this type of a round has a definite value. Noise maker exploding, projectile type shot shells were originally developed for dispersing hazardous and destructive birds. Similar new improved rounds are now available for physchological purposes that act as noise makers to frighten and disperse crowds. These cherry bomb type rounds can also be used to simulate "crossfire" and for other tactical purposes.

A revolutionary, 12 gauge, finned, plastic projectile, liquid tear gas round for police use in counter sniper and barricade situations to force evacuation of areas has just been introduced. This round is accurate up to 100 yards and is expected to largely eliminate the need for the conventional, special 37 mm (1½ caliber) tear gas gun now in many police arsenals. This new round called the "Ferret" will be the subject of a separate write-up in a forthcoming issue.

Development is still continuing on special "stinger" loads consisting of plastic and unbreakable glass pellets of relatively light weight. These rounds are being tested for possible use as a special police load for crowd dispersal and discouraging looting. The light specific gravity of the plastic and glass materials results in little penetration at other than point blank ranges. The desire is to achieve a "rock salt" effect without inflicting serious wounds.

The state of the art in the manufacture of shotshells has finally reached the point where the diameter of the pattern of a given round can largely be controlled by construction and loading of the shell and not by the choke in the barrel of the gun. The desire to achieve good tight patterns for conventional buck shot, game killing loads, (also purchased by police for official purposes) has resulted in modern loads that are in reality too efficient and too tight for police purposes. The basic purpose of a good police round from a riot gun is to achieve a wider regular pattern and an increased hitting factor at moving targets, especially under riot and poor light conditions. At present some experimentation in development of a wider pattern producing load, especially for law enforcement use is underway. This round design would be similar in design approach to the scatter load now sold for use from full choke guns to enable more accurate small bird shooting at close ranges with No. 8 shot.

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Metal penetrating shotshell loads, Flechette loads, tranquilizer loads, dye marking loads, incendiary, tracer and other special rounds are in development. Predictably, before too long there will not be a single police shoulder weapon need, with the exception of long range sniping, that cannot be provided for by the basic riot shotgun.

It has always been generally assumed that police riot shotguns are either cylinder or improved cylinder bore. These are still the indicated and preferred chokes in use by most departments. However, a recent survey of major police department purchases and factory manufacturing policy indicates that large quantities of riot guns are being sold to police with 20" full choke barrels. The reasons for this are not entirely clear, or necessarily logical from the police viewpoint. Originally, the U.S. Army purchased large quantities of full choke weapons for use in Southeast Asia, but the latest Army purchase specifications have been changed to cylinder choke specifications. This was due to the military need for greater hitting capability at short jungle ranges. The police situation is similar. Aside from a police purchase of full choke guns as a "spin off" from a military contract, at a lower price, there seems to be no logical or defendable reason for this practice. Patterns are already too tight using modern loads with wider open barrels. Full choke guns do not improve this situation and in some cases, depending on ammunition used, restrict the diameter of the pattern even more, or limit the use of some of the numerous special rounds now being designed for use in the riot shotgun. A recent inquiry resulted in the following information as to factory production policies on choke for riot shotguns.

Remington manufactures all its standard police riot guns with cylinder bore barrels. Those furnished with rifled sights have improved cylinder barrels. Savage manufactures and inventories all of their riot shotguns with full choke barrels. The Savage policy is to ream them out to any specified more open choke on receipt of orders. The firm reports that the majority of its police customers specify cylinder bore and that they have had few requests for anything but cylinder bore. Mossberg makes its basic riot gun in cylinder bore, with a 181/2" barrel. They use a tighter choke for their special "Slugster" barrel that is equipped with rifle type sights. Winchester riot guns are shipped with cylinder boring unless otherwise specified.

As of this writing, Ithaca has not

replied to two inquiries on their manufacturing policy with respect to choke borings. However, two Ithaca riot guns on hand, one an older military model with bayonet adapter and the other, a recent production 8 shot police model, are full choked. Inspection of Ithaca shotguns on hand in three major departments indicate that unless the department specifies otherwise, Ithaca guns are produced and shipped to law enforcement agencies with full choke.

With the tighter shooting buckshot loads available, the full choke boring on a riot shotgun is just like putting another layer of icing on the cake. No real useful purpose is served and the guns tactical capabilities are limited. particularly with respect to firing some of the new projectile rounds. It would be the writers recommendation that all departments check their riot guns for choke boring and when necessary have their guns reamed out to cylinder or improved cylinder bore by their local 'friendly' gunsmith. This is a relatively simple, inexpensive operation.

After having witnessed fatal and near fatal accidental discharges of shotguns in police and military hands, and a number of holes in the roofs of ranges and patrol cars, it is pretty obvious that a riot shotgun should have a trigger mechanism that must be individually pulled for each shot fired. There are great numbers of slide action riot guns in police armories today that will fire when the trigger is held down and a new round is racked into the chamber. This is a condition that happens too frequently when men are under tension or have had little regular training and practice with the riot gun. It can be argued that a gun that will automatically fire with the trigger down when a new round is jacked into the chamber is a good means of developing a lot of firepower in a hurry. However, this is not a good enough reason for this type of a trigger mechanism in a police weapon when the safety and other factors are to be considered. The trigger can be pulled and released for each shot fast enough to deliver all the firepower needed in a police weapon of the shotgun type. There are many Model 12 Winchester and the Ithaca Model 37 guns in police inventory that do not have trigger interrupters. The new Winchester Model 1200, the Remington 870, the Mossberg Model 500, the Stevens-Savage Model 69R-M and all High Standard riot guns are designed with trigger interrupters. The Ithaca factory sells their current production riot gun, with or without, interrupter. It is recommended that all new police procurement of riot

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guns specify the trigger interrupter. Steps should also be taken either to correct those in police hands without the interrupter feature or to relegate them to reserve or limited duty purposes, departmental budgets permitting.

