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IN RECENT WEEKS, we have seen our elected representatives in Congress pass laws banning the sale of firearms by mail order, and we must ask ourselves several questions.

1. Why can't politicians say what they mean? For years we have heard them say "We need some kind of control of the sale of firearms." Yet-at least to my way of thinking-there is a vast difference between control and outright ban.

2. During the Dodd hearings in 1964, and in the Ways and Means hearings in the House at a later date, many legislators asked why the two Federal laws, which have been on the books since 1938, had not been enforced. The Treasury Department, which was responsible for enforcement of these laws, led the committees to believe that they would get a report on enforcement efforts, yet none was forthcoming. Why should Congress think that Treasury will do a better job now than they did before?

3. Why must all gun owners be classified as being pawns of, or brainwashed by, the NRA? With one million members, the NRA still has little or no influence over the rest of the 20 million gun owners in the U.S. Why can't the news media believe that 19 million people have minds of their own, and as much a right to "lobby" as the members of the NRA?

Just received a letter from Bill Schumaker, our Gunsmithing editor, which reads as follows:

*

* *

"I got into this pro-gun fight so deep here, a lot of people asked me to run for state representative." Enclosed with the letter was a card; "William (Bill) Schumaker, Republican candidate for State Representative." Bill is running as representative of District 2-B in the state of Washington, and we wish him much success.

THE COVER

Pictured on this month's cover is FitzGerald's .38 Special Colt Single Action flat-top, made especially for him by the workmen at Colt's. Note the extra long grips and special sights. This gun, serial #154334, is in the collection of David Brown of Albuquerque, N.M., along with an authenticating letter from Mrs. J. H. FitzGerald.

OCTOBER, 1968 Vol. XIV, No. 8-10

George E. von Rosen Publisher



CONTEN

FEATURES

special . .

THE .38 SUPER vs .45 AUTO	. Mason	Williams	22	
J. H. FITZGERALD				

color features . . .

.22 RIFLES OF YESTERYEARKingsley P. Karnopp	44
COLT POCKET MODELPoster size for framing	48
A TRIO OF PELLET GUNSDan Winter	50
FREE GUN DRAWINGAlpine Supreme rifle	

technical . . .

RARE LUGER CUTAWAY MODELSRalph E. Shattuck	25
TAMING SHOTGUN RECOILClair F. Rees	38
SEEING THE INVISIBLE	42

shooting . . .

THE SHOTGUN SLUGCol. Charles Askins	28
NEW WINCHESTER MODEL 70Les Bowman	30
CHOOSING A SHOTGUN BATTERYClair F. Rees	36

shorts . . .

WHY I SHOOT Stuart Watkins	53	
U.S. ACCOUTREMENTSLyle Reedstrom	58	

DEPARTMENTS

Crossfire 10	Point BlankCol. Chas. Askins 70
Questions & Answers	Shopping with Guns
Handloading BenchGeorge C. Nonte 16	New patentsAugust Tiger 84
Our Man In WashingtonCarl Wolff 21	Shooters Club of America
PulliDick Miller 54	Index of Advertisers
Gun Rack	The Gun Market
Jerome Rakusan	Les Bowman
Charles L. Willson	Jon KaufmanPromotion Manager
Col. Charles AskinsShooting Editor	Sydney BarkerArt Director
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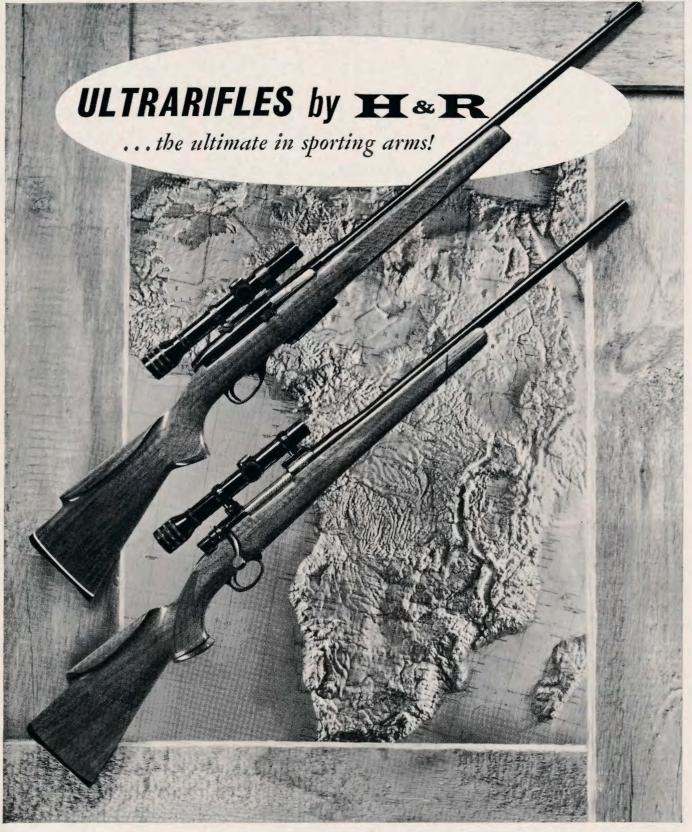
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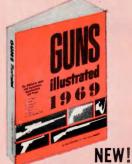
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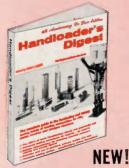
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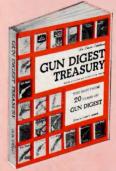


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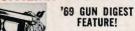
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y Norman B. Willsey '69 GUN DIGEST FEATURE!

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Some remarkably fine guns are made in Spain today. Proof? Many of Madrid's live bird shooters—and that's rough, tough com-petition—use them, O'Connor describes the better doubles.

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DITTO DATA by John Wootters keeping.

WILDCATS & TABBYCATS by Charles Hood, 11 The area of gentle cartridges offers a real opportunity for useful wildcatting. If you need a hotshot you can grab one off the shelf.

EXPLODED DRAWING

Gras M 1874 by Richard A, Hoffman This limm rifle-a good design for its day -was carried by many French troops. A Zouaye is pictured.

AMERICAN REVOLVER

SAFETIES by Dewttt Sell If you think only automatic pistols have man-ually operated safeties, you're mistaken. A number of early revolvers had them, and many of today's double-actions have hidden "safeties." This comprehensive piece de-scribes them fully.

WHY AIN'T GUN RITERS AKURATE? by Henry M. Stebbins Usually they are—but in some cases, as de-valled here by a longtime terror of the type-writer, error does creep in, and rarely is a retraction published. That's the basic pur-pose of this article—not to cast stones. If our yoal was to be hypercritical, we'd get as many lumps as anyone, as is proved herein.

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Air acountry where big stags about. Air ArM AMMUNITION by L. Fanta The air rifle today—in its competition or match version—is a far, far ery from that BB gun you shot as a boy, and the modern, pre-cision-made pellet is responsible in good part for the booming air rifle success story. Here's a concise history of air gun projectiles.

AUXILIARY CARTRIDGES Dy George A. Hoyem A most interesting and fully illustrated his-tory of these now scarce substitute cartridges, used in the past for small game and pest shooting from big game rifles.

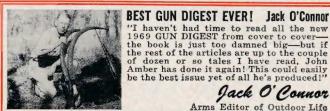
EXPLODED DRAWING French Ordnance Revolver,

Model 1892 by Richard A. Hoffman The official French sidearm until 1935. An officer of the oid regime is also pictured.

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Pachmayr's new "Presentation model" basket weave design, shown above, is the latest in recoil pads for rifles and shotguns. Available in 3 colors and sizes. Price \$7.50. See your favorite dealer or write for details of this and other Pachmayr recoil pads for rifles or shotguns, field, trap or skeet use. All "White line" recoil pads are guaranteed a lifetime against faulty workmanship or material.

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CROSSFIRE

More AK-47 Comments

I recently finished reading Maj. Geo. Nonte's article on the "Mysterious AK-47." While stationed in Viet Nam I watched with interest the change over of V.C. small arms. In the early months of 1966 it became obvious that the V.C. were being well supplied with the latest in Soviet type small arms, mainly the AK-47. Many of the GI's had praise for this weapon and its capabilities.

Being somewhat cautious, I was hesitant to praise the weapon as others had done. After handling the weapon I found myself in agreement with the comments Maj. Nonte has made. The excessive weight and the lack of a final round hold-open device seemed to detract from the hasty praise so many had given the AK-47. Thanks for a fine article and an excellent magazine.

> Robert Anderson Newark, New York

Browning Hi-Power Updating

While the facts in the "Browning Hi-Power Pistol" article (July '68) remain unchanged since the article first appeared in 1957 there are a few additons and corrections to be made.

First, the identification of the photos on p. 22 should read as follows:

Top Left: Inglis-made Canadian Army Model

Top Right: Inglis-made Chinese Model

Center Left: Belgian-made "Occupation" German Army Model. (Hammer and grips non-characteristic, probably butchered).

Center Right: Pre-War Belgianmade Military Model

Bottom Left: Post-War Belgianmade Civilian Model

Bottom Right: Belgian-made Magazine. Inglis-made clips have different base plates. Second, since this article first appeared, one additional variation should be recorded. This is the currently manufactured Belgian-made Civilian Model. While I have never examined one of these closely, nor have I ever field-stripped one, the extractor has been modified to resemble that of the Browning .380 ACP pocket pistol. Previous runs of this model had an extractor closely duplicating that of the Colt .45 auto-pistol.

A. S. Mactavish Montreal, Canada

Himmler or relmmiH

In reference to your article "Evolution of Firearms;" it is just possible that fat old Heinrich was left handed and had a special Walther constructed for himself. However, I doubt that he would have appreciated having his name spelled backwards. Plate #9 was obviously printed in reverse.

W. Hooper Lake Bluff, IlL

What you witnessed in that photo was a phenomenon we in publishing call a "flopped photo." The printer neatly managed to print it from the wrong side. We understand the printer is now working on a process whereby he can turn a photo inside out. In combination with the "flopped photo" technique this should produce some very curious effects.—ed.

New Fast Draw Club

A new fast draw club has been formed in Boonville, Indiana. Its name is the Peacemaker Fast Draw Club and the address is P.O. Box 83, Boonville, Indiana. We presently have nine charter members and would enjoy having more.

Often imitated... never equalled! The Weatherby Magnum

When you blaze a trail you can always expect someone to follow in your tracks. And they always make camp where you did and try to cook up something by poking through the coals you left behind.

The high velocity trail was blazed by Weatherby when no one else dared go in that direction. And today you see little puffs of smoke rising along the way from followers who are trying to catch up now that they've caught on.

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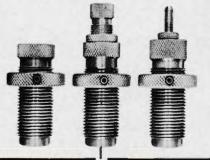
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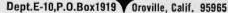


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Panel of Experts

-The Guns Magazine ·

Engraved Merwin, Hulbert Revolver

I have a revolver marked "Hopkins & Allen" on top of the barrel. It is fully engraved, has ivory grips, a lanyard ring and is in mint condition. I have seen many Hopkins & Allen guns but none like this one which opens by pressing a button on the front of the trigger guard. Another button on the frame, when pushed in, turns the barrel 1/4 turn counterclockwise and then, when pulled forward, extracts a cartridge. I would appreciate any information you might have on this gun.

> Karl Jackson San Jocinto, Calif.

The gun you describe is a Merwin, Hulbert Revolver not a Hopkins & Allen. If your gun is marked as a Hopkins & Allen it is a revolver made by them for Merwin, Hulbert & Co., dealers in firearms. A firearm in fine condition and factory engraved would bring about \$350 or more.-R.M.

M-95 Mauser To .30-06

I have a model 95 Mauser in 7x57 which I have made into a sporter. It has a Timney trigger and the bolt turned down and inletted to the stock. I would like to know if this action can be barrelled up to .30-06 or bigger. Some say the M-95 action won't stand the pressure.

> **Robert Edmiston** Eugene, Ore.

Model 95 Mauser actions are generally not considered adequate for .30-06 class cartridges. Since you have a surplus military action, a model 98 Mauser could be obtained for very

but the cartridge feeding can be more of a problem. Besides its possible questionable ability to handle these calibers, there are other undesirable features, like cocking on the closing of the bolt, etc. For the additional cost of about \$12.50 the M-98 is more than worth trading for. Leave your M-95 as 7mm or like cartridge.-w.s.

little more. Then there is no question

about it being ok. With some selec-

tion, we build up 7mm and .300 Win.

Magnums on the M-98's. The M-95

probably would handle the pressure,

Mexican .22 Full Auto

I recently spoke to a friend who lived in Mexico for six months. While there he happened to see a Mexican made .22 automatic which he says could be fired semi- or, full-auto by the use of a selector switch.

He took pictures of it but as yet I haven't seen them. The name (and this is what has been told to me) is "Trejo." It bears an apple emblem, the words "Tipo Rafaga" and Pat. No. 50921 Model No. 1."

No one around here has ever heard of this type of firearm and no material has been found in any text on handguns.

This could be a cute baffler for your panel of experts.

> M. V. Rancich Whiting, Ind.

The Modelo 1 Trejo is a product of Armas Trejo, Zacatlan, Puebla, Mexico. The head is Mr. Angel Trejo; their Trade Mark is a red apple with Trejo superimposed. The word "rafaga" indicates a gun capable of fullautomatic fire. Your friend is right; (Continued on page 14) .

> GUNS . OCTOBER 1968

A QUORUM OF EXPERTS AGREE ON FRANCHL

FRED STURGES: Editor & A Shooting Instructor

B BOB STEINDLER: Editor & Author

B

- PETE BROWN: Arms Editor Sports Afield C
- COL. CHARLES ASKINS: D Noted Firearms Authority

Fastest "The action is quick. Real quick. I really get that second shot out there in a hurry with my Franchi."

Smoothest "Smooth as can be ... that's how I'd describe the Franchi action. No hesitation . . . just sure, fast subsequent shots."

Lightest "It's so light I really swing into action quickly, even feels light after trudging the fields with it all day."

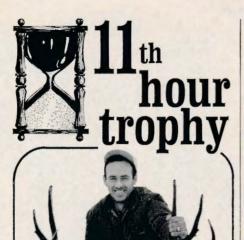
The Franchi Automatic was designed for the discriminating shooter. It's beautifully balanced, very light, and has a uniquely smooth action. The barrel is the finest a shotgun can boast of . . . the best quality chrome molybdenum steel, which is then hard-chrome lined for an ultra-smooth bore. The Franchi Automatic is made in 12-and-20 gauge, Standard and Magnum, with interchangeable barrels and a 5-shot capacity. A Dynamic-12 Heavyweight Model is also available, as are ventilated rib barrels for all models. Lightweight Model at \$159.95. Heavyweight Model at \$169.95. Ventilated rib models and deluxe models at extra cost.



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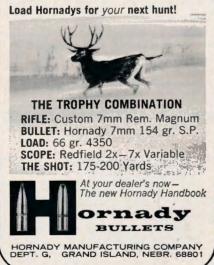


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Heavy late season snow storms kept Passmore from finding the big trophy buck he'd come to hunt near Bondurant, Wyo. Then, on the last day of his hunt, he spotted this magnificent mule deer, belly-deep in snow atop a ridge.

"As the buck headed down for better feeding grounds," writes Passmore, "there was no doubt in my mind that this was what I had been looking for. It took only one shot at 175-200 yards to put this guy down." One Hornady 7mm and his record class trophy never moved again. "I have never seen anything go down with such suddenness."



(Continued from page 12)

PANEL OF EXPERTS

the Modelo 1 is a .22 caliber pocket pistol that has a selector and is capable of conventional semi-automatic or full-automatic fire as desired by the user. Also made are the Modelo 2 Especial (a larger version of the Modelo 1) and the Modelo 3; the 3 is .380 caliber and semi-auto only. The rafaga types (1 and 2) come under the National Firearms Act (as well as the "machine oun laws" of most States) and are very rare in the United States. In general outline, the guns resemble our Gov't Model .45 autosomewhat smaller with a less angled grip.-S.B.

Loading Down .338 Win. Mag.

I am interested in purchasing a .338 Magnum rifle. Can you tell me if this rifle can be handloaded to use on small deer?

Due to the area that I live in I feel the .338 is a great gun except many hunters think it is too large to use on small deer. I don't want to buy a different rifle for each type of game in this area due to the cost of a good arm.

What calibers do experts recommend?

Thomas Hansen Kitchikan, Alaska

Certainly you may load the .338 Winchester Magnum down for use on small deer. In your particular area of the country this is certainly a better course of action than buying a light rifle and attempting to use it on heavy game. I think you will find the Speer 200-gr. Spitzer bullet an excellent choice for light game. A modest charge of 50-52 grains of IMR 3031 powder will produce 2600-2700 fps with this bullet in most .338 rifles of standard barrel length. This is sufficient velocity to give a reasonably flat trajectory and the bullet is still traveling approximately 2200 fps at 200 yards. To drop the velocity any lower than this will result in poor expansion. Other powders may be used for the same purpose, at a charge of 57-gr. of IMR 4895 or 56-gr. of 4320 producing approximately the same results. My personal recommendation for an allaround rifle to be used on all Alaskan game would be the .338 Winchester Magnum.-G.N.

Building a Replica

I am a muzzleloading shooter and amateur gunsmith who would like to build a replica of a Harper's Ferry Model 1807 flintlock pistol. To date I have been unsuccessful in obtaining drawings or even good photos of this beautiful pistol. Can you supply me with information as to sources of working or three-view drawings of this and possibly other flintlock and percussion pistols and rifles. Even a fairly large, clear photo would be a help.

> H. S. Polson, Jr. Palos Park, Ill.

Some of the best line drawings I have seen on military firearms are in the book "U.S. Military Firearms" by Major James E. Hicks. All are line drawings, done to scale by Andre Jandot. The Harpers Ferry pistols are done in three sides and also a cutaway showing the working parts. This should be of great help to you in building a replica. Write to James E. Hicks & Son, Publishers, 4704 Vineta Avenue, La Canada, Calif.—R.M.

.38 Spcl. To .357 Mag.

Can a Colt Cobra .38 SpcI. with a two inch barrel be converted safely to handle the .357 Mag. cartridge? If so, what must be done and whom could you recommend to do it?

Sam Harrison Los Angeles, Calif.

For the most part gun manufacturers do not recommend converting standard caliber revolvers into magnums. In some cases of course it is practical, and a lot of it has been done. I don't have the exact cylinder dimensions of the Colt Cobra, but from the mechanical angle cylinders which are long enough to accommodate the .357 magnum, need only to be reamed deep enough for it to chamber. There are however other factors, mainly cylinder and frame strength. You might contact the Colt Mfg. Co., Hartford, Conn. The Christy Gun Works, 875-57th St., Sacramento, Calif.-95819, can probably give you a reliable answer-and/or also do the work for you.-w.s.