Currently, three manufacturers of tear gas munitions can supply inexpensive tear gas grenade launchers that can be quickly mounted on the riot shotgun. Special blank launching cartridges enable the tear gas grenade to be launched over one hundred yards. Greater quantities of gas can be delivered in this manner well out of mob rock-throwing ranges, at less expense and in tactically more effective manner, than by use of the special issue single shot, 37 mm tear gas gun with lesser capacity long range gas projectiles. Reliance for all long range tear gas launching situations can be placed on the basic riot gun by purchase of an inexpensive tear gas grenade launcher and the use of the new AAI Ferret 12 gauge barricade

The military type procurement of riot shotguns usually specifies that the arm come equipped with a handguard and bayonet adapter and that the finish of the gun be parkerized for less light reflection and more durability. Police departments at times can secure the military type of riot gun, especially if procurement is made during a factory production run under a government contract. Handguards and bayonet adapters to fit most commercial type police riot guns with bead front sights can also be secured as accessories and installed in the departmental armory. The controversy around civil law enforcement use of weapons with bayonets still rages, but many departments feel they have a need for this type of military armament and apparently have the public support necessary.

Recoil pads should be factory installed on all riot shotguns under initial procurement. They should be, budgets permitting, locally installed on guns already in police inventories. The recoil pad protects the gun stock in daily usage but more importantly,

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it should be installed on all weapons used in training. Although recoil of a shotgun is not usually noticed under the tension of combat, it is certainly a factor under the controlled conditions of a police training range. More trainee confidence in the weapon will develop, faster, if pads are installed on all range weapons. All riot shotguns should be equipped with carrying straps or slings. Fixed or detachable swivels can be specified as original equipment, at the factory, or locally installed in the police armory. The plain leather strap that can be used as a hasty sling is ample for all police purposes. The Williams "Guide" strap makes an excellent combination with the riot shotgun. Not only does a hasty type sling aid in accurate shooting with rifled slugs, but is also very necessary for carrying and gun safety purposes. Police who are unaccustomed to shoulder arms and to carrving them need this accessory.

The growing importance of the rifled slug as a basic police load makes it advisable to equip all riot guns with rear sights. Most manufacturers can furnish barrels with rifle type sights on request. They cost more, but they are worth the investment, particularly if training and combat use of the slug is contemplated by the department. It is possible for a trained man to shoot good slug groups without a rear sight under range conditions where his hold and rear receiver alignment can be consistent. Most police, however, will not be able to achieve the best accuracy under combat stress without a rear sight. Poor light, hasty shots and improper shouldering of the weapon all will contribute to inaccurate shooting when reliance is placed on the front bead alone. Shotguns for counter sniper teams should always have rifle type sights, low power scopes mounted, or the excellent Oxford 'point of light' sight installed. It is a simple and relatively inexpensive matter to install rear sights such as the rugged Williams 5D receiver sight on riot guns already in the arsenal.

The riot shotgun in its many models and variations is indeed a police weapon without peer. It is ideally suited for all types of armed violence situations, prisoner control and apprehension, stakeouts, mob and riot control, foot and mobile patrol and counter sniper and barricade operations.

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GUN RACK

(Continued from page 16)

also standard loadings and wildcats. British sporting cartridges, military loadings, Continental types; altogether more than one thousand are included.

The tome is a testimonial to the dedication, the energy and the deep understanding of the author. His task was a monumental one and the job he has done in assembling the most complete history ever written on cartridges represents a most admirable effort. The book, put out with a soft cover, is one of these literary efforts that will be a standard reference for the next many decades.

Those portions of "Cartridges of the World" which most impressed me were the hundreds of dimensional drawings, the excellent illustrations. the history, ballistic data both factory and handloads, the general usefulness and comparisons, comments on the game killing ability, introduction and discontinuance dates, and the inclusion as an indication of how author Barnes has revised and updated this second edition, the caseless round. Here is a reference volume that is unique and comprehensive, clearly written, and of extreme worth to the student of firearms and their cart-

V12 Weaver

The W. R. Weaver Co., 7125 Industrial Ave., El Paso, Texas, has probably done as much to put rifle scopes in the hands of riflemen and hunters, as Henry Ford did to put a car in every garage. Now, they have come out with one of the slickest 4X-12X variables that I have ever seen. Following their usual coding, this one is dubbed the V-12. Vital statistics on it are as follows:

ac do long was	
Power	4 to 12
Field of View, feet	
(at 12X)	9
Field of View, feet	
(at 4X)	24
Eyepiece Diameter	1.485"
Tube Diameter	1.000"
Objective Diameter	1.860"
Eye relief	334"
Length	13"
Weight (ounces)	13
Type of Adjustments	
(Internal)	1/4" Click
The crosshair reticle	is standard,

with Dual X, Post and Crosshair, and Rangefinder Reticles available at no extra charge. The Dot is optional at a small additional charge. The objective lens features a paralax adjustment for 50 ft., 75 ft., 100 ft., 50 vds., 100 vds., 200 vds., and 1.000 vds. Power is continuously variable from 4 to 12 with a constant sized, centered reticle. The 1/4" adjustments seem positive and correct, and rifles scoped with it shoot to the same point at any power. For a 4X-12X, it is a compact, trim scope, featuring the same dimensions as does the 3X-9X Weaver, and it's a couple of inches shorter than their K12.

The one I have been testing has the new Dual X reticle, which features exceptionally heavy cross hairs, dropping down to very fine ones in the center. This seems to be one of the most practical reticles for an all around scope such as this, that you could hope to find. In all instances, it performs as well as does a conventional cross hair, yet the heavy outer cross hairs are heavy enough to work nicely as post reticles, should you care to sight it in that way. At 100 yards the space between the heavy portions of the reticle is 22" at 4X and 7" at 12X. If you have a fairly good conception of the size of your target, this will work as well for a rangefinder reticle as will most of them on the market that are specified as that. However, for game hunting, any rangefinder reticle such as this is good only for fairly rough approximations. As Les Bowman once told me, if big game came in set sizes, like maybe Fords and Chevies, this theory of range finder might work okay, but where they come in odd sizes like Volkswagens and Macks, it's not too dependable. None-the-less, it is an extremely versatile reticle, and one of the most practical for all around use.

I am extremely partial to the variable scope, and have approximately 15 of them. This new Weaver should prove as versatile as any, as I rarely see the need to go below four power in a scope, and hunting the western plains and mountains as I do, much of the time the 12 power is almost a necessity. I can find absolutely no fault with this new offering of Weaver's, and priced at a modest \$79.50, I would not hesitate to recommend it to anyone. It's my guess that this could well become one of the hottest numbers in their lines of good, sturdy scopes.-G.W.

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drawer and the sliding un-breakable plexiglass front panel. Measures 303/4" wide, 24" high, 6" deep in honey pine or maple, antique pine or walnut finish. Price is \$34.95 completely assembled or \$22.50 in kit form. From Yield House, North Conway, New Hampshire 03860.

THE NEW Hunter's Companion features a full five inch blade in Pumaster High Carbon Steel, the front part of which is sharpened top and bottom for easy gutting and skinning.

The smooth rounded guard in heavy nickel silver prevents fingers from slipping. Extra protection for fingers doing heavier work is afforded by grooved non-slip finger rest at back of blade.



Like every Puma, this one also bears a special control number stamped on each knife testifying that it has gone through 26 different inspections at various stages of its custom craftsmanship.

Price is \$17.00 at better sporting goods stores and sporting goods departments throughout the U.S., or from Gutmann Cutlery Co., Inc., 3956 Broadway, New York, N.Y.

THE LATEST FROM A1 Popper Guns & Accessories is the Winchester Model 52 rifle in either tie tack or tie bar form. This item is a one inch minia-



ture replica of the famous Winchester rifle. It comes in either English gold or silver oxide finish. Price is \$2.00, from Al Popper Guns & Accessories, Dept. G, 614 Turnpike Street, Stoughton, Mass. 02072.

TSI 300, a new pure synthetic liquid compound for complete gun care has been introduced by Testing Systems. Inc. of Glenside, Pa. The compound acts as a lubricant, rust, corrosion and contaminant remover, and as a rust and corrosion preventive. The compound was developed as an antistatic, non-flammable, extreme temperature lubricant that also strips corrosion and contaminants from parent metal, and sets up a microscopic barrier defying the formation of new rust or corrosion while repelling dust, lint and dirt. Unlike ordinary lubri-



cants, TSI 300 contains no petroleum distillates, silicone, wax, graphite or molybdenum disulphide. Whereas these lubricants put a relatively thick film on top of a metal surface, TSI 300 sinks into the pores of the metal. Very little is required, even when a surface on which TSI 300 has been applied appears to be dry it is there. It creates a thin film which tends to uproot corrosion or contaminants. TSI 300 is available in 4 oz. unbreakable containers selling at \$2.98 each. Testing Systems, Inc., Glenside, Pa. 19038.

SHOPPING WYNTH GUNS

RE-LIVE THE EXCITING MO-MENTS of that great hunting trip in the comforts of your own home. Being able to show friends and family the highlights of your trip is part of the fun. The new DeJur Electra 650 Super 8 movie camera is rugged



enough to withstand even the roughest terrain yet take crystal clear movies without stoppages or lens adjustments. Automatic Reflex Power Zoom with Chromatar f/1.8 color corrected power driven zoom lens. Takes the standard Super 8 film cartridges for quick and easy loading. Other features are slow motion and normal speeds, receptacle for house current operation, and battery charger.

For movie viewing, the DeJur Eldorado 84F features a brilliant quartz halogen projection lamp for 100% brightness with stop-action viewing,



The 84F can show both Super 8 and regular 8 film spliced together with no adjustments! Instant start and stop for single frame viewing. Enjoy up to 30 minutes of uninterrupted movie enjoyment. Comes in self enclosed carrying case. Cameras from \$104.95, projectors from \$129.95. DeJur-Amsco Corp., Dept. G-12, Northern Blvd. at 45th St., Long Island City, N.Y.