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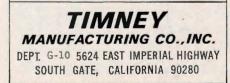
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HANDLOADING BENCH

By MAJ. GEO. C. NONTE

I T SEEMS THAT thousands of Japanese 8mm Nambu pistols, mostly the Type 14 that resembles the Luger in outline only, were brought to this country around the end of WWII. The 8mm Nambu cartridge is an odd one, never manufactured outside of Japan. After the end of the war, it was not produced there, either. In addition, it seems to be about the only pistol caliber that hasn't been available in quantity from surplus dealers.

For these reasons, Nambu owners haven't been able to do much shooting. During the 1950's, at least two small companies tooled up to produce 8mm Nambu cases and ammunition. One turned the cases from solid brass on screw machines, then necked them down. This is perfectly acceptable at conventional pistol cartridge pressures. The other firm apparently used drawn brass cases. Both ceased production after a short time, so there is still no factory-loaded 8mm Nambu ammunition available today.

Several case-forming and handloading solutions exist. The Nambu case is bottle-necked and rimless, measuring about .408" at the head and .860" long. No existing rimless pistol case matches that diameter, but the *rimmed* .41 Long Colt does. In my opinion, the best Nambu cases are made by turning off the .41 caliber rim and cutting an extraction groove in the head; then, resizing and trimming to length. Cases thus formed, function perfectly and have long reloading life.

Another solution is to shorten and resize .25, .30, or .32 Remington *rimless* rifle cases. They must also be neck-reamed and carefully annealed. Unless annealed, the hard, thick brass will crack or split—sometimes on the first firing. Case capacity is less than original brass or that made from .41 Colt cases, but presents no problem.

While I prefer the first mentioned case, this method can be used by the average handloader without recourse to a lathe. Only a full-length 8mm Nambu die and neck reamer are required, aside from some sort of trimmer and a torch for annealing. And, as a last resort, a twist drill can be used for reaming.

If you'll stick to light loads, another solution is possible. The .38 Colt Super Automatic case has a rim .403" in diameter and a head about .385". This is .020" undersize for the Nambu chamber. The amount of expansion that occurs in firing is more than normally considered allowable. However, with a light load, no gun or shooter damage will occur even if an occasional case does split. In my own experience, somewhere between five per cent and seven per cent have split with 4.0 grains of Bullseye and a 100-grain .320" lead bullet. Most guns function well with 3.5 grains of Bullseye which seldom splits a case.

If you are willing to accept some split cases and a short reloading life, this is the simplest solution. Just resize .38 Super (or .38 ACP) cases in an 8mm Nambu die. Your gun may accept the resultant case without trimming, but for some, it must be shortened to .860". Incidentally, this can also be done with .38 AMU cases, but more splits will result because of the thinner brass; and, trimming is required.

Now and then, we get complaints that bullets properly cannelured for a specific purpose are not available. The plaintiff may be loading for use in a tubular magazine and have trouble with bullets shifting under recoil or be may just like to crimp all his loads. Because of all the different depths to which bullets are likely to be seated, it simply isn't possible for the makers to put cannelures where they'll suit everyone. In fact, for most uses, cannelures aren't at all necessary.

If you must have cannieures, get a S.A.S. canneluring tool from Shooters Accessory Supply, Box 205, North Bend, Oregon, and roll your own on smooth bullets where you want them. This device costs \$7.50 at last report, (Continued on page 18)

GUNS . OCTOBER 1968

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Dent. 1038-K

HANDLOADING BENCH

(Continued from page 16)

is easy to use, and is adjustable to suit most calibers and weights of bullets.

If you have trouble with bullets receding into case necks when used in tube-magazine rifles, there's another solution. Lyman formerly sold what was called a "Shell Indenter." Built somewhat like a pair of pliers, it was used to make a ring of dents around the case neck. Bullets were seated to rest on the dents and could move no farther into the case.

You can make a similar tool from a pair of needle nose pliers. Grind one jaw to enter the case neck with about $\frac{1}{16}$ " clearance. Grind a piece of hacksaw blade to match the curve of the neck, making it long enough to reach $\frac{1}{8}$ to $\frac{1}{4}$ around the neck. Solder this at right angles to the other pliers' jaw. File a notch in the first jaw to match it.

Now, slip a case over the grooved jaw and close the pliers. The neck will be indented between the jaws. Two or three equally spaced dents will support most bullets, but by overlapping several a full cannelure can be formed. A stop can be added to the pliers' jaws to insure uniform distance of cannelure from mouth.

Once so altered, cases can be resized in the usual manner, but a standard expander button can't be used. It will iron out the indents or bulge the case. Neck expansion will have to be done separately, and only down to the indents.

Lord only knows how many wildcat caliber rifles have been built in this country or how many of them still exist as they were made. Scores, perhaps, hundreds, of wildcats have risen, seen popularity, then faded from the scene. Often these old (and some not so old) rifles turn up in the hands of an expectant new owner but without loading data. That can be a real headache unless one has an extensive library of the older books and periodicals in which data can be found if one digs deep enough. Of course, if this happens to you, you can always write this column and leave the digging work to us.

Today's loading manuals and books don't list the older, lesser-known wildcats. If they did, they'd be four times as thick as they are now. So, what to do if you turn up a bargain in a .276 Dubiel, .22 K-Magnum, .334 OKH, 7mm Express, or .350 G&H Magnum? Simple. Get yourself a Powley Handloader's Computer from Marian Powley, 17623 Winslow Rd., Cleveland, Ohio, for \$3.50. Take time to study the instructional booklet accompanying the simple slide-rule device. Once you've done that, less than five minutes will give you a so-called "optimum" load for each bullet weight and the gadget will also tell you what velocity to expect. Powder type and charge can be read directly from the scales. Loads so calculated will be in the under-50,000 psi range, thus, safe in any modern bolt-action gun in good condition.

There isn't space here to go into the whys and wherefores of the Powley Computer; suffice to say, it does work and can save you days of research and correspondence when it comes to loading data for old wildcats.

Don't ever do what I did one day last Fall. I'd taken the heavy barrel 6x45mm Sako out to shoot a few groups. The cases had been loaded quite a few times, some were rather well chewed up about the rims, and all were past due for full-length sizing.

About round No. 10, the bolt didn't want to close completely on the car-(Continued on page 20)

Portland, Oregon 97225

OCTOBER 1968

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You get what you pay for in our gun's receiver. We could machine stamp it from sheet metal. It would be cheaper. But we don't. Each Model 37 receiver starts out as a 7½-pound block of steel. It's milled, broached, drilled down to a mere 1½ pounds. You'll never wear it out. You get what you pay for inside our receiver. Breech block, hammer, slide, firing pin. Ours are all machined or dropforged from high-grade steel. Some famous-name shotguns are filled with production-line castings or stampings of these parts. Pump their action and you can hear stampings clash with stampings. In your Model 37 you'll hear a solid ka-lack! as steel meets steel.

You get what you pay for in our Roto-Forged® barrel. First, it's hot-forged from bars of high-tensile steel. Then stress relieved. You never see an Ithaca with a hooked barrel.

Even with all its solid steel forgings and machined parts, our 12 ga. model weighs only 6½ lbs. The 16 ga. is 6 lbs; 20 ga., 5¾ lbs. We call them Featherlight.®

With Ithaca's exclusive bottom ejection, empty shells, burned powder, gas go straight down. Protects you and anyone alongside. Dirt, rain, snow stay out of the action. There's no such thing as a standard stock on a Model 37. Each one is hand fitted to the receiver. You never see a gap where stock and receiver meet on our gun.

The Model 37 has hand checkering on stock and fore-end. The receiver is handsomely engraved. The stock is rich American walnut. The whole gun has a soft highlight finish. Handle a Model 37 at your favorite sports shop. At \$109.95, it's a bargain. Ithaca Gun Company, Inc., Ithaca, N.Y. 14850





(Continued from page 18)

tridge. "No real problem," says I, and jammed the bolt handle down by brute force figuring to go ahead and fire that round—after which the case would extract without too much trouble.

But right then, strange people moved into the impact area and I couldn't shoot. Neither could I get the bolt open to clear the gun. Worse yet, I had an appointment elsewhere that couldn't be missed and had to leave before the range cleared. This meant I had to place the loaded and cocked rifle in its case and drive through town with it in the car—not only unsafe, but highly illegal and certain to irritate any gendarmes who might become aware of the situation.

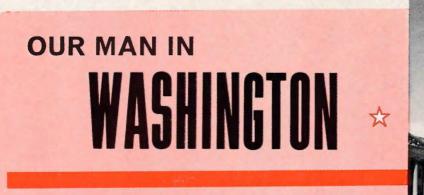
That night I pulled the extractor through the rim of the case trying to open the bolt. After that, there was nothing left to do but drill out the bullet, pour the powder out through the barrel, then drive the offending case from the chamber. Hours wasted, not to mention voluble profanity expended.

None of this would have happened if I hadn't violated one of the rules I preach—try every case in the gun before loading if it hasn't been resized full length.

Several handgunners have written about reloading the 7.65mm French Long cartridge for use in M1935 pistols. Most French ammunition is steel-cased and all is berdan-primed. It can be reloaded, utilizing top .32 ACP loading data. Save yourself a lot of trouble by shopping around for a box or two of .30 Pedersen ammunition. It will work fine in the gun; the cases are brass and take standard small pistol primers. Hoard the cases with care, though, for this cartridge hasn't been produced since 1919 and is getting scarce.

The French 7.65mm Long cartridge is a bit of an enigma. Adopted by the French Armed Forces in the early 1930s for the Mle. 1935 series autoloading pistols and the unusual M.A.S. 38 submachine gun, it is not used in any other weapons. Large numbers of the pistols are now being sold in this country, along with steel-cased, berdan-primed ammunition. The guns will last forever, but when the surplus military ammunition is shot up, there isn't likely to be any more. From then on, it will be handload or don't shoot-unless some importer can persuade Gevelot to load fresh ammunition.

I've reloaded the steel French cases, but it isn't worth the effort. Primer (Continued on page $\delta 2$)



By CARL WOLFF

During June and July, Congress has received more mail on gun legislation than ever before on a single subject. Various proposals before the Congress reflect the division of opinion that exists in the country and on Capitol Hill. Only a very few lawmakers are saying we need no more law.

There are already many gun laws on the books, including the Title IV of the Crime bill which replaces the old Federal Firearms Act. (See the August issue of GUNS.) This measure provides for the registration of all guns purchased from licensed federal dealers. It also bans the interstate shipment and out-ofstate sales of handguns.

A total ban on all guns is in the final stages of enactment at this writing. The only thing that can stop it is antigunners pushing for the registration of all guns and licensing of owners. That too is pending before both the House and Senate Judiciary Committees. And, there is still another set of bills awaiting introduction that would amend and upgrade the old National Firearms Act. Only a few lawmakers have seen the bill to amend the National Act. Just what new laws we will have when Congress closes is up in the air.

And, there are the State laws. Fortynine States and the District of Columbia now have laws affecting the carrying, purchasing, or owning of guns. Four States require gun registration. Nearly all States and many, many municipalities are currently examining their laws and regulations in light of the pressures for more law.

Chances are that when Congress closes, all sales of so-called mail order guns will be stopped. And all out of state purchases of guns will be stopped. Legitimate sportsmen who may have need to purchase a shotgun or hunting rifle in a State other than his own will not be able to do this. If you move from one state to another you will be in violation of the law if you take your guns along. If you have a gun outside your state you will not be able to take it home without violating Federal law.

Already, you will not be able to do the above things with handguns when Title IV of the Crime bill becomes law in December. There is still another law pending. The importation of military type handguns will be stopped also in December. The additional law would make the date effective in August.

The President, by special message to Congress, has recommended legislation which would require registration of all firearms and licensing of gun owners. In urging the Congress to pass this bill, the President cited the present system of registering automobiles, boats, bicycles and of licensing fishermen, hunters, and drivers. He did not point out that these registration and licensing examples are all functions of State and local government.

It is at the State and local level if at all, that the question of registration should be decided. The Federal government has neither the policing authority under the Constitution nor the policing capability to administer and enforce national registration and licensing laws. Is the President in favor of the creation of a national police force?

Congress should not go beyond the banning of shipments of firearms into States in (Continued on page 64)

SUPER VS. AUTO

A comparative study of two popular handguns as to their hunting and combat effectiveness

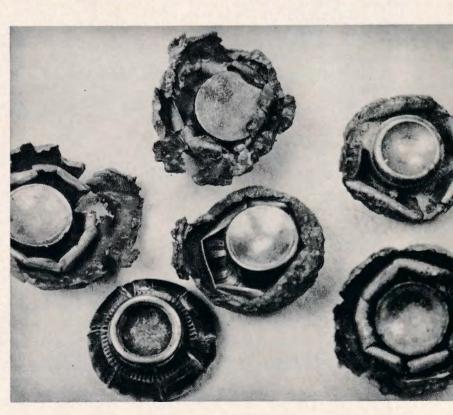
By MASON WILLIAMS

IN THE PAST two years I have written several articles on the Colt Model 1911 cal. 45 ACP pistol and on the Colt cal. 38 Super ACP pistol and their respective cartridges. In these articles I have made comments as to their respective potentials and the resulting letters from readers have proven to be both interesting and challenging so that in this article I would like to take each pistol and each caliber and examine precisely what may be expected from factory ammunition and from handloaded ammunition. This divides the article into two parts, the first dealing with factory ammunition and the second part dealing with handloads in these two calibers.

I wish to state that whatever data is given refers only to its use in my particular Colt Model 1911 Commercial cal. .45 ACP pistol and my Colt cal. .38 Super pistol. My pistols are heavy, all-steel handguns that can handle both factory loads and handloads and while I have fired many of the handloads in the Colt Commander I cannot recommend this practice. If you own a Colt Commander and wish to use the handloads listed below, drop all powder charges at least fifteen per cent to arrive at a starting load. I further recommend the use of a recoil buffer for both the Model 1911 and for the Commander as manufactured by Alton S. Dinan, Canaan, Connecticut. Dinan's buffers reduce the recoil shock of the slide against the frame. I cannot recommend the use of these handloads in foreign handguns that are manufactured under entirely different standards of quality



The .38 cal. bullets above and the .45 ACP bullets, right, show the type of expansion that provides good target stopping energy.



control than the fine Colt pistols turned out in Hartford, Connecticut.

I have no intention of delving into the Match Target aspects of either cartridge because this has been done by Alton S. Dinan and other top shooters for many years and would contribute nothing towards showing the combat and hunting potentials of these cartridges. Both the cal. .45 ACP and the cal. .38 Super cartridges are ideally suited to the hunting of big game and to furnishing Law Enforcement Officers with remarkably potent handguns and ammunition using today's reloading components or purchasing this type of high velocity ammunition from leading custom firms. For the man who must shoot factory ammunition, he will find it to be superbly consistent, accurate and meeting all standard specifications but woefully lacking in its ability to transfer mechanical energy into physical energy as we will see below. The following firms shipped their ammunition to me for these tests:

> Winchester Remington

Norma Federal

I chronographed all velocities myself using my Avtron Transistor chronograph with the tapes spaced precisely five feet apart and the handgun muzzle four feet from the first tape. I used the Colt Model 1911 pistols for all firing and I did not use any "special" devices of any kind. I purchased a bag of clean, dry playground sand for the expansion tests. Bullets were fired into this sand from a distance of approximately five feet. I ran the penetration tests using my frame that holds sixteen, one foot square, half inch plywood panels securely within a rack. The moment any individual panel had five holes in it, I replaced this panel

6 panels

7 panels

7 panels

1099 FPS-493 FPE

1032 FPS-472 FPE

1031 FPS-472 FPE

0.671

0.685

0.711

Caliber .38 Super Colt Ha	Indloads
1 IBAC 100 grain 0.357 SP bullet	10 panels
CCI Standard primer	0.674
8.5 grains Unique	1616 FPS—580 FPE
2 NORMA 116 grain 0.355 SP bullet	16 panels
CCI Standard primer	0.621
8.0 grains Unique	1467 FPS—554 FPE
3 IBAC 120 grain 0.357 SP bullet	11 panels
CCI Standard primer	0.843
8.0 grains Unique	1474 FPS—555 FPE
4 SPEER 125 grain 0.355 SP bullet	11 panels
CCI Standard primer	0.713
8.0 grains Unique	1439 FPS—575 FPE
5 HORNADY 130 grain 0.356 full jacket bullet	14 panels
CCI Standard primer	0.609
7.5 grains Unique	1397 FPS—564 FPE
6 IBAC 140 grain 0.357 SP bullet	10 panels
CCI Magnum primer	0.659
7.8 Herco	1153 FPS—413 FPE
Caliber .45 ACP Handl	oads
1 IBAC 180 grain SP bullet	8 panels
8.0 grains Unique	0.650
CCI Standard primer	1024 FPS—417 FPE

- 2 HORNADY 185 grain SP bullet CCI Standard primer 8.0 grains unique
- 3 IBAC 200 grain SP bullet 8.7 Herco CCI Magnum primer
- 4 IBAC 225 grain SP bullet 7.5 Herco CCI Magnum primer

Temperature averaged between 18 and 23 degrees above zero during the chronographing. Readers may adjust if they wish. with a new one so that all tests were kept reasonably constant regardless of whether the ammunition was fired at the beginning or at the end of the penetration tests.

Velocity Tests Factory Ammunition

.45 ACP		FPE
Brand A	867 fps	386 FPE
Brand B	858 fps	377 FPE
Brand C	839 fps	358 FPE
Brand D	861 fps	378 FPE
.38 Sup. ACP		
Brand A	1267 fps	465 FPE
Brand B	1279 fps	471 FPE

During all of the firing tests the air temperature averaged around 21 degrees above zero so that readers may adjust velocities if they wish.

The velocity figures with their resulting FPE figures for the cal. .45 ACP are so close that there is little to choose from. Buy a box of commercial .45's and your velocities will run about 850 fps. The same holds true of the cal. .38 Super velocities that would appear to average out at around 1270 fps. Based on these velocities, it would further appear that the .38 Super has a definite edge insofar as stopping power goes based on the Foot Pounds of Energy figures. But is this so? I have had many letters on this subject and I believe that it warrants serious discussion.

The larger the bullet caliber the slower the velocity with a resulting loss in bullet penetration as shown by the penetration tables. The larger the caliber the greater the initial impact shock due to frontal area and bullet weight. Based on this thinking, the cal. .45 should have considerably greater practical stopping power than the .38 Super.

The above reasoning is qualified by the simple fact that bullet performance plays an important part in converting the mechanical energy inherent in the bullet into physical energy that is closely tied to stopping power. In other words if a bullet, caliber .452, enters an object and remains cal. .452 throughout its penetration of the object and then comes to rest within the target only a fraction of the mechanical energy has been transferred to the target. How much? Let's check out the expansion of the factory cal. .45 and .38 Super full jacketed bullets. Full jacketed. (Continued on page 82)

By RALPH E. SHATTUCK

A S A LUGER COLLECTOR for twenty years and a fancier for some years more, it has been difficult for me to understand why Georg Luger found it necessary to employ any sales tool in the merchandising of the immortal Luger pistol. But, as a salesman for a large steel company, I can appreciate the value of a product sample coupled with an excellent working knowledge of that product.