SPORT-LORE's "Voice of the Deer" was the first modern adaptation of an old Indian DEER CALL ever offered to American sportsmen. The flutter in its tone is why it sounds like a deer to a deer. Bucks all over North Amer-



ica answer to its call. Complete Kit \$2.00; Record, "How to Call Deer", \$1.25; Diagrams, "How to Hunt Deer", 60¢. For more information, write Sport-LORE, Inc., Dept. G-12, 1757 Cherry St., Denver, Colo. 80220.

TO TAKE THE EFFORT out of loading BB guns, the M.G. Bauer Company has invented an EZZE BB gun loader. The loader, compact, automatic and easy to use, was developed to make BB gun loading easier.



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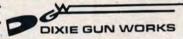
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FAJEN GUN STOCKS

(Continued from page 39)

results have been better than expected, and this includes handling, feel, accuracy and the ability to control recoil. The stock is sleek and relatively light, with the finest finish I have ever seen on a commercially produced rifle.

This is Fajen's first move into selling complete rifles rather than stocks only. The "ACRA" rifles come in the following calibers: .270, .30-06, .243, .22-250, 7 mm Remington Magnum and .300 Winchester Magnum. They have been built using the classic Or-

berndorf Mauser action design and have been fitted with diamond lapped barrels for the finest accuracy.

So, if you like your stocks wild and glossy or classic and dull, Fajen has a stock for you or a complete rifle. If you are really fussy, you can buy a barrelled action and stock it yourself with one of Fajen's best. In any event, it's good news for the American shooter and I suggest you mail two dollars to Reinhart Fajen, Inc., Dept. G, Box 338, Warsaw, Missouri 65355 for their latest catalog.

BERETTA

(Continued from page 28)

feel. However, since shotgun triggers are pulled abruptly, not squeezed off, a small amount of creep is not detrimental to good shooting in the field.

Most handloaders who shoot doubles cast their ballots for a non-ejector gun; manual removal of those precious hulls seems to be preferred over searching for them in weeds, grass or what-have-you. Full extractor travel for the GR-2 is ½" and this is adequate for easy grasping of shell heads, though another ½" would probably speed things up. The camout action is provided by a pivoted piece on the fore-end iron, but on closing the action the extractor must necessarily drag down the action face.

The test gun "breaks" not without some effort, but this stiffness is normal in a new gun and can be expected to fade with use. One of my colleagues reported that the safety on his GR-2 had a tendency to balk. Mine worked perfectly. Fact is, my test shooting has not been marred by a single malfunction. The first batch of handloads that was run through came out with pierced primers-every one of them. It was thought at first that possibly the firing pins were either too long or too pointed. However, trials with several other brands disclosed that those first primers possessed metal that was decidedly on the soft side.

And speaking of pierced primers, the action face of the GR-2 is vented for gas escape—a feature which few doubles have.

The Garcia dope sheet describes the fore-end as a semi-beavertail design. With a length of 9" and a width of 2½" at its broadest point, it is large enough to be functional, yet small

enough not to be ostentatious. A bit short for the really long-armed characters, perhaps, but most will get a good handful of wood for pointing control and the absorption of some recoil without the need for contortion. Recessed in the belly of the wood is a roll-type release, serrated for easy manipulation.

A quality, straight-grained piece of European walnut was used for stocking my test gun. It is medium in color, smoothly finished and filled, and carries one of the modern, plastic-type finishes. Some find these glossy jobs a bit too flossy, but you have to admit that they do a mightly good job of sealing out the weather. Most of them, too, seem to stand up fairly well under the usual assortment of knocks that a field gun receives.

The stock is nicely proportioned, with a fairly full comb that is not likely to act hostile toward one's cheekbone. Grip is of the semi-pistol style and rides comfortably in my hand. Checkering on both the foreend and the grip runs about 20 lines per inch (not die-impressed), and that's a good compromise—pleasing enough in appearance, yet not so fine as to be non-functional. The work is not flawlessly executed, due to some minor border run-overs, but it is about as good as you will find on a gun in this price class.

The mating of wood to metal is top-drawer at the stock jaws and around the upper tang. But, alas, there is room for improvement on either side of the trigger plate. Here a piece of paper of .004" thickness can be slipped between wood and metal.

Barrel exteriors are free of waves and dips, are smoothly polished (yes,

even that section between the barrel flats and the fore-end loop) and carry a rich blue-black finish, as does the frame (including action face and flats). Bluing imperfections, sometimes found along the rib gutters of imported doubles, are totally lacking. All markings on the barrel and action flats are cleanly stamped. Triggers are left in the "white," as are the barrel

A moderate amount of scroll and floral engraving adorns the frame, and this ornamentation is not what I would call sloppy work. It's good. But if it is the decorative touch that makes your blood race, then you'll probably want to move up to the GR-4 at \$325 with its Windsor grade of artistry; although I have yet to see fancy engraving that did anything in the way of delivering better patterns or upgrading one's own proficiency.

When I finally got out to the pattern range with the GR-2, I found barrel alignment to be right on the money at 40 yards. Pattern centering in the vertical plane calls for seeing about 3/16" of rib, and although some cross-shift in pattern centers between the two tubes was noted, it is far too small to warrant a second thought.

These barrels on the GR-2 are as good as you'll find. They start as a solid, forged billet of "chrome-moly." Following drilling, boring, reaming and choking, they are lapped, polished and then Magnafluxed to reveal any hidden imperfections. After a final polishing, the bores are tested with an air gauge to make sure that they are as near perfect as can be for inside diameter.

Incidentally, an extra set of tubes is available for any of the GR series of doubles. Those for the GR-2 run \$137. factory fitted.

A check with my TMI dial caliper gauge disclosed a bore diameter of .725" for both tubes, this being about par for 12-ga. guns of European manufacture. Chokes are of the conicalparallel type and run about 23/8" in length. Muzzle constriction for the right barrel (modified) is .021", while the left tube (full) has .037". The variation in roundness at the muzzle is less than .001" for both tubes.

With some of the handloads that were tried the barrels delivered patterns in agreement with the designated amounts of choke. With others, they did not. (See pattern test summary.)

There is really nothing unusual about sizeable variations in pattern efficiency between different loads, and it can be considered more a virtue than a fault-particularly if one set of barrels is to be handed a potpourri of gunning chores that might run the

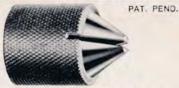
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Box 1133 Twin Falls, Idaho 83301 gamut from close-range upland work to long-range water-fowling. And while it may be emphasizing the obvious to point this out, through judicious handloading you can just about write your own ticket in terms of pattern performance.

For the late-season pheasant busting with the GR-2, I leaned heavily on 29.0 grs. of N/2020 behind 1¼ ozs. No. 7 chilled, using Herter's Shaped Charge plastic wad in conjunction with a plastic shot wrapper to prevent lead fouling. (See handload data.)

Another handload that was used

loading out of the GR-2's modified tube, indicating patterns that were probably running tighter than 60 per cent. According to the Du Pont tables, this prescription moves out at 1,295 fps and cooks up chamber pressure a bit over 10,000 psi.

Weighing in at 7½ pounds (empty), the GR-2 can be pegged as something of a compromise. It is not too heavy for upland work, nor it is too light for run-of-the-marsh waterfowling. With the 1¼-oz. high-speed loading, for example, recoil sensation is still a long way from the blood-and-thunder

HANDLOAD DATA

Load: 19 gr. Norma 2010/11/8 oz. No. 8 MV: Approximately 1,200 fps Remington plastic target shell Remington #97 primer Alcan UNISLEVE "A" (50 lbs.) 8-point crimp Crimp space: 15/32" to 1/2"

Load: 32 gr. AL-7/I 5/I6 oz. No. 6
VELOCITY: I.263 fps at I2 feet
CHAMBER PRESSURE: 9,600 psi
Federal Hi-Power plastic shell
220 Max-Fire primer
Herter's VANDALEE — 3/4" x
11/4-oz. shot cup

Zero seating pressure 6-point crimp Crimp space: 7/16"

Load: 29 gr. Norma 2020/11/4 oz. No. 7
MV: Approximately 1,330 fps
Federal plastic low-brass shell
Remington #97 primer
Herter's SHAPED CHARGE
plastic wad with 5/16" 20-ga.
filler wad (50 lbs.)
Plastic shot sleeve, 11/4-oz. size
6-point crimp
Crimp space: 7/16"

Load: 32 gr. AL-7/1 5/16 oz. No. 7
VELOCITY: 1,263 fps at 12 feet
CHAMBER PRESSURE: 9,600 psi
Federal Hi-Power plastic shell
220 Max-Fire primer
Herter's VANDALEE — 3/4" x
11/4-oz. shot cup (cup slit)
Zero seating pressure
6-point crimp
Crimp space: 7/16"

Load: 23 gr. Green Dot/11/4 oz. No. 71/2 MV: Approximately 1,220 fps Federal plastic low-brass shell Federal 209 primer Champion PELLET PROTECTOR (Zero lbs.) 6-point crimp

6-point crimp Crimp space: 7/16"

Load: 28 gr. Norma 2020/11/4 oz. No. 6
MV: Approximately 1,300 fps
Western AA plastic target shell
WW209F primer
Alcan AIR-WEDGE
5/16" Feltan-Bluestreak (50 lbs.)
Plastic shot sleeve, 11/4-oz. size
8-point crimp
Crimp space: 7/16"

sparingly, but which did an equally fine job out of the GR-2, consisted of 28.0 grs. of HP-164, the other components being identical to those used for the 29/N-2020 loading.

Neither of these two handloads has been run through the lab, so I cannot give you the story on ballistics. However, they are definitely in the highvelocity class and there has been no evidence of excessive chamber pressure in the several guns in which I have used them.

A third handload which giftwrapped a few China birds, but was not pattern tested, consisted of 1½ ozs. of No. 7½ shot pushed by 27.5 grs. SR-7625, using the G57F primer and Power Piston wad (# 23694) in Remington high-brass SP plastic hulls. This proved to be a very deadly

level, and this shot charge weight will cope with a lot of duck busting.

The amount of recoil that can be handled is largely a personal thing, and it varies considerably among shooters. Some will be able to feed the GR-2 a steady diet of short magnums and smile all the way through. Others will not.