SXI

Thus was born the Luger cutaway. Although used primarily as a sample to be displayed and demonstrated to Luger's prospective customers, the

The DWM cutaway is unique in that it has a removable barrel. This is from the collection of the author.

RARE LUGER CLITANAY



LUGER CUTAWAY

cutaway was also used as an ordnance instruction tool in World War I.

Only a few of these prize pieces were manufactured—no records have been unearthed as to the exact number produced—and even fewer have been recovered by collectors. I am aware of the existence of only five cutaways at the present time.

The cutaways were manufactured at three factories—Mauser, Simson, and DWM. They were taken from the production runs and were functional and mechanically excellent. Although some bore serial numbers, some were produced without numbers; all were proofmarked. Some were originally test pieces and then later converted to cutaways; an example of such a piece is the Mauser shown—note the UB on the chamber. The Simson shown bears no serial number, although I have seen one numbered Simson cutaway. The DWM cutaway is proofed and numbered, bears the



manufacturer's name, and is the only cutaway with a removable barrel. While the Mauser and Simson cutaways do not show their respective producers' names, the manufacturer can be determined by the proofs.

Every cutaway possesses a minimum of at least thirteen cuts; the maximum number of cuts—seventeen—are to be found on the Mauser. The finest finished cuts are borne by the Simson; those on the DWM rank second.

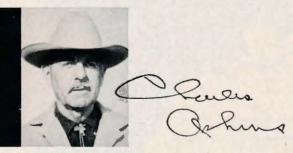
There is contention in some quarters with regard to the existence of a 1900 cutaway; although there is no evidence to support the denial of such a piece, I have no personal knowledge of a cutaway of this vintage.

It is difficult to place a value on these rare collection pieces. However, my closest estimate is that an original factory cutaway would command a price of upward of \$1,000.00 on today's market with the value increasing as years go by.



THE SHOTGUN SLUG





By CHARLES ASKINS

A MULTITUDE of deer stalkers hunt with the scattergun. Most of them live in those states where the smoothbore is mandatory. We ordinarily think these venison hunters are all east of the Mississippi but this isn't altogether true. Oklahoma insists that her huntsmen quest for the wily whitetail with the shotgun. In this western state the forested areas are open and scattered and shots are very often far too lengthy for buckshot. The natural choice is for the slug load.

No one knows, of course, what the percentage is between those Dan'l Boone types who swear by the buckshot and them as uses the slug. I'd reckon that buckshot gets the nod. This doesn't mean it is better, it simply indicates that the blue whistlers have been around longer and get the nod because of this longevity. As between the two the slug is better for all around useage. However, there are circumstances, as where the swamp is so dense you can only see fifty feet ahead,, when the big multi-pellets have a certain edge.

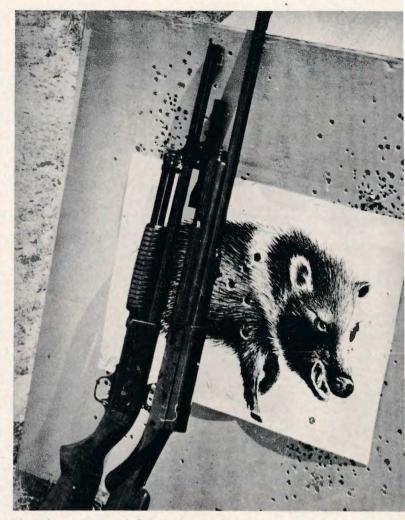
At 50 yards, a 12 gauge pump repeater or autoloading smoothbore equipped with a short handy 1.5X scope, will put five consecutive slugs into a five-inch circle. The 400-grain (one oz.) leaden projectile has a velocity of 1186 feet per second at the target and it delivers up a wallop at 1370 ft. lbs. at the distance. The buckshot, firing the heaviest pellet, the No. 00 which runs nine to the load in 12 gauge, will be going 1068 feet per second and each pellet will hit with a force of 136 ft. lbs. at 50 yards. Firing from a benchrest at the full-size silhouette of a whitetail deer at 50 yards, ten shots, the 00 buck gained an average hit total per shot of 4.3 pellets. Now, ordinarily we consider that the vital areas of the whitetail run about 14x16 inches. The 4.3 hit average did not always fall into this 14x16 lethal area but was strung all over the animal target. The average energy per shot was 584.8 ft. lb.

The same pump repeater or autoloader, bored improved cylinder, and with the same low-power scope (any power is OK, it is simply better to keep the magnification low to gain more field of view) at 75 yards with slugs will shoot groups of 9.5 inches, and at 100 yards the slugs can be held inside the vital areas of the buckskin target. Groups will run 11 to 13.5 inches. Beyond 100 yards the slug shooter gets in the same class with the buckshot aficionado—maybe he hits but more likely he misses!

The 12 gauge slug, best choice, weighs as an average of from 394 grains to 409 grains with the manufacturer trying to hit 401 grains. It is made of purest lead and has 14 lands and grooves about its surfaces. These are anywhere from .014" to as much as .024" in depth and have an angle of rifling, right hand, from 9 degrees to 15 degrees. Some of the makers like to claim that these helical ribs impart a slow lazy rotation to the projectile. I have daubed the 2 o'clock side of the slug with red paint and fired it through a series of baffles out to 35 yards and somehow or other my slugs haven't got the word. I can't get 'em to commence that spin.

This doesn't seem too important because the huge globule of lead has accuracy enough for all practical purposes traveling just like it does now. It has a walloping big cavity in the base end and this keeps it nose on. The nose is solid and it is one of the ballistics facts that a light butt end simply cannot get ahead of a weighty prow. I've banged off scores of slugs at 200 and 300 yards and other than a lot of visible wabble and sometimes considerable yaw the 400-grain dollop of lead is still traveling head first as evidenced by holes in the target.

The 12 gauge slug measures all the way from .665" to .690" and this sometimes makes for a rattling good fit in the twelve gauge barrel which may be as tight as .690" in full choke and as open as .735" in full cylinder. You can appreciate that if you happen to fire one of the .665" balls in a barrel that is .735" that accuracy may be pretty much on the sour side. Again if you happen to get a big slug that runs .690" and you bang it off in one of the old guns that was choked to .690" then the fit is going to a tight squeeze through that muzzle! Slugs are swaged and not moulded and after manufacture are poured like peanuts into hoppers for loading. The bases are mutilated and seldom indeed do you find one that is round. Set a big bullet up on the table and you'll find vertical variations from 3 degrees to as much as 18 degrees. This base must rest on the over-powder wad once the projectile is dropped into the shell casing and if it does not rest evenly and flat on the wad it will enter the bore out of axis with the center line of the barrel. This causes it to bang into the forcing cone and puts a flat side (Continued on page 64)



The Ithaca pump, left, is equipped with a scope; the Browning, right, has a "slug barrel" and iron sights.



The 12-ga. slug at ranges under 50-yds. is deadly on bear, but over 75-yds. would probably miss the target.

FOR ABOUT 27 YEARS, the Winchester model 70 was considered to be the ultimate in what a sporting rifle should be by a large percentage of gun users. Actually, it was a greatly improved version of the 12 year old Winchester model 54, which was also a pretty superior rifle at the time it was brought out.

In the late 1940's various competitors of Winchester began to redesign and change the basic concept of the bolt actions that had been copied from the Mauser. These designs incorporated many new safety features not in the original Mauser design. The deeply recessed bolt face, shrouded bolt head, new and far simpler extractors, and new ejectors, were just a few of these improvements. A matter of some importance also was the fact that these new actions were much easier to make, requiring less hand fitting and all the work could be done on modern machines. This greatly reduced the cost of production.

Looking back now it seems strange that the big arms companies were as slow as they were in modernizing their products and methods of merchandising. The numerous changes made in actions by some of the gun companies proved to be agreebly acceptable to the buying public and sales picked up accordingly.

Although the big arms companies made design changes in the actions they did not make any changes in their gun stock designs and custom gunsmiths and gun stockmakers had been making and installing better designs in stocks on factory made rifles for quite some time. The demand for these stocks steadily increased. The stock designs on the factory rifles were not attractive, awkward to hold and shoot correctly, and all seemed to transfer the recoil of the rifle into a "kick" effect that is quite disagreeable to most shooters and which also ruins accuracy and shooting pleasure.

As there was thousand of surplus guns being remade into sporting rifles by custom gun makers and quite a demand in having factory rifles restocked, the number of good custom gunsmiths increased immensely. New ideas in gunstock shape and styles developed rapidly and the better gunsmiths were making rifles easier and more pleasurable to use, as well as being much better to look at. My personal opinion about the factory made stocks put on the Winchester model 54 and the model 70 as well as those on the Remington

THE 'NEW' WINCHESTER M.70

Als Broman

By LES BOWMAN

721 and 722, was that if a designer had been hired specifically to make as bad a stock as he could, he had certainly succeeded. In those days the first thing I and many others did when we got one of the new rifles was to either restock it ourselves or have a custom stocker do the job. Actually we would buy a new rifle just to get the barreled action and then spend more or as much as the rifle originally cost to get a good stock put on it—One that had looks, shape and good handling qualities to it.

New design changes in actions adopted by several of the arms companies were followed by a definite change in stock design too. Competition became more active and old designs that had required a great deal of handwork to finish were discarded and newer, easier to make ones adopted.

Four years ago Winchester announced a complete change of the old model 70 action. It was brought out in a new design that equaled any on the market as to simplicity, strength, smoothness, and ease of manufacture. They also made a very definite change in stock design and shape. I have no idea who was responsible for this stock but it seemed to have all the faults of the one that was used on the old model 70 for so long, plus an attempt to make the barrel full floating by putting a gap between barrel and stock. This not only spoiled the entire looks of the rifle but allowed dirt, snow and rain free access.

In the following two years some slight stock modifications were made but these included no really big improvement. Then, last December, Winchester presented the latest change in the model 70 rifle at the Gun Writers Seminar held in Italy. Some small changes were made in the action. A rib that works in a slot in one bolt lug eliminates binding when the bolt is worked rapidly. The action has really been smoothed out, the bolt is jeweled and now it works slick as glass. The exterior of the action and barrel is very smooth and the blue-black finish has a soft, rich looking satin gloss to it, instead of the old shiny look. The magazine follower is now made of highly polished stainless steel that allows positive and free travel of the cartridge from the magazine well to the chamber. However, the real big change, and one that I consider most important, has been made in the stock on this new model 70 Winchester.

This new stock is definitely the finest in design, looks, shape and feel that Winchester has ever offered to the public. It is most certainly the equal of the best grade of custom stock work. The purchaser of one of these new rifles will have no need of restocking in order to get a gun he enjoys shooting.

The lines of this new stock are graceful with grip and cheek piece comforming to the best in custom stock design and workmanship. The grip is far enough rearward so that the trigger guard does not hit the finger when the gun recoils. For myself, I like a 41/2"diameter grip, but the 47/8" grip on this stock seems to fit the average hand quite well. The curve of the grip allows a natural hold and proper hand placement for good trigger feel.

The Monte Carlo comb is of excellent shape, round and thick at the top and sloping down and in toward the front, eliminating the jar of recoil to the face. The stock is fairly straight with just enough drop at the comb to



The reworked M71 features a superb stock design, smoother action, jeweled bolt and smooth metal finish.

allow free removal of the bolt, and with only $\frac{3}{4}''$ drop at the heel. This feature reduces muzzle jump a great deal and prevents a lot of the "kick" effect being transferred to the shooter.

The entire stock is well modeled. There is enough wood left in the forend to give to it good feel to the hand but not so much as to make it bulky. It will fit into a saddle scabbard quite well. On the .30-06 model I have for testing, the grip cap is steel and butt plate plastic. I would prefer a rubber butt plate on this caliber for my own use. The floor plate is of steel and the trigger guard is an alloy.

The finish on this stock is very probably a synthetic, yet it looks like one of the best hand-rubbed, oil-finished jobs. It has a soft satin look to it that I really like and it should wear well. I am positive there will be no flaking to this finish. A combination of scattered diamond and positive point impressed checkering is used. The pattern is slightly recessed in much the same way a good custom stockmaker would do with hand checkering, although it is actually done with heat and pressure when the imprint is made in the wood.

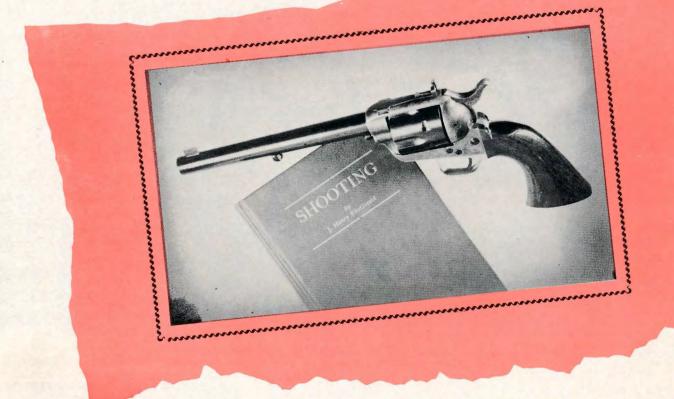
Open sights are standard and can be removed quickly and easily by removing two screws in each sight. The stock is of proper height for using a scope and the open sights are the right height to allow proper mounting. The receiver is drilled and tapped to accomodate both scope mount or receiver sight. The one piece of equipment on the rifle that I don't care for is the fixed sling rings. I would replace these with Quick Detachable studs and swivels. I often remove the sling when carrying a rifle in a saddle scabbard, but also want to (Continued on page 61) be able



Bob Thompson took a huge black bear with the scoped and redesigned M71.

'SHOOTING'

By J. HENRY FITZGERALD Excerpts and Editorial Comments by E. B. MANN



Fitzgerald was nothing less than a "wizard" with the handgun

IT HAS BEEN SAID of many men that "He was a legend in his own time." Among pistol shooters of pre-World War Two vintage, J. Henry Fitz-Gerald was a legend in his own time, and is still a legend, in *two* fields of gun wizardry: for his shooting, which was fabulous, and for his artistry with tools in making fine guns shoot better.

Of course Fitz, like other great gunmen, was the victim of numerous gross exaggerations. Stories are told of his shooting that exceed even his powers; and I have heard men tell, too, how Fitz "took a damned old coarse file" to the sear or trigger-notch of a fine handgun, "made half a dozen or so swipes at it, and it shot better than it

32

ever had!"

Fitz never "took a damned old coarse file" to the vitals of any handgun. He loved handguns, and he hated gunbutchers. True, his files were likely to be old; he says in this book that "a number six Swiss file about half worn out" is a prize to be cherished for gun work. But they were not coarse, and they were not damned. They were blessed; blessed with the magic skill of Fitz's loving hands and life-long practice. Fitz was one of those rare craftsmen who could file a square edge or a flat surface on gun steel. They never made many who could do that, and they make fewer now.

Fitz was a Colt's man, and to him,

"shooting" meant handgun shooting. Hence the title of this book; and if you exclude rifle and shotgun shooting, the book covers the waterfront: Target shooting (plinking and competitive), defense or combat shooting, revolver shooting (single and double action), shooting the auto-loaders, exhibition and aerial shooting, fast draw-plus chapters on such related subjects as gun selection, gun care and repair, handgun history, handgun masters past and present-not to mention dissertations on firearms forensics (bullet wound evidence, identification), and police methods. After all, Fitz was "half cop:" Inspector-Instructor New York State Police School, 11 years; Member

National Identification Association; Member New York State Police Chiefs Association; qualified Expert Witness on firearms subjects, veteran of some 265 trials and 1500 consultations relating to arms and ammunition.

Fitz would never have described himself as a writer, although he wrote considerably. His writing style approximates what Fitz would have said in a friendly face-to-face discussion-which is not a bad style; many writers might do well to study it. His work is dated. naturally. by gun models and loads and scientific methods not known in Fitz's era. But you finish each paragraph with a clear knowledge of what Fitz thought on that subject; and much of his thinking is as pertinent today as it was when he wrote it. As, for example, some of his comments about the civilian "right to own and bear arms," and the need for guns in self-protection:

"If the good citizens of our country knew how to handle firearms properly, crime would decrease by half. Our present firearms laws in many states so restrict the use of firearms that the honest, law-abiding citizen does not care to comply with the regulations and red tape required to own a revolver or pistol, yet how else can he protect his home? What greater assurance does a crook need than the fact that he knows not one house in fifty is protected? He carries a revolver to protect himself against the honest citizen and the police, and he will continue to carry a revolver as long as he has his liberty regardless of any law that will ever be passed. Many of our known gangsters are carrying permits to carry firearms. How come that our respected citizens cannot get permits as easily as the crook?"

And again: "Instead of discouraging the practice of home protection, one hundred dollars reward should be given by the town or city to any householder who will turn over, dead or alive, a burglar caught in the act of robbing a house. This would soon discourage many of our present-day amateur crooks."

Sounds familiar, doesn't it? And Fitz's further prescription toward solving the problem might have come straight out of the Bill recently offered by Congressman Casey of Texas:

"Should the time ever come when the law-abiding citizen (could) carry firearms, and the crook caught with a revolver or pistol in his possession in the commission of a crime was due for a life sentence, what a wonderful world this would be!"

Fitz was a fast-draw addict, recommending it both as "a fascinating sport" and as "the recognized system of protection used by proficient police officers throughout the land." Being "a



A display at Colt's shows but a few of the targets Fitz punched in his time, and the various handguns that were worked by his masterful hands.

COLT'S PATENT FIRE ARMS MFG. CO.

J. HENRY FITZGERALD ABAS TRUTING DEFABILIANT

'SHOOTING'

plain-clothes man" himself, Fitz favored the cross draw. Left-handed, his own rig was an outside belt holster belted in front of his right hip, the gun tilted toward his left hand. But he could shoot equally well with either hand, and he developed a right-handed upside-down draw from this rig that was a surprising thing to see. That he was proficient "on the draw" is proved by his recorded times of from 30 to 50 hundredths of a second, and his recommendations as to holsters (short of the shaped metal backings yet unknown in his era) would not offend today's performers.

Fitz was a passionate believer in double action as against single action shooting for everything but target shooting, and his arguments on this subject are cogent:

"... the single-action converts claim that more accuracy can be obtained this way (but) now we are talking of police work and not target shooting and (while) we must all agree that the self-defense bullet has no effect unless it strikes the opponent, an officer's life is in very little danger except at short range (inside fifteen feet) and at this distance accuracy is not as important as speed ... (and) in fast shooting every officer will shoot double action ... (rather than consuming precious time by) cocking for each shot ...

"The double action was placed in revolvers to use and is an improvement over the old single action. While single action is correct for slow fire and long range shooting, it is incorrect where speed is desired. Ninety per cent of police shooting is within ten feet and less than two seconds . . ."

Fitz is speaking here of double-action



Always "half cop" Fitz was an expert in police methods and here shows his method for disarming the "suspect."

versus single-action shooting with the double-action revolvers commonly used by police. His argument was that "Double action is one motion as you draw your revolver and point it, pull the trigger, and your first bullet is on its way"—whereas single action with this type revolver requires that you "draw the revolver, find the low hammer used on all double-action revolvers, draw it to the rearward position until it locks (with the chance of your thumb slipping off the hammer as you cock it, especially in cold weather)" before you are ready to trigger the first shot. Fitz was not unaware, however, of the beloved Single Action and its army of admirers. He too loved the Old Peacemaker, and used it with great skill.

"I know I am going to hear from the lovers of the 'Old Peace Maker,' the single-action army . . . For the man who has lived with the single action and practiced with it until he has mastered the art of quick draw and getting the first shot away, it is a wonderful arm; but the officer of today . . . will find that he can master the later double-action revolvers in less time ... Target shooting or any other kind of revolver shooting will help the officer, but what he must eventually have is rough and tumble shooting, using speed rather than extreme accuracy....

"Many advance the idea that the single action is more dependable . . . I do not agree with this; the modern double-action revolvers will fire more shots and still remain in working order longer than the single action."

There are those who did (and do) disagree with Fitz on some of the fine points of competitive target shooting at or above Expert level; but no two National Champions agree exactly, either, on all the fine points. Once a man has reached that degree of proficiency, he must (and is able to) refine his techniques to suit his personal peculiarities of stance, grip, sighting, and triggerpull. But there is one thing certain: nothing Fitz tells you in this book will prevent your reaching that level—and, once you reach it, you won't believe any teacher anyway!

One thing Fitz taught (and which Old Master Smitty Brown urged for years) is this: Start close enough to the target to score; stay there until you can score well; move back gradually and only after you are certain of consistent accuracy at the present range; and never attempt 50 yard shooting until you've closely approached Expert proficiency. It is a rule worthy the consideration of all handgun instructors. Handgun shooting is a fascinating fun sport, but more people are driven away from it by the sheer embarrassment of being unable to "look good" at the ranges at which they are expected to shoot than for any other reason.

But it was for his exhibition shooting that Fitz was most famous, and his wizardry here went far beyond anything that could be written in a Book. As with those others of his time and caliber—Captain Hardy, Ad Topperwein (and "Plinky"), Ed McGivern, and others—you had to see to believe. Fast draw was one of the things the crowds always begged for, and Fitz would oblige them. He was fast; and he hit what he shot at.

Fitz called it "trick shooting," a phrase many exhibition shooters abhore; but Fitz would take pains to tell you that there was no trickery in his exhibitions—no shot loads, no close fragile targets broken by muzzle blast: "The trick," Fitz said, "is to hit 'em!" Some of the lines in Fitz's chapter on "Trick And Fancy Shooting" are amusing, informative, and indicative of the caliber of his performances:

"A good start for an exhibition is made by laying on the back (over a table) and breaking six candy wafers, crackers, or other small objects. The revolver will be upside-down, and twelve o'clock will be the aiming point (for a gun sighted for six o'clock hold in the normal position). The distance is 12 feet or more, governed by the size of the targets and the ability to hit them. . .

"Splitting a vertical card is a nice little trick and easily accomplished if the arm is properly sighted. . . It is harder to hit a horizontal line than a vertical one. . .

"Hitting a swinging object is another pleasing shot. Some accomplish this at the end of the swing, but this is not as spectacular as hitting it when it passes center. . .

"Try a small balloon hung by a string about five feet from the ground. Cut the string with the first shot and hit the balloon before it reaches the ground. . . . Another trick is shooting two revolvers at two objects, both stationary or one stationary and one swinging. . .

"Cutting the spots out of playing cards may be done regularly at short range, ..." (Continued on page 77)



Fitzgerald relaxes with friends and competitors at the Wakefield Shoot, August 1932; and at his makeshift workbench, Camp Perry, he uses his skill to repair an old friend—the double action.



A shotgun battery to fill any shooting need; from top: Ithaca 37 12-ga. pump MC; Browning 20-ga. M⁣ Winchester 1200 12-ga. Mag. FC; Remington 11-48 28 ga. FC; Browning 16-ga. Auto-5 IC; Hi-Standard Flite-King .410 FC; and Dickson Falcon 10-ga. double F&F. The seven gun battery digests a variety of loads.

BUILDINIG ATERN BUILDIN BATTERN SHOTSUN

FROM ONE SHOTGUN TO A HALF-DOZEN, PICK THE RIGHT GAUGE, MODEL FOR YOUR HUNTING NEEDS

By CLAIR F. REES

T here have been myriads of articles written about selecting an all-around shotgun. Almost every gun writer ventures, at one time or another, to guide the novice in selecting *the* gun to fill all his bird hunting needs.

This is fine; such articles can make interesting reading and such an allaround gun undoubtedly exists, even though it is by necessity a compromise between the optimum guns for different hunting conditions. But what about the hunter who would like to own more than just *one* shotgun (and don't we all fall into that category?).

I have had many friends ask me, "If you were to build a shotgun battery, starting from scratch, just how would you go about it?" and, "How can I select a series of shotguns for different purposes without getting too much duplication?"

This article will outline a plan whereby a battery of shotguns can be built one at a time—while insuring that the purchaser has the best balanced selection possible whether he chooses to buy a total of two, three, or any number up to the maximum seven types and gauges named. With this arrangement, you can stop at any point and still be as prepared as possible for anything from close-flushing upland game to passing shots at high-flying geese.

This article will also support the man who likes to buy guns, but must satisfy his wife (or his own conscience) that each new purchase is really necessary. Each addition to the battery fills a slightly different need.

Of course, the first gun should be a multi-purpose gun—the all-around scattergun compromise mentioned previously. It should be a 12 gauge repeater (I prefer a slide action) with a modified choke. When all is said and done, the 12 gauge will handle a wider variety of loads than any other, and the modified choke is the nearest thing to the ideal compromise for all types of shooting.

I am sure to get an argument here from the double gun fans (I am one myself) on the choice of a magazine repeater. They will immediately cry "Why not choose the double, with its two available degrees of choke?" Perhaps the best answer to this question is that most people shoot better over the narrower sighting plane offered by a single-barreled gun. Too, the availability of more than two shots can be a boon to the confidence, as well a help to the bag. An over-and-under scattergun gives an excellent sighting plane, but still offers only two shots before reloading is necessary. So, for an allaround gun, my vote goes to the single-barreled



repeater.

Now, assuming that you've got your first shotgun paid for, and your wife has forgotten that she hasn't had a new dress in three months, you are ready for your second gun.

It is now time for a twin-tubed gun—a 20gauge double is the next logical addition to your growing battery. This classic gun/gauge combination will carry lighter and point faster than your bulkier 12 gauge pump or automatic. This gun should be choked improved cylinder and modified, for it will be used on closer-flushing birds—grouse, quail, early season pheasants, and the like. For this gun, you may choose either the classic side-by-side, or the newer over-under barrel arrangement. Plain, but servicible, sideby-sides can be had for as little as \$80, while superposed guns start at around \$200.

Here I would like to give a little of my phyilosophy concerning trigger arrangements on double-barreled (Continued on page 62)

FOR THE VETERAN GOOSE HUNTER and pass-shooting addict, the 12-gauge magnum has many things going for it: increased pattern density with a corresponding increase in effective range, ready availability of shells, a variety of guns chambered for the load, and a good balance between performance and economy (as compared with the former long-range champ—the 10 gauge).

It has one minor drawback-it kicks like hell!

In fact many people who have fired the three-inch Roman candles from lightweight pumps and single-shots are firmly convinced that magnums are only compatible to hulking 350-pound Goliaths who are completely insensitive to pain.

It is true that there are few gunners hardy enough to take the full recoil of more than a few 1%-ounce loads without losing the fine accuracy required to make consistent kills out to the 50-55 yard mark.

There we could have a peculiar paradox: a gun that is suited only for long-range shooting, that really isn't any

1.14/16

SHOTGUN

REHIL

By CLAIR F. REES

Guns used in test: (I-r) Winchester 1200 with WRRS; Remington 1100, gas operated; Savage M30.

GUNS . OCTOBER 1968

PLASTIC AND

good for long-range shooting.

Fortunately, this isn't really the case. There are many 140-pound nimrods who regularly use a 12-gauge magnum—and with consistently good results.

Their secret is, of course, the use of some type of recoilreducing mechanism. These devices—which make continued, consistent accuracy possible with heavy loads come in a variety of types, ranging from the well-known recoil pad to sophisticated mechanisms using hydraulics and other relatively costly arrangements to reduce punishment to the shooter's shoulder.

By the same token, autoloading shotguns are generally kinder to the firer's frame than manual loaders, such as pumps and break-tops. This is because, with autoloaders, some of the rear-directed energy is used up in operating the mechanism. More important, however, is the fact that the energy remaining is transmitted to the shooter's shoulder over a longer time span, which further softens the blow.

In contrast, a pump or double-barreled gun delivers most of its recoil energy over a very short time span—resulting in a very sharp "kick."

Because of the nature of the beast, light shotguns "kick" harder than heavier guns, all other things being equal. This is partly due to the fact that the heavier gun requires more energy to overcome inertia. Probably more important is that the heavy gun handles slower than a lighter one—consequently most shooters find themselves positioning it more deliberately when bringing it into action.

The way a shotgun is stocked also plays a part in how much recoil is felt. Guns with more drop at the comb (a greater angle between the buttstock and the barrel line) "kicks directly to the rear less than a straight or "Englishstocked" gun. However, a shotgun with *too much* drop at the comb can bruise the shooter's cheek badly, as much of the rear-directed energy is converted into upward-directed energy.

With a well-stocked gun properly positioned and firmly held, the entire body of the gunner moves to take up the recoil. A light, fast-handling gun thrown quickly and loosely into position and fired will almost always recoil slightly (but sharply) before the shooter's body begins to react with the gun. This gives a "rabbit punch" effect to whatever portion of the anatomy the buttplate is resting against . . . and if it's resting against the *wrong* portion that smarts!

Actually, the way you let your body react with the recoiling gun has more to do with how much punishment you take than your weight. A 250-pound waterfowler who rigidly resists his gun's "kick" is going to be more blackand-blue by the end of the day than his 135-pound partner who has learned to "give" with his gun.

In addition to autoloading actions, a variety of other recoil-reducing devices have been developed over the last several years. Perhaps the best know is the simple recoil pad.

The rubber recoil pad works in two ways: First, it conforms to the shooter's shoulder better than a rigid metal or plastic buttplate, thus effectively reducing the "kick" felt by simply spreading it out over a much larger area. Second, the "honeycomb" structure of many pads can help to spread the *period* of peak recoil slightly.

Mr. Frank Pachmayr, president of the Pachmayr Gun Works, Inc., advises me that they will soon be placing an entirely new type of recoil pad on the market. These pads are supposed to be far more effective than other pad-type recoil absorbing devices now on the market. Unfortunately, no samples were available for testing at the time of this writing.

One relatively recent device that is highly effective is the "Hydro-Coil" mechanism. This—and Winchester's similar WRRS (Recoil Reduction System)—use hydraulics and coiled springs to spread the period of recoil out over a much longer time span than any other type of device that I know of.

These systems are used in a telescoping buttstock arrangement that has only one real drawback: you can find yourself with a sudden noseful of thumb if you don't take care to cheek the stock far enough back. This can be an unpleasant (e.g., painful) surprise to the uninitiated, although it doesn't take long to train yourself to mount such guns properly against the shoulder—especially when firing



Bill Cranney adjusts oscilloscope prior to tests as Clair Rees looks on. (Note grid where recoil is charted as time vs. force curve; grid trace is photographed.

Photos by Ken Turner

The Winchester Recoil Reduction System operates inside of a telescoping stock.

those three-inch magnums!

Another type of device—offered by St. Louis Precision Products, and others—consists of an aluminum cylinder that fits into the longitudinal hole found in most buttstocks. This cylinder contains a metal piston and spring arrangement; as the gun recoils backward, the piston moves forward and compresses the air in the cylinder to cushion the blow.

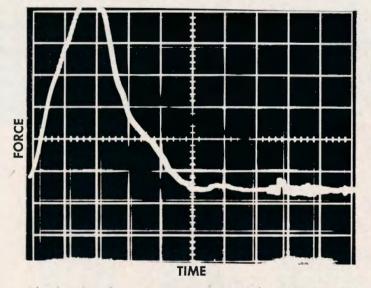
Of course, all of the above-named devices will soften the effect of any load, from the puny $\frac{1}{2}$ -ounce .410 on up. But the big-bore pass-shooting addict is interested in how they affect only one load—the optimum $1\frac{7}{8}$ -ounce magnum. Trap and skeet enthusiasts like recoil-reducers to ease the cumulative effect of the several boxes of one-ounce target loads they fire in a day, but the waterfowler is only concerned with obtaining maximum protection from the few teeth-rattling magnums he needs to use to fill his daily 2 to 5-bird limit.

With this in mind, I decided to see just how some of the different anti-recoil devices compared. After getting a representative sample of guns equipped with these devices on hand, I contacted the Brigham Young University and made arrangements to rent an oscilloscope and other necessary equipment. I also hired Bill Cranney, a graduate mechanical engineering student, to help me conduct the tests.

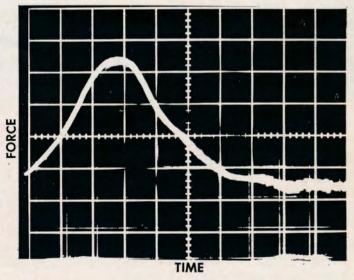
To obtain a comparison of the effectiveness of the devices tested, the gun fitted with each device was butted against a 3%-inch steel plate, which was in turn butted against a quartz crystal that acted as a transducer. Any rapid blow to the crystal caused it to deform elastically, providing an electric potential across its surface. This potential was converted into a force vs. time reading on the oscilloscope. Each reading was recorded on Polaroid film as the tests were run.

The whole transducer apparatus was firmly butted against a heavy steel girder that constituted part of the frame of the laboratory building.

For the tests, I had a Browning A-5 (long-recoil autoloading system), a Remington 1100 (gas-operated autoloading system), a Winchester 1200 pump fitted with the Winchester Recoil Reduction System, a Model 30 Savage pump (no anti-recoil device of any kind), and a "Gun Tamer" from St. Louis Precision Products, Inc. All guns



The height of curve shows degree of recoil intensity; shown is curve of Savage M30 without a recoil device.



The trace of the Remington Model 1100 (gas operated action) shows some decrease in the recoil intensity.

were chambered for the 12-gauge 3-inch magnum shell.

Each gun was fired into a heavy metal bullet trap used by the University to stop high-powered rifle bullets. The front of the trap was partially covered by a 1-inch-thick piece of plywood to prevent back-spatter; this covering was literally shattered by the back-blast from the first three $17/_8$ -ounce magnum loads fired, and we had to replace it with a reinforced double thickness of plywood before we could resume testing. Even this shield showed signs of disintegrating before the test were ended.

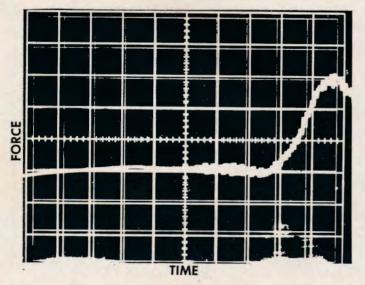
The results of these tests are shown in the set of graphs accompanying this article. These graphs are actually photographs of the oscilloscope readings.

While no attempt was made to determine the actual value of the forces involved, or measure the time over which the effects were spread, the graphs do allow a direct comparison of the effectiveness of the different devices under the particular conditions imposed by these tests. The effect of certain factors, such as gun weight, could not be measured because of the test conditions and limitations.

The "Gun Tamer" was under a handicap during its tests which were inconclusive because of the very minute rearward movement of the gun allowed. In fact, Edward Sattler, executive vice-president of St. Louis Precision Products, advised me before the test that holding the gun very tight to my shoulder would tend to minimize the recoilreducing action of the mechanism. And in all fairness to the makers of the "Gun Tamer," I should say that field tests with this device did indicate that it had a more noticeable effect on recoil than the oscilloscope tests indicated.

The Savage Model 30 was used to show the force-time pattern of the magnum shell when fired from a gun with *no* recoil-absorbing device of any kind. Not even a simple recoil pad was used (both the autoloaders had pads).

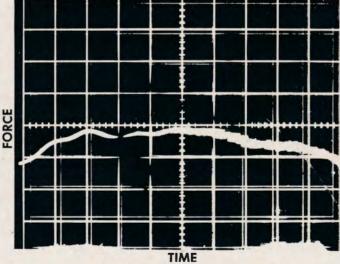
Again, the test results should not be taken as a criticism of the gun or the action. All recent 12-gauge Savage guns of this model are chambered for the three-inch shell as a matter of convenience. These guns are intended to be used for all-around field work; and as all-round shotguns, they are considerably lighter than standard "magnum" models —but you can fire the three-inch stuff if you occasionally have a chance at a high-flying (Continued on page 60)



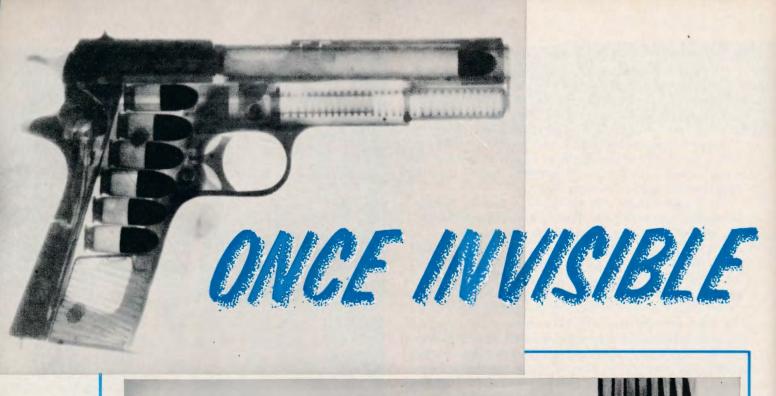
Trace of Browning Auto 5 (long recoil operated action) shows delay in transmission of recoil to buttplate. GUNS • OCTOBER 1968



In one of the final steps of testing Rees identifies each oscilloscope trace as to gun, load setting used.



The Winchester M1200 with Recoil Reduction System has low recoil intensity spread over longer time period.





Courtesy Field Emission Corp.

This radiograph "x-ray" of a Colt Government Model .45 shows the slug (top) just before it leaves the barrel. The bottom photo shows the .45 cal., 220 grain bullet going through a trap of plywood and lead plates.

By JOHN DALE

HE SHOOTER of any firearm hears the report and feels the recoil; but he sees very little of what goes on when the gun is fired; there are many visual effects of firing which are unseen by the human eye. One by-product of the advances made by science in the field of high speed photography, coupled with the use of x-ray and electronics, is detailed evidence of what occurs when a gun is fired. On these pages we present some examples of what would otherwise be lost to the shooter in the flash, jolt, and boom. The scientists who took these photos work in a world of strange terms, such as betagraphy, nanoseconds, field emmission beta-ray devices, and flash radiographs. Ours is not to understand how it is done, only to show our readers some things they may never have seen before; images which were once invisible.