For the recoil-sensitive waterfowler with a real need for the 1½-oz. loading, and occasionally a few pokes with heavier charges, the Garcia-Beretta GR-3 in magnum persuasion at eight pounds represents a more practical choice. The 3-inch chambers and the selective single trigger add another \$20 to the ticket, but if that extra gun weight puts the kibosh on a budding case of flinchitis, it's a double sawbuck well spent.

The Guns Magazine -



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Bolt Jeweling

Could you please give me any information on jeweling a bolt? A stepby-step procedure would be greatly appreciated.

> Thomas C. Papa Brooklyn, N. Y.

Write the B-Square Engineering Co., Box 11281, Fort Worth, Texas for prices and information. They can furnish a bolt jig for calibrated turning, the steel bristle brushes and the jeweling grit impregnated compound. I use their small brushes entirely, and in the beginning, wrap the section near the ferrule with nylon thread to prevent undue flaring. The thread will wear off as you progress, using the brush chucked into a drill press at high speed. In the beginning allow the brush to run for at least 5 seconds in each position with medium pressure. After the brush shapes itself with wear about 3 seconds in each position will suffice. You start down the bolt. moving your compound drill press vise (into which the jig is locked), just enough to overlap each jeweling spot a little short of the center eye (jewel). Your next row of spots is likewise overlapped into the first row. as well as individually within its own row. A little practice and you will be amazed .- W.S.

Manufacturers Dates

Could you advise me on how to get the manufacturers dates on my collection of about 20 handguns, most of which are Colt's and Smith & Wessons.

> E. Franklin Carteret, N. J.

I would guess that your best bet would be to pick up books on Smith

and Wesson and Colt firearms such as Colt Firearms by Serven and Smith and Wesson Revolvers by Parsons . . . they should give you a very good idea as to mfg. dates.—R.M.

Brazilian Beretta

I recently purchased a Beretta .25 Jetfire made in Brazil. I would like to know if there is any difference in the model from Brazil compared to the model from Italy, in regards to material, workmanship, and any other factors.

L. D. E. San Jose, Calif.

The Beretta factory that was established in Sao Paulo, Brazil about 1965 manufactures only 22 and 25 caliber pistols. The quality and finish of these guns is equal to those made in Italy.—s.b.

I have been told that my 1910/22 Bergmann pistol in 9mm Bayard will successfully handle both 9mm Luger and 9mm Browning Long, Could you please comment. Is there any other available ammo which would be suitable?

> Wes C. Bisbing Brigham City, Utah

Your Bergmann M1910/22 pistol is chambered only for the 9mm Bergmann-Bayard cartridge. The 9mm Parabellum case is much shorter than the B-B, therefore, sets up a condition of grossly excessive headspace which often results in ruptured cases and blown primers. The 9mm Browning

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Long is also shorter than the B-B but is semi-rimmed and will sometimes headspace correctly on the rim. However, it is loaded to lower pressure and velocity than the B-B and will often not cycle the Bergmann action. In addition, it often fails to feed correctly from the magazine.

Assuming that the cartridge head recess in the face of the bolt of your pistol will accept the larger rim of the .38 ACP and .38 Colt Super Auto cartridges, they will function correctly and reliably in this model.

Both are currently manufactured and widely distributed in this country.

Scope Shims

Due to improper drilling, it appears necessary that the bases for my scope mounts be shimmed in order to center the scope on the rifle. Will hard paper shims last or can metal shims be used to advantage?

Richard A. Klein Brooklyn, N. Y.

I would suggest metal shims, Brownell's Gunsmith's Mart. Montezuma. Iowa, can supply shim kits which every gunsmith should have. The beauty of these assortments is that most any thickness that may be required is right at his finger tips. However there is nothing wrong with cutting shims out of tomato cans or any other metal material of required thickness. Paper, if oiled, will do, but metal is better.-W.S.

the fact that this weapon was worth more than the list price of an identical alloy framed model in current production.

> Cpt. Eugene N. Neigoff Fort Hood, Texas

Let me answer the question regarding the value of a steel-frame Smith & Wesson M39 pistol in this way: I have been attempting to obtain a specimen for my own use and was recently offered one in used condition at a price of \$400. The lowest price 1 have been able to obtain on a specimen in NRA good or better condition has been \$250. Therefore, I would say that for this model with steel frame in NRA good or better condition, the minimum current market value is \$250. A specimen in better condition is worth appreciably more, perhaps as much as the \$400. mentioned above .-

Powder Flask

I have a black-power flask made of brass. I think it is a twelve ounce type. It is stamped on the top with the firms name which is Dixon and Sons. Would you please send me any information on this item.

> S. O. Keane Auckland, New Zealand

Your Dixon and Sons powder flask is a very common English made brass powder flask. There really isn't too much information on same without a picture of it to know the type and model it is. Value for same if in good or better condition would be approximately \$25 to \$35.-R.M.

S&W Model 39 Value

I am writing you in an attempt to obtain an independent expert's evaluation of the value of a steel-framed Smith and Wesson Model 39 9mm pistol, unfired and in factory-new condition. This pistol was stolen from the "Secured Storage Area" of a US Air Force Material Air Transport Service contract flight from Bien Hoa, Republic of Viet Nam to the United States.

I need your reply to substantiate

Howard Rifle

I have a rifle (pictures enclosed) that I can't find described in any of the references I have available. Can you tell me anything about it? If you can, please tell me also the reference book(s) you found it in.