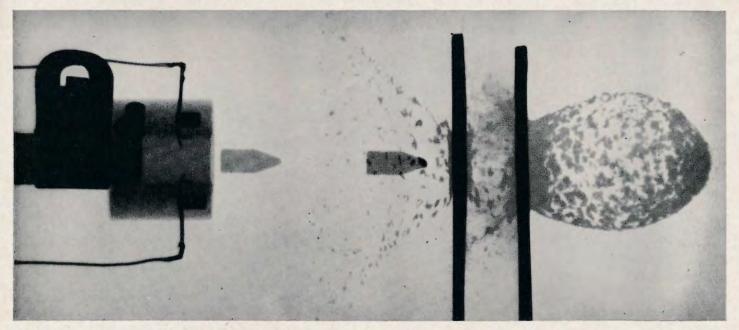
Right: Buckshot and wadding are frozen in midflight in this shadowgraph. Shock waves can be seen ahead of pellets; air turbulence is seen behind. Photo from U.S. Army Ballistic Research Laboratories, at Aberdeen Proving Ground, Md.



Field Emission Corp.

Top: Photo shows the effect of a .30 caliber bullet penetrating a glass coffee mug. Left: Mosaic high-speed shadowgraph of blast region of a gun taken at the Aberdeen Proving Ground.





Multiple exposure shows a .30 caliber bullet as it leaves the barrel, and before and after it has penetrated two lead sheets. Field Emission Corp.

LIKE THE SHAGGY MUTT, IT WAS A BOY'S CONSTANT COMPANION RIFLES OF YESTERYEAR

By K. P. KARNOPP

W HEN MY FATHER was a lad on the farm in Central Wisconsin, he and his brother, my Uncle Emil, managed to get hold of a .22 rifle. They set up a target on the wall of the smokehouse and fired a great many rounds at it. Unfortunately the wall wasn't very thick, and when Grandma went to the smokehouse, she found the hams and bacon riddled with bullets. For a while relations were strained, to say the least.

After 40 years, my father could not tell me what kind of a rifle they had, except that it was a singleshot; nor can my Uncle Emil, who is still living. However, considering the time and place, it is a pretty fair bet that it was a Flobert. This was a Belgian-made rifle that sold during the 80's and 90's for \$10 or \$12 when a Ballard, Beals, or Remington was around \$20. Thus it was the farm boy's friend and untold thousands were sold in this country. It had a very simple action, the breech block being simply the hammer itself, and thus suitable only for weak cartridges. The American rifles were stronger and more accurate, but \$20 was a lot of money to a farm boy in the 80's.

It was a good thing that most of these early .22's were singleshots, as they were safer for a beginner and also helped teach him to be a better shot, because he had to make the first shot count.

To the best (Continued on page 46)



The Remington No. 6, as many .22 single shot rifles of the era, had a short stock and barrel meant for boys.

A Stevens-Maynard Junior boys' rifle retailed for about four dollars around the turn of the century and was one of the prizes offered for selling seeds or salve. Photo by Ed Ashley.

44



.22 RIFLES OF YESTERYEAR





Boys who could not afford to buy a rifle might receive one "free" for sales of salves, cards or liniment.



Firing the Stevens "Little Scout" was serious business.

of my recollection none of the early .22's was a bolt-action. Probably the first of these was the M1900 Winchester, a Browning design, and unusually simple, even for Browning. The great John could have designed it during a coffee break, although being a Mormon he probably didn't drink coffee. A little later it was slightly modified and became the Model 1902. It, and the same style (but heavier) Model 1904 were made for about 30 years, totaling nearly one million in sales. This was my first .22 rifle, achieved at the age of 12, at a cost of \$7.00. Unhappily this was in the days before non-corrosive ammunition, and nobody had explained to me the need for cleaning a rifle bore after firing. As a result, after a few weeks the bore became so dirty and rusty that the bullets lodged in the barrel. I found this out only because I didn't seem to be hitting anything, and the report was somewhat muffled. I finally confirmed my suspicion by shooting at the surface



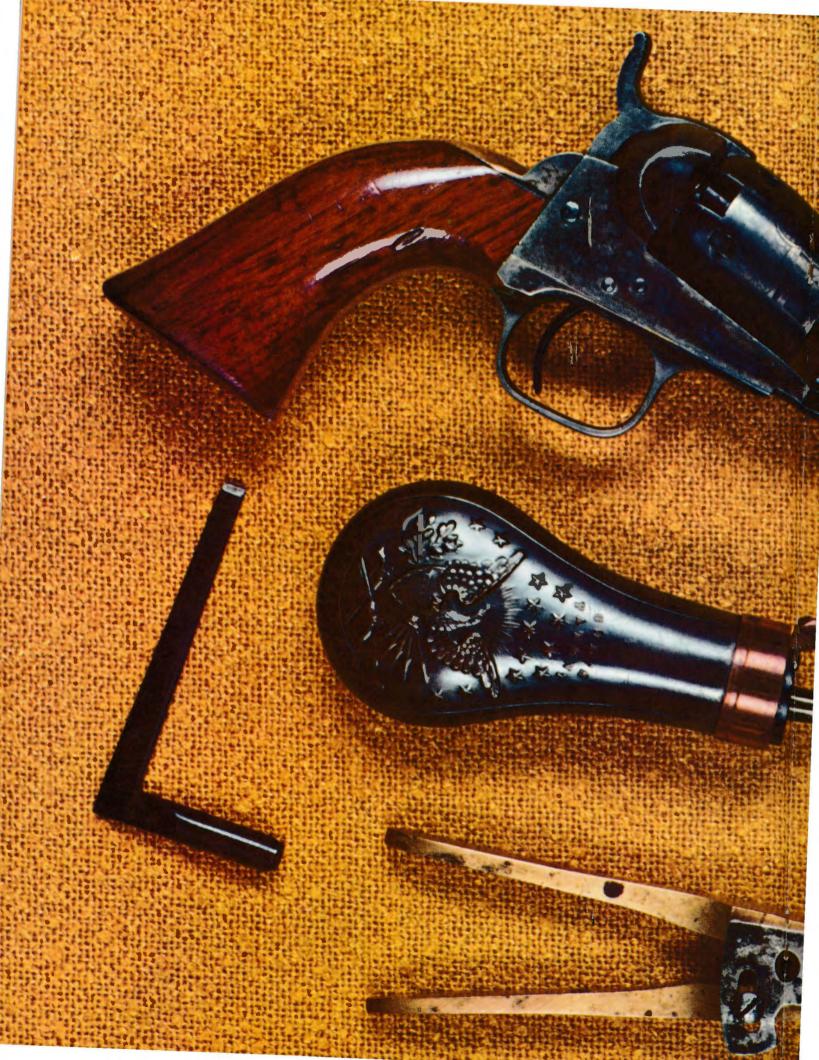
The Remington "Boy Scout Rifle," later known as the 4S Military Model, was quasi-military in design including stud for a blunt bayonet.

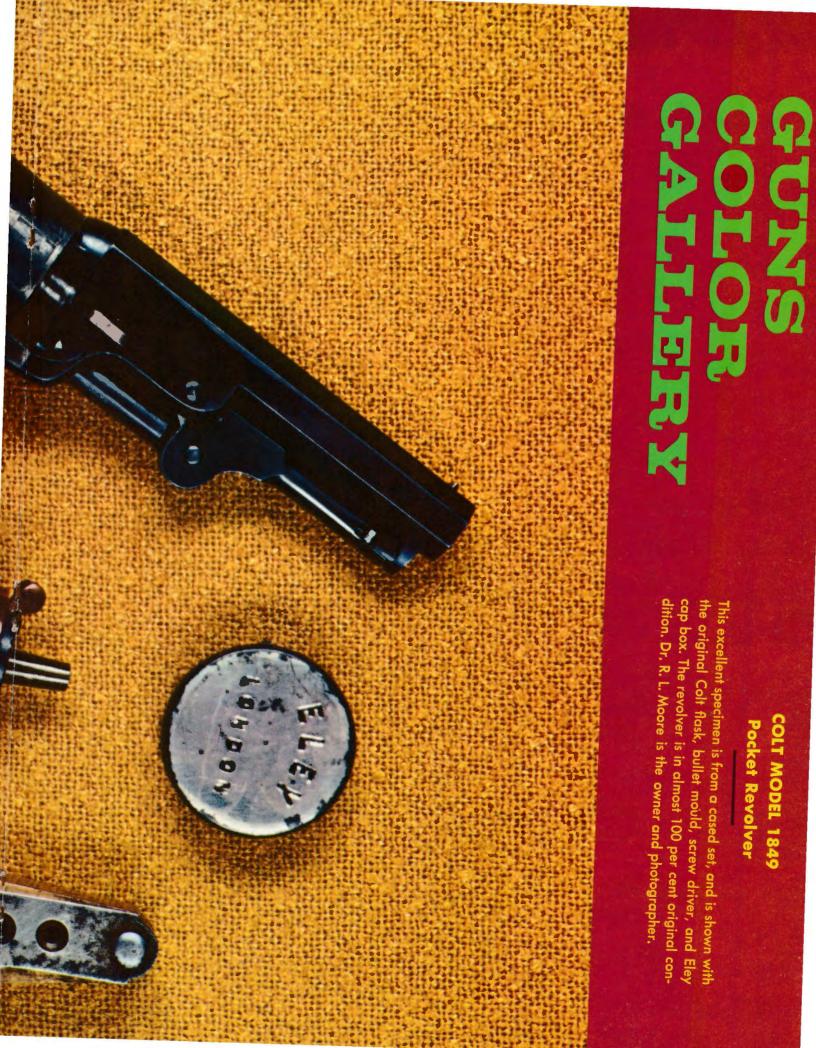
of a pond, and when there was no splash I decided to quit shooting. By this time there must have been 8 or 10 bullets piled up about midway in the bore. An older friend, more familiar with tools, took a piece of $\frac{3}{16}$ " steel rod, flattened the end and filed a flat drill point on it. Turning this with a carpenter's brace, we drilled the bullets out and restored the rifle to shooting (but *not* accurate, condition). So, in my first attempt at gunsmithing, I cut it down to a pistol and it gradually disintegrated and disappeared. Many years later, I decided that I should have a Model 1902 for old time's sake, and looked around a dozen or more collector's meetings before I found one. It's curious where that million went.

An odd modification of the '02 was the "Thumb Trigger", of which Winchester produced about 75,000 up to 1923. It had no conventional trigger; a button in the same position as a shotgun safety was pressed by the shooter's thumb. This was touted as being an accurate method, since the piece was less disturbed than by the operation of the conventional trigger. Curiously, these are extremely hard to find these days. One clue is that they were said to have been very popular in Australia and perhaps the bulk of them went "down under."

Perhaps the largest maker of .22's in this country was Stevens; they made dozens of different models. I can remember drooling over the rifle page in the Sears catalog which offered a Stevens "Little Scout" for three or four dollars. I wanted one so bad I could taste it. This was before I got the Winchester 1902. I finally did get my Little Scout a few years ago, for nostalgic reasons. I was lucky in getting a good buy, only having to pay several times the original cost!

In the old days, the Stevens models were mostly falling or rolling block numbers, and (Continued on page 59)





A TRIO OF NOW PELLET GUNS

By DAN WINTERS

WE RECENTLY RECEIVED samples of three new air guns that are different in operation, but seem to represent the various systems, and the wide range of shooting activity that non-powder guns provide. It struck us, as we ran them through their paces, that these three examples could be used to show how varied are people's shooting interests. The three guns (shown in color on the facing page) are: BSA Meteor Super; Daisy Model CO₂300; and the Crosman Model 700.

Before we get into a discussion of the types of shooting, let's examine each of these rifles and describe the mechanism.

The BSA Meteor is a single shot, available in either .177 or .22, shooting the typical skirted pellet. It is cocked and charged by breaking the barrel and then returning it to the locked position. This is what is usually called a "Diana Type" action. The Meteor is made in England by BSA Ltd., and imported by J.L. Galef & Sons, N.Y. It is a handsome

Introducing three new air riflesone of which is bound to meet your own shooting needs

rifle, finely finished, with several excellent features. The trigger is single-stage, and adjustable; the stock is full-sized, with a handsome finish and a recoil pad (certainly not necessary on an air rifle, but it is a nice touch). The sights are adjustable, and the rifles comes in a sturdy carton with formed styrofoam interior, and includes pellets, targets, target holder, and lubricant. The retail price is \$29.95.

The Daisy CO_2300 is a semi-automatic rifle shooting the standard round BB's. It is powered by Daisy CO_2 cylinder (either standard 8,500 mg. size or giant 12,000 mg.) The for-end has a reservoir which holds a full tube of BB's; the magazine is fed five BB's from this reservoir. With a CO_2 cylinder in position, the rifle may be fired semi automatically—one shot for each pull of the trigger until all five BB's have been shot. Actually, this Daisy rifle is basically the popular Daisy "200" pistol incorporated into a rifle stock. And what a stock! I know that there are many who take one look at a stock that is not only plastic, but of unusual design, and say, "Who needs it." But I would suggest you hold any comments until you put this Daisy up to your shoulder; it's light, and points like a dream. The Daisy 300 retails for about \$29.95.

The Crosman Model 700 is a single shot .22 caliber (also available in .177 caliber as the Model 707) that shoots the skirted pellets. It, too, is operated by a cylinder of CO_2 gas. The Crosman 700 features a unique loading system that incorporates a rotary chamber; turned forward, it exposes the chamber, the pellet is dropped in nose down, and when chamber is turned back, the rifle is ready to fire. Loading and charging the CO_2 chamber is as simple as inserting the cylinder, screwing on the cap, and pushing the button, which pierces the cylinder. With the gas cylinder pierced and a pellet in the chamber, the Crosman 700 is cocked by pushing the cocking knob forward; if knob is pushed forward and up into a slot, the rifle is on safety. The Crosman 700 retails for \$26.50.

The general tendency, when a person has three guns of this sort at one time, is to compare one against the other. In the case of the BSA, Crosman, and Daisy, this would not be fair, nor would it help you choose the one best for your particular type of shooting. Among pellet (or air gun) shooters there are many who do not like the break-barrel type such as the BSA; there are others who don't like CO_2 guns; still others don't want a single shot, but prefer some type of repeater. As in any other situation, I doubt that you will be able to get all the desired features you require in any one gun; and some sort of compromise must be made.

In the three guns we are discussing, we have, I believe, one which will suit your type of shooting to some extent. Let's examine each of the rifles again, and see where they fit into the many shooting requirements.

Each of these rifles exhibits some degree of accuracy, and the first determination you must make is just how much inherent accuracy you require. If this rifle is to be a first step toward your participation in competitive shooting, or is to augment your regular rimfire or centerfire target shooting practice, then you certainly don't want the Daisy. This shoots regular BB's which are generally not as accurate as the skirted pellet. This leaves us with the BSA and the Crosman. Immediately, some of our readers will ask, which of the two is more accurate? Actually, the accuracy tests we ran would not really answer this question. I'll go out on a limb and say that either of these are accurate enough for any but the most discriminating target shooter. Of course, those who don't like CO_2 rifles will have already discounted the Crosman, and those who dislike pumping a rifle for every shot will have discounted the BSA.

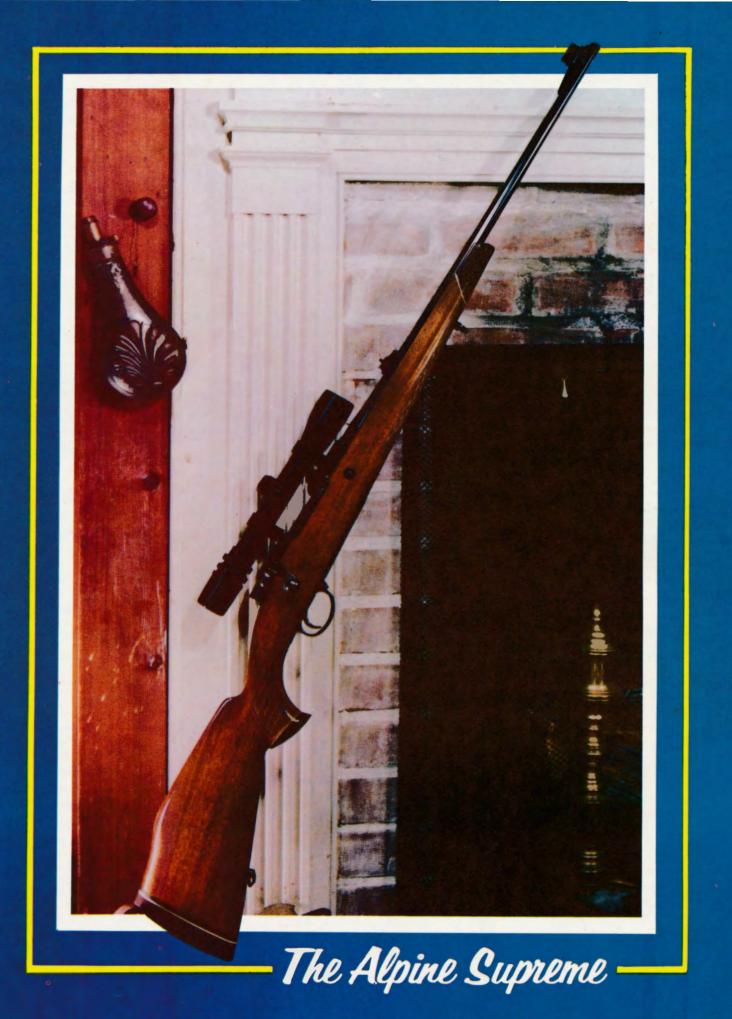
While we are on the subject of accuracy, let me get my highly opinionated view off my chest. I think that too many people are too concerned about accuracy without really understanding it. If we were to take these two rifles—the Crosman and the BSA—put them in a machine rest, and test them for accuracy, we would undoubtedly find that one or the other shot groups slightly better than the other. So What? The real test of accuracy comes when you introduce the human factor, so the question should really be; "How accurate is this rifle when I am shooting?"



We seem to have left out the little Daisy repeater, but it, too, has a place for a great many shooters. There are times when I like to pick up a rifle, and just plink. I'm not interested in getting an ultra-small group, just shooting a rifle that feels good and responds to my directions. The Daisy 300 is just the ticket. It feels good at the shoulder; it responds with one, two, or five fast shots, as I direct; and within its limitations has all the accuracy I can handle while shooting off-hand, at short range, and at non-regulation targets.

Speaking only these three rifles—for there are many others on the market of similar style, quality, and price select the one best for you by first eliminating these with any features you find undesirable. If you want accuracy, and don't mind a single shot, break barrel action, try the BSA. If you want the ease offered by a CO_2 system, also want a single shot with a good degree of accuracy, then you should try the Crosman 700. If, however, you want a fun gun; one that will satisfy your plinking needs, and offer CO_2 charging with multi-shot operation, then the Daisy 300 may be just what you need.

No matter what your choice, you will be assured of good value, a lot of shooting fun, and quality backed by responsible manufacturers.



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WHY I SHOOT



By STUART WATKINS

EDITOR'S NOTE

Stuart Warkins is a teacher in Fairbanks, Alaska. He won the Virginia State Military High School Championship in 1959 while a cadet at Fishburne Military School. He also won the William Randolph Hearst Military High School Trophy in 1959. Watkins was a four time Collegiate All American while a student at the University of Alaska. In 1963, he won the National Collegiate Indoor Rifle Championship, and also was the National Collegiate Big Bore Champion in '63. Watkins served in the Army, where he joined the United States Army Marksmanship Training Unit in 1965. He was a team member when the International Rifle Team broke nine new national records during the Champion of Champions Tournament held at Ft. Benning, G. in 1967.

MY WIFE, JEANETTE, asked me why I shoot. It puzzled me because I could not give her an immediate answer. I finally turned to her and said, "It's the competition. I enjoy the competition, and most of all I enjoy winning."

But this answer was not enough! There are many reasons that keep me showing up for practice each week, for entering each match that I can.

Rifle competition is much more than winning a trophy, or being congratulated—

It is being one of the nearly 7,000 Americans who compete at Camp Perry, Ohio each summer in the National Matches.

It is being among these shooters, who all have similar interests, and just enjoy talking shooting.

It is trying to out guess the wind speed at 600 yards. (After shooting your first record shot, a target two points to your left goes down. The shooter on that point has not fired yet, and your target is still up!)

It is lying in the rain at Camp Perry, refusing to quit, and later as you are drying off your rifle, hearing that you won that match.

It is being among the World Champions and Olympic winners who have beaten all the shooters in the world; it is knowing these people and their knowing you and respecting your shooting ability.

It is being in on the practical jokes played on great shooters.

When the United States Army International Rifle Team was shooting an outdoor prone match in Florida, Captain Lones Wigger had a trick played on him. Captain Lones Wigger, the 1964 Olympic champion, has a habit of shooting holes around his sighting bull, and then shooting at the bullet holes to check his zero as the wind changes speed and direction. Eventually he uses the sighting bull. At this match, by the time he finally used the sighting bull, everyone else had been (Continued on page 56)



C HOTGUNNERS FIRE AT MORE N than 350-million clay targets every year-and that figure is rising by an average ten percent per year. Trap and skeet are participation sports, and as participation sports meet a real recreational need in the lives of millions of business and professional men and women, students, boys and girls, housewives, grandmothers, factory workers, office workers, or what have you. Name an occupation, and I'll find you one clay target shooter from its ranks. Trap and skeet are recreational activities capable of accommodating great numbers of participants safely and efficiently. More than half a million people account for the more than three hundred fifty million targets now being smashed at gun clubs all across the North American continent.

The Amateur Trapshooting Association, Vandalia, Ohio, regulating body for Trapshooting in America, has a membership of approximately 37,000 persons. There are 843 gun clubs affiliated with ATA, and in 1967 they conducted 3732 shooting tournaments, the results of which were registered with the ATA. The ATA conducts annually on its home grounds in Vandalia a national trap tournament said by newsmen to be the largest single participant sports event in the United States.

The National Skeet Shooting Association, with headquarters in Dallas, Texas, is the regulating body for skeet shooting in America. In 1967, 15,521 shooters belonging to the NSSA accounted for 2204 tournaments at the six hundred clubs affiliated with NSSA.

More recently, the National Rifle Association has added clay target programs for its almost million members.

Both the NSSA and ATA conduct national tournaments for their members. The NSSA tournament is rotated in several geographical areas, and at present the NRA championships are held at Camp Perry, Ohio. In addition, the NRA holds tournaments to select this Nation's shooting teams and individuals for the Olympics and all other International shooting competitions. Since 1964, another very noteworthy shooting development has blazed across the clay target shooting scene, and this program could very well, and quickly, kick the total of expended clay targets over the billion mark. And, my friends, that is a whale of a lot of clay targets.

I am referring to the Winchester Franchise Public Shooting Center Program, the world's first network of commercial recreational shooting installations, which has become a flourishing enterprise with 54 individual facilities operating in 27 states. More will open before we ring out the old



year and welcome the new. The new Winchester franchise centers are trap and skeet facilities operated under franchise to local business corporations.

In 1966, Winchester Claybird Tournament combined both trap and skeet in a program to give all shooters, regardless of experience or expertise, a chance at big prizes. In 1967, the Winchester Claybird Tournament attracted nearly 6,000 shooters from the United States and Canada. The unique classification system used in the program does give all shooters an equitable chance at winning fabulous prizes. The winning 1967 team, from Chula Vista, California contained such diverse members as a doctor, a building contractor, a dry goods merchant, a lovely young housewife, and a 13-year old freckled-faced schoolboy.

In the 1968 Winchester Claybird Tournament, entrants will be subdivided into five classes by computer, based on qualifying scores and/or known ability. At the local level, this means that every shooter competes against other shooters of comparable ability. It also means that club teams are made up of shooters ranging from novice to expert. And, here is the real frosting on the cake! This selection system means that you, the reader, who might have been surpressing a yen to find out how much fun it is to shatter flying clay targets, have as much chance as anyone else to win such prizes as an all-expense trip to the Bahamas, sets of presentation grade shotguns gold plated and in special cases, cases of shotgun shells, and other goodies. Shooting began on June 29 for qualifying scores, so run, don't walk, to your nearest Winchester Franchise Public Shooting Center. You could be sending postcards from the Bahamas to the folks back home during the week of October 20-26, as you shoot in the finals.

As my personal salute to the clubs supporting the 1968 Winchester Claybird Tournament, I have listed the clubs where you might find your special pot of gold. And don't worry if you don't even have a gun. You can rent one at the club. All you have to do is present yourself, and because of the system used, you have as good a chance to share in the prizes as the next shooter. Good luck!

AUTHORIZED GUN CLUBS 1968 WINCHESTER CLAYBIRD TOURNAMENT

State & City—Club Name—Telephone Number

Alabama: Birmingham, Southern Skeet and Trap Club, (205) 592-2231.

Arizona: Phoenix, Black Canyon, WPSC, (602) 942-5552.

Arkansas: Hot Springs, Hot Springs Gun & Country Club, (501) 767-2761.

California: Auburn, Quail Valley WPSC, (916) 273-9250; Fresno, Fresno County Gun Club, (209) 229-2013; Long Beach, Watson WPSC, (213) 830-4118; Los Angeles, Golden Valley Gun Club, (213) 899-0204; Palo Alto, Peninsula Gun Club, Mr. McManus, Pres., Home—(415) 321-6659, Office— (415) 323-3724; Redlands, Redlands WPSC, (714) 792-5780; San Diego, Otay WPSC, (714) 420-5242.

Colorado: Lafayette (Denver), Winchester-Denver PSC, (303) 665-5529. Connecticut: Hamden (New Hav-en), Quinnipiac WPSC, (203) 288-5112

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Florida: Fort Lauderdale, Fort Lauderdale WPSC, (305) 581-5874; Indian Lake Estates, River Ranch Acres WPSC, (813) 692-1321; Jacksonville, Jacksonville Gun Club, (904) 765-4877; St. Petersburg, Skyway Rod and Gun Club, (813) 526-8993.

Georgia: Albany, Flint Skeet and Trap Club, (912) 436-3341; Atlanta, River Bend Gun Club, (404) 448-2774; Pine Mountain, Callaway Gardens WPSC, (404) 663-2281.

Idaho: Coeur d'Alene, Coeur d'Alene Gun Club, Mr. Gillette, Pres., Home—(208) 664-4172, Office—(208) 644-9995; Lewiston, Lewiston Gun Club, (208) 743-3883.

Illinois: Manteno (Kankakee), Greater Kankakee WPSC, (815) 468-8381; Peoria, Peoria Skeet and Trap Club, (309) 566-8496; Rockford, Thunder Rock Gun Club, (815) 633-4847.

Indiana: Elkhart, Elkhart WPSC, (219) 264-2012; Evansville, Evansville WPSC, (812) 867-2854; Fort Wayne, Fort Wayne WPSC, (219) 747-9411; Indianapolis, Indiana Gun Club, (317) 485-4981; South Bend, Hill & Dale WPSC, (219) 654-7701.

Iowa: Des Moines, New Pioneer Gun Club, (515) 997-4415.

Kansas: Kansas City, Greater Kansas City WPSC, (913) 964-7944.

Kentucky: Louisville, Jefferson Gun Club, (502) 957-2661.

Louisiana: Baton Rouge, Baton Rouge Gun Club, (504) 344-0584; West Monroe, Pine Hills Gun Club, (318) 322-1203.

Maine: Kittery, Kittery Klaybirders, (207) 439-9896.

Maryland: Oakland, Wisp WPSC, (301) 334-9482:

Towson (Baltimore), Loch Raven Skeet and Trap Club, (301) 252-3851.

Massachusetts: South Egremont, Jug End WPSC, (413) 528-0434.

Michigan: Davison (Flint), Wil-liams Gun Club, (313) 653-2131; Grand Rapids, Kent County, (616) 363-2125.

Minnesota: Blaine, Metro WPSC, (612) 786-5880.

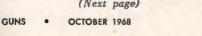
Mississippi: Jackson, Jackson WPSC, (601) 362-7123.

Missouri: St. Louis, Winchester-Bridgeton PSC, (314) 739-9119.

Montana: Missoula, Missoula Trap and Skeet Club, Mr. Blake, Pres., Home-(406) 543-5590, Office-(406) 549-6433.

New Hampshire: Nashua, Winchester-Nashua PSC, (603) 889-9565.

(Next page)



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New Jersey: Clinton, Grouse Ridge WPSC, (201) 735-8590; Englishtown, Englishtown WPSC, (201) 446-7792; Ringwood, Thunder Mountain WPSC, (201) 962-6377; Salem, Schepps Valley WPSC, (609) 455-0517; Sussex, Fox Ridge WPSC, (201) 875-5791; Williamstown, Delaware Valley WPSC, (609) 629-3200.

New York: Alexandria Bay, Pine Tree Point WPSC, (315) 482-2740; Binghamton, Clear View Lodge WPSC, (607) 656-4401; New Paltz, Mid-Hudson WPSC, (914) 255-7460; Buffalo, Buffalo Shooting Club, (716) 632-9738; Youngstown, Three-F Conservation Club, (716) 754-8084.

North Carolina: Advance, Tar Heel Gun Club, (919) 998-4259; Dallas (Charlotte), South Fork WPSC, (704) 922-7990; Greensboro, Piedmont WPSC, (919) 275-7967.

Ohio: Ashland, Green Haven Lodge, (419) 962-4422; Berkey, Toledo WPSC, (419) 829-2430; Celina, West Ohio WPSC, (419) 394-9901; Findlay, Findlay WPSC, (419) 422-4765; Reynoldsburg, Columbus WPSC, (614) 866-2861; Wilmington, Buck I-71 WPSC, (513) 382-0092.

Oklahoma: Oklahoma City, Canadian Valley WPSC, (406) 946-0101.

Oregon: Salem, Salem Gun Club, (503) 364-5433.

Pennsylvania: Mt. Pocono, Pocono WPSC, (717) 839-9380; Pittsburgh, Western Penn. Sportsmen's Club, (412) 327-9918; Reading, Berks Lehigh WPSC, (215) 562-8222; Somerset, Indian Lake, (814) 754-5185.

Rhode Island: Exeter (Providence), Exeter WPSC, (401) 295-5695.

Tennessee: Chattanooga, Moccasin Bend WPSC, (615) 266-9472; Nashville, Nashville Gun Club, (615) 256-8223.

Texas: Dallas, Elm Fork WPSC, (214) 241-2421; El Paso, El Paso Skeet and Trap Club, (915) 584-0693; Pasadena (Houston), White Wing WPSC, (713) 473-9904; San Antonio, Texas International, (512) 688-3141.

Utah: Holladay (Salt Lake City), Holladay Gun Club, (801) 277-0058.

Virginia: Centreville, Bull Run WPSC, (703) 631-9696; Williamsburg, Williamsburg WPSC, (703) 229-8898.

Washington: Seattle, Seattle Gun Club, (206) 885-3980; Sequim (Port Angeles), Sunnydell WPSC, (206) 683-5631; Spokane, Spokane Gun Club, (509) 926-6505.

Wisconsin: Franksville (Milwaukee), North Shore WPSC, (414) 835-1112.

WHY I SHOOT

(Continued from page 53)

shooting record shots for some time. All at once a loud explosion went off! Someone had taped a firecracker to the back of Captain Wigger's sighting bull. When he finally hit it, it exploded. This did not bother Wigger, who went on to win the match. One of the great Marine shooters is thought to have been the culprit.

Another trick was played on MSG William Krilling who is now in Vietnam. MSG "Bill' Krilling once won a prone match with a cleaning patch taped over his spotting scope. He laughed when he realized it was there and confessed that his target had looked rather dark, but he thought it was his eyes!

This same Sargeant was cleaning out his closet before going to Vietnam when he came across an old Olympic patch he had received some years ago. He handed it to me and said, "Give this to your son, he might like it."

Yes, rifle competition is much more than winning or losing.

It is hearing of the time Captain Verl Wright, one of the all time greats in international rifle competition, was shooting in the standing position at Ft. Benning, Ga. All at once he let out a yell. Everyone wondered what the yell was about, as there was a bullseye at three o'clock on his target. When asked why he was mad, Captain Wright replied, "Because I called that shot a bullseye at nine o'clock!"

It is making the "Big Team." On the day I finally made the United States Army International Rifle Team, I brought a bottle of champagne and some glasses to the range. We all had a sip to help me celebrate the end of tryouts.

It is also the mental pressure of shooting poorly, and knowing you are shooting poorly. One day the coach says he will have to cut you from the team if your scores do not improve. It is telling the coach you can do better, and then doing it! Suddenly you are out of your "slump" and before long you find yourself a member of the team that breaks nine national records.

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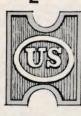
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(A) U.S. Rifle Model 1892, the Krag-Jorgen-

sen; the first U.S. regulation rifle to use smokeless powder ammo in reduced caliber.

(B) Mills cartridge belt, adopted in 1878,

as an improvement over the old hand-sewn

(C) Dress chevron worn as cap ornament

belts which were unsatisfactory.

by enlisted infantrymen.

(D) Cartridge, .30 caliber U.S., or .30-40 Krag, using a 220 grain patched bullet.

E

(E) U.S. Army brass buckle for web loop cartridge belt.

(F) Krag bayonet, patterned after the Swiss Model 1889 knife bayonet. Shown with scabbard.

.22 RIFLES OF YESTERYEAR

(Continued from page 47)

the greatest of these was the "Favorite," a most aptly named model, judging by the large quantity still surviving. In common with many other makes and models they were also offered in .25 and .32 rimfire and in smoothbore for shot. They were not only cheap but quite accurate. No one can possibly estimate how many billions of rounds have been fired from this model.

The Stevens line, particularly, had names to stir the boyish imagination. Aside from "Favorite" and "Little Scout" there were "Crackshot," "Maynard Junior" "Little Krag" and "Marksman." How much more glamorous than a mere number!

A fine line of singleshots was introduced by Stevens in the 30's. Called the "Walnut Hill" series, after the famous old range near Boston, they were available in both medium and heavy weights. Sadly, they were not sufficiently popular at the time to warrant continued manufacture, and died in the late '30's. They were based on the famous old 44 action, and were also available for the Hornet cartridge.

Another very popular one was the Remington #4 Rolling Block. This was made for a great many years, up to 1934. I bought one over the counter in 1930 and used it happily for several years. Their #6 was similar, but lighter and cheaper.

In the course of research for this article an interesting but little known accessory turned up, mounted on the Remington #6. It is a telescoping steel tube capable of holding ten or more Long Rifle cartridges. It presents each cartridge in turn, hanging bullet down, and of course is intended to be an aid to fast loading for a singleshot. The item is stamped "Endres Bros. Mfg. Co. Dane, Wis. Patent Pending." This is the only one I have ever seen, and unfortunately there is no way of dating it.

In the early 30's came the flood of bolt actions, primarily because they were cheaper to make. They took over the field so completely that for many years the only singleshot .22 available was bolt style. Only recently has a non-bolt rifle been marketed. This is the Ithaca M49 "Saddle Gun," styled after a tubular magazine lever action, actually a singleshot with modified Martini action, and very popular indeed.

One curious thing about the older .22's was that they were almost invar-

iably all made boy-size, even the more expensive repeaters. In my younger days, the gun makers were regularly chewed out by gun writers because they didn't offer a man-size .22. When the pendulum finally swung it went almost all the way, and all the bolt actions were full-size. Today most manufacturers make one boymodel, but these are not well publicized, and many are not aware of their existence. Usually they have both shorter barrels and butt stocks than the standard models.

No story on singleshot .22's would be complete without mention of the Hamilton. This was no doubt the cheapest of them all, the cash price being somewhere around \$3.00 or less.

When I was a kid, "Boy's Life" and "The Youth's Companion" constantly carried advertisements which offered the Hamilton as a reward for selling "only 1 doz. boxes of OSOCLEAN SOAP" or some similar merchandise, maybe packets of garden seed. The Hamilton probably didn't weigh over 2½ lbs. and was unique in having a bronze barrel encased in a steel tube.

A good, original Hamilton is hard to find these days and commands a comparatively fancy price at a collector's show.

A small but enthusiastic group of collectors specializes in early .22's; indeed, one man the writer knows collects "Little Boy's" rifles. One advantage of collecting this category is that it is much easier to get a representative group together. This is accounted for by two reasons: there are not so many collectors in this field, as there are, say, in Colts, and there are so goldarn many single shot .22's still floating around uncollected. Here is a partial list of obsolete brands:

Flobert Beals Davenport Meriden Page-Lewis (sold to Stevens) Wurfflein Quackenbush Ballard Maynard (also to Stevens) Hopkins & Allen Enterprize Whitney Wesson Bay State Warnant (Belgian)

The first serious .22 target rifles were singleshot. Around the turn of the century the Stevens Models 44 and 44¹/₂ were prominent. Perhaps the







most widely used was the Winchester in a military style called the "Winder Musket" after the National Guard general who designed, or at least, sponsored it. Many are found with U.S. Ordnance markings, and sometimes with actual Krag sights mounted, as they were widely used in both Guard and Regular training. The Stevens Armory Model was similar.

A fascinating quasi-military model was Remington's "American Boy Scout", based on the #4 action. It had military-style wooden handguard and full-length forend, with sling swivels. It also had a cute little (and very bayonet. The frame was blunt) marked "American Boy Scout". For years collectors have assumed that this was an official rifle of the Boy Scouts of America. Recent research by S. M. Alvis, manager of Remington's Research Division at Ilion, has uncovered the fact that it was used by the American Boy Scouts, a rival organization, not the Boy Scouts of America. The ABS existed in the early 20's.