The rifle is approximately 44 caliber, and some of the action parts are marked "706A". The left side of the barrel is marked "C. Howard, Pat-



ented Sept. 26 and Oct. 10, 1865 and Oct. 28, 1862." The right side of the barrel is marked "Whitney Arms Co., Whitneyville, Conn." The gun has extractors so apparently used a metal cartridge. The gun is loaded from the bottom. The chamber is located just ahead of the trigger guard-cocking



and extracting lever which has a pivot arm just ahead of the trigger guard. The barrel is 24" measured from the base of the chamber. The gun is in excellent condition.

> Chester C. Wilt Hemlock, New York

Patented in 1864 it was designed by The Howard Bros. of Whitneyville, Conn. Over the years I have seen Howard Rifles made by Foster Arms Company of Taunton, Mass, and also a few made by the Whitneyville Arms Company. Single shot, caliber .44 Rim Fire, it was used only as a sporting rifle and never adopted by the government. From your pictures your Howard Rifle looks to be in excellent condition and would serve well to any collector as a representative American single shot rifle. Collectors value in your picture condition should be about \$150 .- R.M.

1909 Colt

I have a 1909 .45 cal, double action Colt New Service Model. On the butt is "USN" with an anchor and 45 DA under it. It has a very fine blue job that is original. It has the usual lanyard and on the left side is the rampant Colt. Could you help identify this piece and place a collector's value on it?

Roy A. Spangler Daytona Beach, Fla.

Your Navy, Model 1901, 45 Colt New Service revolver was Government issue between 1909 and 1911. While not as rare as the Marine issue. your gun is considerably scarcer than the 13,906 issued the Army; in very good condition it should bring \$125-150.00 from a serious collector.-S.B.

.44 Caliber Hopkins & Allen

I have a .44 cal. shotgun made by Hopkins & Allen. It is a single shot rolling-block action. I am writing to find out if it would be safe to convert this gun to .22 Hornet. If not I would like to convert it to .22 cal. rimfire. Where could I get a .22 RF breechblock to fit this action?

> Clark Ryndak Athens, N. Y.

Your .44 caliber Hopkins & Allen rolling block shotgun is probably worth far more just as it is than it could ever be via any conversion. It is doubtful if you could locate a .22 breech block to fit it. You would have similar problems with a Hornet caliber, and I'm frankly not able to tell you if or not it would be safe with a Hornet cartridge, My personal feeling is that it would be a shame to mess it up with any conversion attempts. I for one, wouldn't think of undertaking it. -W.S.

Model 1891 Argentine Mauser

Recently I purchased an 1891 Argentine Mauser Model I, Y, or L, I can't quite make it out. Is there any chance this type of weapon was used by Germany during WWI?

> Michael Christian Wayne, Michigan

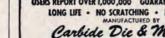
The Model 1891 Mauser rifle was manufactured in considerable quantity for Argentina well before the beginning of WWI. The M1891 was not a standard rifle in use by the German Army during WWI-however, it is not beyond the realm of possibility for such guns on hand at the factory to have been requisitioned and placed in limited service by the German Military Establishment. There is no way to confirm such a happening, but it is possible. Generally speaking, though, the M1891 with Argentine markings was not used outside of Argentina.-G.N.

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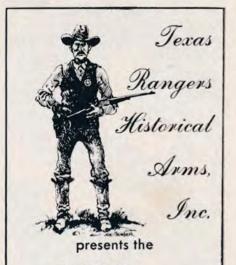
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BASICS OF SCOPE MOUNTING

(Continued from page 25)



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can be long gone before he shoots. Different makes of rifle actions vary enough in design that installation of each kind of mount must be considered carefully before trying to put a particular mount on a particular gun. Very few sporting goods salemen realize this and quite often even the gun owner is unaware of this, until it is brought to their attention.

The average factory or custom built rifle is made with a length of pull (trigger to stock butt or recoil pad) of 131/2 inches. This is about right, and satisfactory for most shooters. Even if it is a bit off for their particular size and build, most of them can adjust to this length. However, the scope should be positioned correctly for their particular hold. Most every one has their own way of aiming and holding a gun. Some just naturally seem to stock crawl and some hold rather far back on the stock.

Most modern scopes are made with a bit of variation in eye relief, about 23/4 to 31/2 inches. However, many shooters do not get the eye to within 5 inches of the rear scope eye-piece when the gun is in their natural shooting position. Others have a tendency to get the eye up too close, and this can result in a kick in the eve and sometimes quite a cut, especially if they hold the gun a bit loosely.

Very few gun owners and not many gunsmiths or stock makers can tell you just what is the general distance from the rear eye-piece of the scope to the butt of the stock. This distance varies from 111/2 to 131/2 inches for different shooters. I am about average in build and I shoot my light recoil varmint rifles, with scopes set at 111/2 inches. My hunting rifles are usually at 1134 to 12 inches. A man with a long neck and long arm reach may really need a 13 inch setting, and a woman shooter will most often need an 11 inch setting.

In order to clarify all this for the readers I'll cover the steps of an actual installation of a scope. First, you should determine if a certain type scope and mount can be installed on this particular rifle, with the ocular end of the scope in a proper position that enables the shooter to get a full field of view when the rifle is in shooting position. I do this on my own rifles by using a ruler or tape to check the distance from the ocular glass to the butt of the rifle. I like a mount that allows some leeway here. Since I want the distance to be 1134 inches on my big game rifle, I would prefer a

mount which permits the scope to be set from 111/2 to 12 inches distance, from rear eye-piece to stock end. If you prefer a longer setting such as 13 inches, be sure your mount and scope can furnish this length.