A similar rifle, made by the Meriden Firearms Co., also has been found. This is a rare one, as the writer was a Gun Watcher for over 40 years before ever running across one.

In the '20's many of the lists of match winners showed the "Pet. Ballard" as the weapon used. This meant a Ballard modified and rebarreled by Peterson of Denver, one of the leading gunsmiths of the period. Also about this time came the still-popular B.S.A. (Birmingham Small Arms) Martini, about the only foreign-made .22 target rifle to become popular here before the coming of the present Anschutz. The Anschutz, by the way, although a bolt action, is a singleshot. Target shooters will not use a magazine feed owing to the danger of shaving lead from the bullet as it is fed from the clip.

Some recent bolt actions have been provided with a steel block to be inserted in place of the magazine to facilitate single loading.

And speaking of Martinis (not the dry kind), a very neat little Martiniaction rifle was offered by Mossberg in the '30's. The writer nearly bought one and regrets that he did not, as they are a very desireable item today.

Even counting military rifles, there have probably been many many times as many singleshot .22 s made as any other rifle. It is surely "The World's Most Popular Rifle". An indication of this is that one American manufacturer has a branch factory in Puerto Rico where they produce only two models: a single barrel shotgun and a singleshot .22.

TAMING SHOTGUN RECOIL

(Continued from page 41)

honker. (Speaking from personal experience, the Savage Model 30 is a very nice field gun . . . but it's *not* one to shoot with magnum loads more than two or three times in quick succession without having a large bottle of aspirin nearby!)

I fone wanted to use this gun with magnums for any length of time, he would be smart to use a heavy metal magazine plug in place of the usual wooden affair, and fill the bolt hole in the stock with a similar plug (or recoil device) to add weight. For upland hunting, these plugs could simply and easily be removed for use with lighter loads.

As the results show, both the longrecoil and gas-operated autoloaders reduce peak recoil by spreading it out over a longer period of time. The primary difference between the effect of the two types to the shooter is that the recoil is felt slightly later when firing the long-recoil (Browning) action.

This delay is caused by the entire

barrel and slide moving to the full rearward position before any of the force is transmitted to the buttstock of the gun. Some shooters like this delay, while others are distracted by its "double-shuffle" effect.

As you can see, the hands-down winner in these comparisons was the Winchester Recoil System (the "Hydro-Coil" would perform similarly). Even with the maximum 17_8 -ounce loads used throughout the tests, recoil was converted into one long, gentle p-u-s-h. In field use, the wrists and arms of the shooter tend to take some of this recoil, but this is not felt in the shoulder region.

A slide-action magnum (such as the model 1200) fitted with this device would be a more versatile waterfowling gun than either of the autoloaders tested in that it can digest the full range of light 2³/₄-inch to heavy 3-inch magnum loads without adjustment. The autoloaders function fine with either length magnum, but light "standard" loads don't pack enough punch to work the action without some adjustment to the gun.

One interesting observation made during these tests was that by simply switching from a manually activated action to an autoloader, the punishing "kick" of the 12-gauge magnum maximum load could be tamed appreciably. In fact, with either of the autoloading types tested, the intensity of the 12-gauge magnum's recoil was only slightly greater than a 1-ounce load fired from an uncushioned 28gauge shotgun.

Several of my waterfowling friends used the shotguns mentioned above in the duckblind with a variety of loads. They all agreed on one thing: in a gun equipped with some means to reduce recoil intensity, the 12-gauge magnum is not really deserving of its fearsome bone-jarring reputation. Using almost any kind of cushioning device brought recoil down to acceptable levels, and with the most effective of these, the 12 magnum was more pleasant to shoot than a "standard" upland 20 gauge.

WINCHESTER M70

(Continued from page 31)

to put it back on fast when I need it. Also, I always remove the slings when I store my rifles in the gun cabinet.

I believe this is the finest rifle Winchester has ever put out. I like this new, stronger, smoother action far better than the old Mauser type used on previous Model 70's. I like the new recessed bolt face with the new extractor and ejector, and the shrouded firing mechanism that protects the eyes from gas escaping to the rear if a primer should rupture. Except for the sling swivels there is no change I would make on this new Model 70 Winchester.

There is no use listing all the calibers that Winchester has this new Model chambered for, as they are all well known and cover the entire caliber scale from varmints to elephants. After several years of other manufacturers being in the lead as to stock shape, finish and good looks, Winchester now has a rifle that in overall design and quality can compete with the best. It shoots as well as it looks. The fully adjustable, clean breaking trigger and excellent hammer forged barrel add to the inherent accuracy. This new Winchester will find a welcome place in any hunter's gun cabinet and will be a pleasure to use in the field.



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HANDLOADING BENCH

(Continued from page 20)

pockets must be reworked to take boxer-type small pistol, and then the brittle cases give out in short order. It's best to locate some WWI .30 Pedersen cases (or loaded ammo, it's the only caliber interchangeable with the 7.65mm Long) and use them with Standard .32 ACP data and .308"-.309" lead bullets.

But Pedersen cases are hard to find. Get .32 S&W Long or .32 Colt New Police cases and persuade a latheowning friend to turn off the rims and duplicate the 7.65mm rim and extraction groove. Trim the turned-down cases to 0.775" length. From there on, load them like any other case. They will last a long time if loaded moderately with a 85-90-grain bullet and 2.5-2.7 grains of Bullseye. RCBS will make dies for you.

To duplicate original ballistics (1175 fps with an 88-grain bullet), use Lyman #3311227 (84-gr.) or #313226 (93-gr.) and 2.7 grains of Bullseye or 3.4 grains of Unique. Stick to round nose bullets unless you want to do some feed ramp work to make semiwad cutters feed correctly.

Incidentally, the .32 ACP cartridge will fire safely in the M1935 pistols, but won't cycle the action or feed from the magazine reliably. At least you can use the gun single shot with .32 ACP ammunition. That's better than nothing, isn't it?

DIMENSIONAL DATA

7.65mm Long .32 Colt N.P.

Rim Diam.	.333"334"	.368"379"
Head Diam.	.334"335"	.334"339"
Neck Diam.	.333"334"	.331"337"
Length	.773"776"	.904"925"

If altered, .32 cases chamber tightly, push base first through 7.65mm resizing die to swage head down slightly.

SHOTGUN BATTERY

(Continued from page 37)

shotguns. Inexpensive double triggers are fine, or if you have the money necessary to buy a shotgun with a selective single trigger-good. But I wouldn't advise anyone to buy a gun equipped with a non-selective single trigger. Non-selective triggers are fine as long as the birds are rising in front of you and going away (since the more open barrel is automatically fired first) but any bird that flushes at 40 yards, or flies toward you fouls the whole system. If you plunk down the money for two different chokes, you should at least have some say in the matter of which one to use first.

The third gun of your new collection will fill the only real gap your two-gun collection doesn't cover; namely, long range shooting at waterfowl. For this, the 12 gauge magnum with three-inch chambers is undisputed king. It will handle within $\frac{1}{8}$ ounce as much shot as the aweinspiring 10 gauge, and at a fraction of the cost. With a proper full choke and the right loads, this gun will bring down geese and other hard-to-kill species at an extreme range of 55-60 yards (provided you do your part).

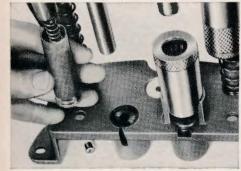
With this gun, you are beginning to specialize. The modified-choked 12 and the double-barreled 20 are both multi-purpose, all-around-type guns; the 3-inch 12 magnum is meant for a single purpose only—to bring down ducks and geese at 40 to about 55 yards.

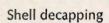
ogically enough, the fourth gun of your collection is another fairly specialized gun-only this one is at the other end of the gauge ladder. I am referring to the 28 gauge. This little gauge is very probably the most underrated gauge being sold today. It is outsold by the .410, even though the 28 will deliver better patterns with the same loads because of its larger bore. Surprisingly, the .410 hangs on to its popularity edge, even though the 28 gauge is available in a short (23/4 inch) magnum loading that delivers 1/4 ounce more shot than even the three-inch .410 can. Few people stop to think that the one-ounce magnum loading in the 28 gauge throws the "standard" high velocity 20-gaue load—known to be an excellent killer on all upland game.

Until recently, Remington's excellent model 11-48 autoloader was the only U.S.-made 28 gauge available. Even though I am not a fan of autoloaders, I freely admit that this little

(Continued on page 87)

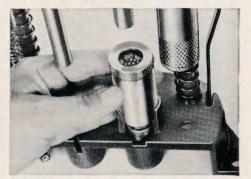
Finished shotshells in 5 easy steps





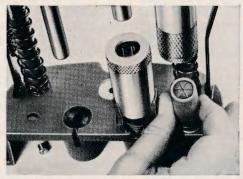


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3 Wad seating and shot loading





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OUR MAN IN WASHINGTON

(Continued from page 21)

violation of existing State and local laws. The best way to do this is to put the shipment of all firearms under the jurisdiction of the mails. The local postmaster would only be required to do what federally licensed dealers now do. He is the one local federal official that should know the local law. If he would be ordered to observe local law in delivering firearms, that would be enough.

Congress and the nation should ask themselves whether more and more new laws are the means through which the country should meet the difficult problem of the nation's soaring crime rate. How about the some 95 per cent of all serious crimes that are not committed with guns?

Undoubtedly, there are many causes for the situation which prevails today. Part of the problem of rising crime results from lagging enforcement of existing laws, including the old Federal Firearms Act. What about the influence TV violence has upon the young and the simple minded? What about the court decisions that turns loose confessed criminals? Gun owners should not only object to anti-gun laws when writing lawmakers, they should try to point their representatives in the true course of crime prevention.

The Omnibus Crime bill passed earlier this year has provisions for striking down recent Supreme Court decisions which favor the criminal over the victim of the crime. When will the new law be used?

The nation's aim should be improvement of law enforcement at all levels of government, as well as the prosecution to the fullest extent of the law of those who are apprehended committing crimes with firearms or charged with violating State or local laws of any kind.

Hasty and ill-considered gun legislation, born in the aftermath of a violent tragedy, should not be treated as the last and only answer to a growing concern for public safety. The TV has pushed for gun controls because it does not want to put its own house in order. What about all the sex and crime it is presenting to the youth of this nation as the American way of life?

It is time for the gun owners to strike back at those who have pushed the public and the lawmakers into illconsidered gun laws. It is important to note that crime is the highest where there are the most TV sets showing sex and crime. What about these TV stations that show "adult only" shows during the time school kids look at shows?

The name of the game is politics. The elections are upon us. TV can make or destroy any one seeking public office. It is for this reason that TV has become untouchable. The cry that freedom of speech gives a private profit making company the right to use the public airways to project an anti-gun pro-sex and crime image into the minds of Americans is way out of line.

It is enough to make a gun owner angry enough to write letters to his lawmakers. Unless he does, come next congress we will have the TV networks again using firearms as the sacrificial lamb. No matter what kind of gun laws we have when this is read, there will be more next congress if TV keeps up the public pressure to enact "effective

gun legislation!"

SHOTGUN SLUGS

(Continued from page 29)

on it. Despite these details which contribute to inaccuracy, just try and get the ammo manufacturers to do anything about it!

When the slug load is fired, powder pressures build up very rapidly and the great hunk of lead, held in place by the old fashioned rolled crimp, resists the building pressures and before it commences to move the over-powder wadding tends to drive up into the big cavity in the base of the slug. The slug, remember, is purest lead. It has a tensile strength of 3,000 psi while pressures reacting directly behind it range up to five and six tons. The forcible entrance of the wadding into the cavity upsets and enlarges the slug and tends to establish a better and more snug fit between projectile and gun bore. As evidence that the wadding is driven into the orifice in the bullet is the fact that if you recover any quantities of these missiles you will find, many times, bits of the wadding jam-packed into the cavity. An interesting second fact you'll

soon note when you fire and recover

the leaden chunks is that the fancy helical ribs on the exterior are marred all to hell! This happens in the bore and how any manufacturer could be so sanguine as to say these exterior lands and grooves can impart a spin to the bullet is hard to swallow! Actually what happens is that the slug must make a wild leap of something like three-quarters of an inch before it enters the true bore. It has to push forward and force open the rolled crimp and then traveling as a free agent, unguided and undirected, it bangs into the forcing cone. The forcing cone may be anywhere from 3/8" to as much as 11/2" in length, with the average in American-made scatterguns at about 1/2", and it is then in the true bore.

It is right here, in its passage from a position of rest in the cartridge to a point just forward of the cone, that the slug is most seriously harmed. It almost invariably strikes one side or the other or the cone and this produces a flattened side. As it passes the crimp of the shell it cannot open the crimp smoothly and evenly because of the configuration of the nose of the projectile and not occasionally it simply rides over a portion of the crimp never opening it at all. This tends to unbalance the missile and it is further upset when it strikes one side of the cone.

Probably more shotgunners fire slug loads through full choke barrels than any other boring. This is because more FC scatterguns are sold than any others. It might be concluded that the constricted forward end of the tightly choked barrel does some harm to the great ball of lead. It does! A series of test firings has established that accuracy is consistently better if a barrel no tighter than improved cylinder is used with the slug: a tube with not more constriction than .005inch.

The other day in preparation of this opus I banged off 25 shots at 50 yards from a benchrest. I was using a standard over-the-counter box of 12 gauge slug loads. The shotgun was a Remington Model 870 pump repeater with a 28-inch barrel and marked Full Choke (FC) on the side. The shotgun carried a Weaver 1X scope in Weaver mounts. The 25 shots fell into a pattern that was enclosed with a circle of 7.35" diameter.

Right after these twenty-five shots I took a three hour rest and then went back. This time I used the same distance -50 yards - the identical benchrest and the same standard factory 12 gauge slug loads. The shotgun was different. It was a Remington Model 1100 autoloader, 12 gauge with a special 22-inch slug-throwing barrel. This barrel measures .730 through the cylindrical portions and has a constriction at the muzzle of .004-inch. This is called improved cylinder. The 25 shots all fell into a group that measured 5.45 inches. The better accuracy is attributable to the more open boring of the second gun and the fact that it does not do so much injury to the soft leaden missile.

Because the slug is pure lead it leaves a deposit in the barrel. This is especially bad at the forcing cone and in the choke but is also apparent throughout the bore. If you ever shoot your shotgun for accuracy plan on scrubbing out the bore after not more than 10 shots. It will require a brass bristle brush and a lot of energetic action on your part. Since the deer hunter can expect to shoot very few times and from a cold barrel the tester ought to do his firing from the same kind of tube. That is, one that is clean and cold.

The shotgun barrel is a flimsy reed. It is too light to handle single ball rounds. It vibrates like a violin string and if it is fired a number of fairly fast shots it heats up worse than Texas in August. During the firing of a long string, I wait two or three minutes between shots. The gun should be opened, the bolt pulled to the rear to allow a circulation of air through the bore which cools it a bit more rapidly.

Some shotguns should not be used with slugs. The side-by-side double is utterly hopeless. The tubes are regulated to throw the shot pattern to the same center at 40 yards. That is, theoretically this is done by the manufacturer. A surprisingly large number won't do this. The right barrel will shoot dead on and the left tube tube will shoot high and right; or low and left. When slugs are fired it is seldom indeed that the two barrels will place the single ball to the same center. I have had doubles that shot fairly good at 40 yards but at 50 yards and 60 yards the slugs showed evidence of crossing each other. The right hand barrel hit to the left of the mark and the left-hand tube on the right.

The over/under is another poor choice. These tubes are regulated to place the two patterns together at 40 yards but the other tube will shoot off the mark; usually inordinately high and quite frequently to the right or left. The more the yardage is increased the more marked becomes these unwanted peculiarities.

The ideal slug-throwing smoothbore wants to be a pump repeater, an autoloader, or a single-shot. Such guns as the new Winchester Model 1200 pump gun, with a breechbolt which locks up at the front end like a T ROLLOVER MONTE CARLO CHEEKPIECE HANDCRAFTED SKIP CHECKERING. GENUINE ROSEWOOD FORE-END TIP AND

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PARKER-HALE

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rifle, shoots well. Another breed that I like is the High Standard pump repeater which is a nontakedown. Mossberg makes a fine slug-gun, the new Model 500 pump action repeater. It is a solid frame job and you cannot take the barrel out of the action except with a pipe wrench. This makes for improved accuracy.

The autoloaders shoot well with slugs. I have had some of the old timers among the self-shuckers that did not perform too well. This was because the barrel did not return to the same location after each shot. The modern semi-autos don't seem to fault in this manner.

No one in his right mind would go out in the fall for the annual venison with a rifle that had no rear sight. It is always said in the West that the country was settled only because the Indian didn't know what the rear sight was for. A shooting iron that throws only one ball needs both a front sight and a rear one. Shotguns are different. We get along with only a front bead, sometimes with a raised rib and just occasionally with a second bead midway of the rib, but not with a rear sight because the pattern will cover 40 inches at 40 yards and this gives us considerable margin for sighting error.

A surprisingly high number of huntsmen go into the woods and fields, their shotgun charged with slugs, and a glance at the old musket will show that it has only the front bead. More deer are shot at and missed with shotguns that are inadequately equipped with sights than from any other cause. The modern scattergun is stocked so that it throws the shot pattern some 12 to 16 inches high at 40 yards. This is deliberately done because most wing shots aim under the bird and not directly at it. When the hunter changes from pellets to a single slug he has a gun that will shoot high for him. This is because it has no rear sight and the comb of the stock regulates the position of the eye and this has been adjusted at the factory so that it sees the gun hit above the mark.

The deerstalker who goes afield with his shotgun slick and clean of a rear sight places himself at a terrific handicap. If he can shoot at the game at 35 yards and under he will probably hit it. Especially if he recollects to aim low. If, however, he must shoot at 65 yards his shot will almost surely be a miss.

All the arms manufacturers who make pump guns and autos now offer a special barrel for slugs. It has two sights on it. A ramp type front bead and an adjustable open rear sight. This combo is worth its weight in ten point bucks, believe me! If you live where you are compelled to hunt with a scattergun by all means possess yourself of one of these special barrels!

Better than any iron sights is a scope. I use them altogether and would not consider a slug-throwing smoothbore equipped any other way. The scope is far more accurate than even the best of the iron sights and with it you do not have to invest in the special barrel. The top of the receiver can be drilled and tapped andscope mount blocks attached by any local plumber. Almost any mount can be used. If it does not fit the contour of your shotgun receiver the mount bases can be reground quickly and easily and thus be made to fit. After the deer season the scope and its mount is readily removed thus preparing the shotgun for bird shooting.

The best of the scopes for shotgun useage should be low power. This is so that you will secure the maximum field of view. A scope of 1X has 96 feet of field at 100 yards. The 2.5X has 43 feet of field. On the other hand a 6X glass has only 20 feet of field. Since your shots are going to be at 100 yards and under and very often will be at game on the run the greater the field the more advantageous. Use a post reticle and be sure it is big and coarse. Crosshairs are a poor second choice and if you insist on them be sure these are the most coarse you can find.