After the mount is selected, the top of the action under the mount, the mount holes that have been drilled in the action, and the mount screws should be thoroughly cleaned with a solvent. Now put some Lock-tite or it's equivalent on the mount screws and a small amount in the holes in the action. The screws are then tightened down very firmly, using a well fitting screw driver that is the full width of the screw head. This is where most everyone considers the job as finished. Not so. All screw threads are somewhat rough. To properly "set" them, take a flat bottomed punch, about the same size as the screw head, hold it vertically and solidly against the head of the screw and give it one good solid blow with a one pound hammer. Now tighten the screw again. Usually it can be tightened from an eighth to a quarter turn. This setting and tightening is what really makes the mount stay put. The Lock-tite sets up in a few hours or overnight. If it is necessary to remove the mount screws after the Lock-tite sets, use the punch and hammer the same way. Just one blow breaks the seal of the Lock-tite and it's easy to remove the screws.

Select rings for the scope so that you can position it correctly. I put the rings on the scope and draw the screws up loosely and then install the scope on the mount. After tightening the ring-to-base screws snugly, I loosen the rings and slide the scope to the position that I feel will give the best eye relief with a natural hold. Here again is where many shooters adjust their hold and shooting position to the scope, instead of adjusting the scope position to their natural hold. To check this, put your gun up to your shoulder, in a natural shooting position, but keep your eyes closed. Now, open your eyes and look through the scope. You should get a full field of view but still have the right amount of eye relief from the scope.

Now level the cross hairs of the scope and tighten the scope ring screws. If all this sounds quite complicated you'll find out it is really quite easy and doesn't take much time. A scope mounted in this manner is going to stay put even under very hard usage, and it will most certainly

help anyone in improving their shooting ability.

To adjust the ocular piece (focus) on your scope to your own individual use, point the gun at a clear sky or large white cloud. Adjust the eve piece until the reticle is sharp black and clear cut. This should be the correct setting for all normal shooting distances. Next, I use a collimator to set the scope reticle so that point of impact is on the target at 100 yards. There a number of makes and types of collimators available, from around \$24.00 to about \$40.00. This is one piece of equipment that saves time and ammunition and it is also very useful for sight checks in the field.

Although you may use the collimator to set the scope approximately on target, you must finish accurate sighting at the bench. Scope adjustments vary from ½ inch per click to 1 inch.

Every hunter seems to have a personal preference in the elevation of his shots above zero at 100 yards. I like mine from 1¾ to 2½ inches. In checking guns used by many of our hunters we found most of them try to sight in too high. They do this to compensate for the "long" shots they may get. Actually, a 20-year check of hundreds of our Wyoming hunters kills show that about 85% of the average game is killed under 225 yards. Sighting in for the 15% at longer ranges doesn't make much sense.

The average big game rifle sighted in at 21/4 inches high at 100 yards is dead on at 200 yards; some guns vary from this average. After collimation I always try my first shots at a target set 27 yards from the muzzle. In the "average" big game, scope-sighted rifle, the bullet is just crossing the line of sight at that point and will rise high enough to be about 21/4 inches high at 100 yards. To get my sight adjusted as correctly as I can, I do make as many corrections as necessary on this 27 yard target, so that my shots are as nearly centered on the vertical line as possible to get them, although the horizontal dispersion is a bit off yet. This 27 yard distance seems to be just right for my .270's and 7 mm Magnums. Some guns require a 25 yard check, others even 28 or 29 yards.

Final checks for sighting in should be 3 shot groups only, with plenty of time for cooling the barrel. There is no particular reason for a hunting rifle to shoot 5 or 10 shot groups, although there is nothing against it. The rifle should be sighted in with the loads that you will use for hunting. Different weight or shaped bullets often shoot to an entirely different point of impact. Handloads usually shoot quite differently from factory loads.

This morning a friend of ours who is going to British Columbia this fall came by to have me work up some handloads for his 7 mm Magnum. His principal objective is a Big Horn ram and he may also get a shot at a goat and a grizzly. He had some 175 grain handloads and wanted some good 160 grain loads.

I carefully weighed out 20 loads and used 160 grain Sierra bullets, set out to just clear the lands by \$\frac{1}{16}\$th". These loads chronographed on my Avtron at 3140 fps. I advised this young man to take only the 160 grain loads and use these for all his game kills. His group shots were right at 1 inch at 100 yards but 3 inches high. I warned him that with this sighting most shooters have a tendency to overshoot at the 150 to 180 yard range and this would be intensified shooting up or down hill. At shorter ranges he would have to hold a bit low.

The use of just one bullet weight will simplify things for him and allow him to become more familiar with his rifle and how it performs. The 160 grain weight is a nice compromise for this caliber for all round use.

I have heard that the definition for "luck" was, "when preparation meets opportunity." I think this is quite correct. This hunter has made the proper preparations. His equipment is right and he is ready. Now all he needs is the opportunity and he will have his "luck."





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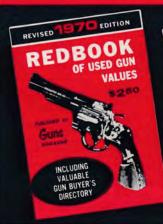
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