The 12 gauge with slug loads kicks. It kicks as much as many magnum rifles. The wallop is around 30 pounds and this does some surprising things to mounts. The mount shifts in its base due to mount screws that are too small and often are a poor fit in the base blocks. Too, I have noticed the scope tends to skid forward in the mount rings. This is because of the severity of the recoil. Be sure when selecting a mount that you get one that is going to stay put!

When shooting at big game like the ubiquitious whitetail try to plunk him in the rib cage. The shoulder is a poor spot and the neck is altogether too small as a target. A vast number of tests on such marks as one-inch pine baffles, moulding clay, hardwood dowel pins and actual growing willows, convinces me that the slug is a poor bullet. It penetrates very sketchily and these slugs are altogether much too soft.

For this reason don't essay shots into the shoulder area of the buck. Plunk him in the ribs and you can be reasonably sure the one ounce ball will get into the lungs. The trophy may run for as far as a hundred yards but it will inevitably fall.

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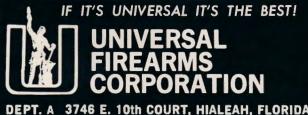


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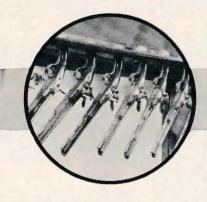


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has already had. The interior is cushioned and all sections lined with Orlon pile that is treated with Silicon to prevent rusting of the gun. Fittings are all chrome plated. A complete shotgun cleaning kit is included in one compartment. A good lock and key compliments the case.

The case weighs but 5½ lbs. empty and with my 101 and the cleaning outfit 121/4 lbs.

The Richland Security Travel Case lists for \$29.95 direct from Richland Arms Co., 300 W. Adrian St., Blissifeld, Mich. 49228 or through their dealers.—Les Bowman

Mini-Shell Kit

Charlie Sullivan has been an innovator in the shotshell loading field for a fair number of years now. The best known of his items to come along was the Vari-Wad which may be assembled to provide three different wad column heights, thereby allowing one to reload a wide variety of cases without keeping a large assortment of wads on hand.

Latest from Sullivan is the "Mini-Shell" kit for short range (or indoor) shooting at plastic break-away birds. Available in 12-, 16-, or 20-gauge, this kit allows the use of your standard scattergun for this type of shooting.

Basic element of the kit is a diecast metal shell case a bit over one inch long. Its sides are fluted to reduce weight. A standard battery cup primer (209) pocket is cast into the head, connected directly to a shot chamber of approximately .410-bore.

For ranges up to 20 or 30 feet, only the primer is used to propell a charge of approximately 50 No. 9 shot. Range is increased to 50-60 feet for killing starlings, sparrows, etc., by adding a charge of 1.0 (one) grain of Hercules Bullseye powder.

The Mini-Kit consists of five shells, decapping punch, wadcutter, powder and shot dipper, and a small arbor press for reloading. In use, one presses a primer in place; seats an over-primer (-powder) wad; adds a dipper of shot; then finishes by seating an over-shot wad. All operations are carried out on the arbor press. Standard .410-gauge card wads may be used, but wads can be cut from plastic or cardboard with the wadcutter furnished. Salvage plastic shotshell tubes make good wads, as do waxed milk cartons.

Loading is extremely simple, though we discovered the fluted primer pockets were quite tight and it took a good bit of beef to seat the primers properly. Three plastic wads cut from junk shells were placed over the primer. The shot dipper held 50 No. 9 shot and this charge was held in place well by a single home-cut plastic wad.

Shooting this load at 20 feet, we got fairly dense patterns about 8" in diameter, with a fair number of wild shot as much as a foot or more out. The pattern was easily dense enough to insure hits on Crosman or Hamlin

PULL SAFETY ON TOP OF STOCK

BREECH.

break-away indoor birds if one is holding well.

Since this setup is quite likely to be used indoors, we checked its ricochet characteristics. A 3/4" plywood panel was set perpendicular to the line of fire at a range of 20 feet. Safety goggles and leather jacket were donned. The first round produced a spray of shot directly back on the shooter, striking chest and face. Pellets striking exposed skin smarted a bit, but no bruises resulted. Less than 10% of the pellets remained in the target panel, the balance penetrating about half their diameter, then rebounding directly along their original line of flight.

This points out that it is necessary to utilize a loosely hung canvas backstop when Mini-Shells are shot indoors. Shot will rebound from any hard surface and could cause injury, especially if safety goggles are not worn

The question of gas escape arises, since a rigid, non-obturating case is used. We experienced none. The case is, in effect, a short barrel. By the time the shot charge clears the case. pressure is so low there appears to be no tendency toward gas leakage to the rear.

Depending on what you pay for primers and shot, cost of shooting Mini-Shells should average about 1.5¢ per shot. If break-away targets are used, their cost can be amortized over a long period without adding significantly to the cost. That makes for very economical shooting. Charlies new firm: Sport Ammo Corp., 8407 Center Dr., Minneapolis, Minn. 55432 at \$14.95.-George Nonte

Henry Hunting Knives

A good hunting knife is a necessity for the well equipped hunter and certainly is a necessary working tool for the hunter's guide or outfitter. One of the most painstaking tasks for a hunting knife is the caping of rare, hard to get trophies, like the Big Horn Sheep. To do the best job possible a knife must have a special size and shape blade.

A little over a year ago I had the opportunity to visit a friend and one of the master knife makers. Bo Randall of Randall Knives, Orlando, Florida. Hung on his office is one of the largest and most complete knife collections in this country. Bo owns a semi-production factory and Randall knives are known and used around the world. Fighting knives, made by Randall, are carried by thousands of our service men in foreign countries. Looking over Bo's collection of knives I noticed one made by a California knife maker to whom I had once sent deer horns to be made into handles. Bo surprized me when he told me that he thought this man, D.E. Henry, was the finest craftsman and best knife maker in the world, today. That was high praise from such an expert as Bo Randall.

A short time after my visit in Florida I received a letter and a drawing from D.E. Henry. The drawing was of a knife he proposed to make for me and was really a piece of art by itself. It looked perfect and I okayed it and sent it back. Time passed and I had just about forgotten about this knife when a box arrived from D.E. Henry and in it was my knife. I examined its shape, blade thickness and width, the handle, made of East India stag horn, and the way the guard was made and put on. I found no fault with it in any way. The silver name plate, imbedded in the handle and engraved with my own signature is just one of the things that makes this knife become "The Knife" when I (Continued on page 75)





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By Steve Ellingson

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POINT BLANK

By COL. CHARLES ASKINS

neck. This is supposed to preserve all the meat, and is also considered sporting for such a hit is usually instantly fatal. I never shoot for the neck, I consider it too chancy. Usually if the buck offers a shot at all there will be a shoulder exposed, and I would much rather take my chances with this target.

Where to shoot game is a long and involved equation and it is surprising how many sportsmen have never decided just where they should place the shot. They simply go into the game fields and play it by ear. WithThe heart on an elk is not benind the fore-shoulder as a lot of hunters seem to think. It is directly beneath the shoulder. When the bull stands broadside the bullet must be lanced through the shoulder to reach the heart muscle. Hunting with Les Bowman in Wyoming we came upon a young wapiti bull that someone had tried to pink through the old ticker. Only he had not calculated his range very well and the bullet had struck below the shoulder but had broken the left front leg where it joins the body. The alignment had been okay to reach the heart but the trajectory had



The study of game anatomy should include trips to the museum.

out much knowledge of the location of such common targets as the heart, the spine, the shoulder joints and the lungs; and without a clear idea of what the bullet will do when it strikes one of these areas.

In the Arctic I watched Charley Renaud shoot a giant Polar bear at 300 yards. The first shot was a miss, the second shot was a hit. The bear was knocked down, and had fallen into a pocket behind a pressure ridge. When we cautiously approached we found the bruin quite dead. The bullet, a .300 magnum 180-gr. Nosler, had penetrated the liver. A hit in the liver is usually as fatal as a shot through been too great. We finished that bull off before he was left to suffer.

There are those who advocate shooting such game as deer, moose, elk, caribou and antelope through the lungs. This is advocated as an aiming point because it is a comparatively large area. Mostly these fellows are honest enough to point out that you will have to follow the blood trail because the wounded trophy will travel for a way before it goes down. In New Mexico one year, hunting elk in the Shuree, a hunting mate stuck a 180-gr. '06 through a cow elk's ribs. The bullet went through the animal—we saw



that right away from the blood trail. We followed this cow for three miles in the snow. Night came on and we gave up the trail. The next morn we went back and followed this wounded critter for another thousand yards. We finally burst her out of a thick stand of timber and killed her as she crossed a little park. The bullet had slipped through between the ribs on entrance and had never mushroomed as it should.

F or all that, a shot in the lungs is usually a good one. I favor a hit in the forward lung area in proximity to the large blood vessels that feed into the heart. Too, by placing the shot well forward into the lungs if the hold is a bit sloppy you always have the possibility of striking a shoulder and thus disabling the prize.

There isn't a shot the huntsman gets off that is probably more critical than the one he makes on the African leopard. This small cat only weighs 150 pounds, many times less, but he is so tough when wounded that the white hunter makes it awfully plain to his sportsman client that the feline simply must be shot dead. The shooting is done over a bait swung up in an acacia. A blind is built within fifty steps from which the hunter delivers the shot.

t isn't a matter of being difficult to hit the spotted beast; that is simple at the yardage. But it is a matter of considerable perturbation that the bullet be placed as to literally snuff out the life of this howling terror before he can fall from the limb and strike the ground. The head is too small and the cat moves it too much to make a good target. So, too, is the neck which is short and muscular and is buried between the shoulders. The spine would be quite certain except that seldom is there a sportsman nor yet his white hunter who knows his anatomy well enough to say with certainty where the spine is located. This leaves the heart, and it is the best target.

There are few times and few places where it is worthwhile to shoot for the animal's head. The African white hunter will always recommend against the head shot on the elephant. This try may be alright for Karamajo Bell but for the sportsman who is all juiced up with the excitement of the tusker hunt this is no good. He is advised to shoot his mammoth target in the heart. While he must hit a spot the size of a saucer if he fires for the head, when aiming at the heart he has a mark the diameter of a washtub.

For all manner of game I favor the heart shot. This shot can be delivered



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from the side, from in front, and from an angle toward the rear. If the heart is missed the try, if it has been properly placed, will break one or both shoulders and this anchors the trophy. Too, if it goes high it will sever the great blood vessels entering the heart or create havoc in the forward lung area.

A great deal of game is killed with shots in the spine. I have a suspicion that a lot of this shooting is pretty lucky. The spine on most of our game is not very well located in the hunter's mind. He has a general idea where it is but that notion is too hazy to make it a good spot at which to aim. Even when shooting at the neck on various species there is an element of chance that sometimes accounts for the trophy escaping. A shot will slip through the neck, miss the vertebra. will not expand, and as a result the game escapes. I favor neither neck shots nor tries for the spinal column. (Although one time I came out on a shelving bench along the breaks of the South Fork of the Flathead River in Montana and below me not 80 yards, down a very precipitious slope. was a bull elk and his little harem of cows. I shot this bull in the top of the back. Just behind the shoulders. The old .35 Winchester ripped a section of the spine out and dropped the bull stone dead. From the angle there was no other vital target offered and it was an excellent one.)

OMETIMES it is inevitable that you D must take running shots. There is a marked tendency to shoot high and behind on these gamboling targets. I aim at the critter's neck on a running shot and if the chance is so distant that a lead longer than this is required I won't accept it. To make any kind of a decent shot on the fleeing animal you have got to have something to aim at. The neck offers the best mark and it provides the required lead. On those animals that are running away, either directly away or quartering from the gun, the hit more often than not will be a messy one.

It must penetrate hind quarters, paunch, stomach and diaphram before it gets into vital areas. The chances of anything more than a wounded animal which must be followed up are awfully poor. But these things occur and only with a caliber completely adequate to the game can you be even reasonably sure of finally anchoring the trophy.

All of us should study the game we are going to hunt. Look over the species you will find in the game fields at the local zoo, in the natural history texts available at the local library. Study the photos of sportsman friends, look at their movies, and talk to them about where to hit your own game. Finally when you get into the game fields and you have brought your own trophy to bag go forward and carefully study the animal locating the vital areas.

SIGHTING IN: When getting the hunting rifle in good zero for the fall game foray it is important to go over the guard screws and be positive all are tight. After that use a screwdriver on all the screws in the scope mount —especially those flimsy little 6-48 screws that attach the bases to the rifle.

The next step is to decide what load you are going to shoot on game. It is surprising how many sportsmen will sight in with Remington 180-gr. loads and then go into camp with a big supply of Winchester 150-grain! If you use a reload for your game taking then be sure the batch you brew is enough not only to sight-in but also for practice and for the actual hunting.

OW FAR will the average gamekilling shot be made? This is important because it governs the distance at which you zero your rifle. If you are hunting over old country you will know whether you take your trophy at 65 yards, 125 yards or maybe out at 250 yards. If you are uncertain about this highly important point then you ought to get in touch with someone who has hunted the game fields you will go into and ask him. Somebody like the guide-outfitter can tell you these highly important facts. On such game as elk, pronghorn, mule deer, caribou and sheep you can be almost certain that shots will be 200 yards. On whitetail deer, grizzly, black and brown bear the chances of shots under 200 yards and possibly under even 100 yards are quite common. For Africa it is usual to sight in for 200 yards. On the other hand I have an Indian shikari from the central provinces of Madha Pradesh who recommends that you sight-in for 50 yards. Tiger are shot, he explains, at 25 yards. On Kodiak Island shots are often taken at 50 yards and less. The alders are dense there and you can never be sure when you won't stumble onto a great brownie at eyeballto-eyeball yardages.

If the rifle has never been sighted in, or it has a brand new scope and mount, or the load is an entirely new one, a rough sort of first fix on the scope adjustment can be gotten by bore sighting. Better than this—and it is pretty crude—is to use the Sweeney Site-a-Line collimator. This is a short handy 5X scope that attaches to the gun with a muzzle spud. With it you can look through the scope and pick up the reticle and then align these crosshairs with those in the collimator. When these two reticles are perfectly aligned the rifle is within a few inches of being zeroed. The Site-a-Line cannot indicate muzzle rise and whip but it will put you on the target for the first shot.

ONE of the best distances to first shoot when you are sighting in is at 25 yards. This may seem close but it is very much worthwhile. For one thing it is easier for the marksman to shoot well at this close range and too, it is simple to check the target. The first firing ought to be done from a benchrest. If it is not undertaken from a rest at least this steady and substantial the final zero is apt to be pretty sketchy.

When firing from the bench use sandbags for the forward support of the rifle. Place the barrel over the sandbags at a point not more than 4 to



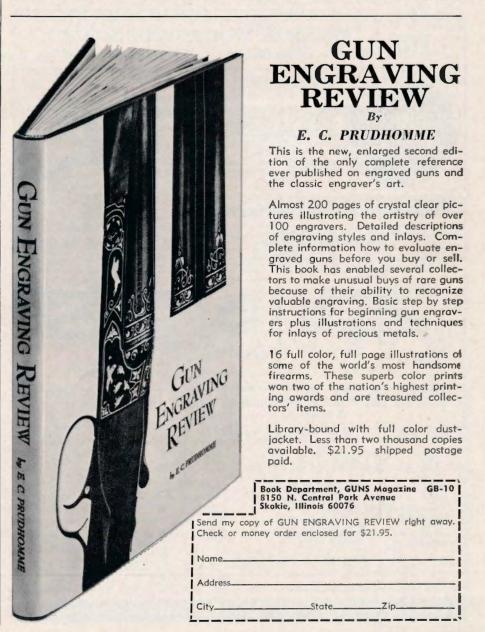
Sighting in from sandbag rest.

6 inches ahead of the receiver ring. Be careful that you do not rest the barrel on the bags anywhere near the muzzle. If you do the vibratory node of the barrel will be adversely effected and the rifle will not group well. If the rifle is a kicker lay the left hand over the barrel where it rests on the forward sandbag and press downward with it. This will prevent the gun rising under recoil and whacking you in the cheek. Press your body up against the benchrest and let the stock rest firmly against your shoulder. It is an excellent strategem to rest the toe of the stock on a second sandbag while holding the rifle at your shoulder.

The old .30-30, one of the most popular of all our deer rifles, when sighted in at 25 yards with the standard 170-grain round nose bullet will, if it is sighted to hit one-quarter inch high at the distance, then shoot $1\frac{1}{4}$ " high at 50 yards and $2\frac{3}{4}$ " high at 100 yards. At 200 yards it will fall $2\frac{1}{2}$









inches low on the target.

The highly popular .30-06 when sighted in with the splendid 150-gr. load, if it is zeroed dead on at 25 yards will be 1" high at 50 yd., $2\frac{1}{4}$ " high at 100; and at 200 will be $1\frac{1}{4}$ inches above the mark. The 180-gr. loading, possibly even more highly accepted, if sighted in at 25 yards, right on the button, will be $2\frac{1}{4}$ " high at 100, only $\frac{3}{4}$ " over the spot at 200, and out at 300 will fall 8 inches low.

The 6 mm Remington with 100-gr. factory loading will, if sighted in at 25 yards to be smack into the center of the mark, shoot 1³/₄" high at 100 yards; 2" high at 200; and dead on at 250 yards. The .243 with the 100-gr. bullet is virtually similar. At 100 yd. it will be 2" above and at 200 it will show 1³/₄" high and at 250 is ¹/₂-inch under.

The .270 Winchester, an hardy old perennial, with its standard 130-gr. bullet if sighted in at 25 yards to hit the spotter precisely, will be 21/2" above the bull at 100 yards, 2" high at 200 and 41/4 inches low at 300. The most popular of all the magnum calibers, the 7 mm Rem, Magnum, when used with the 175-gr, bullet will strike 2¼" high at 100 if it is adjusted to hit dead on at 25 yards. Then at 200 yards it will be 11/4" above, and at 300 yards will be 53/4 inches low. The .308 Winchester with 150-gr. load, if zeroed at 25 yards will strike 21/4 inches high at 100, 1/2" above at 200, and at 250 will be $2\frac{1}{2}$ inches below the mark. With the 180-gr. bullet it will be 134" high at 100 yards, 1/2" low at 200, and 4" below at 250.

The .300 Win. Magnum, when zeroed at 25 yards to be dead on, will be 2" high at 100 yd., $1\frac{1}{4}$ " at 200 and only $4\frac{1}{2}$ inches low at 300. The .338 magnum and its 250-gr. bullet when sighted in at 25 yards will be 2" high at 100 yards; dead on at 200 yards and only $3\frac{1}{4}$ " below at 250 yards. The .44 Rem. Magnum, with its regular 240-gr. bullet if sighted to hit $\frac{1}{2}$ " high at 25 yards will then be $2\frac{3}{4}$ " above at 100 yards, dead on at 150 yards and 10\frac{1}{2} inches low at 200 yards.

After sighting in then get down in the sitting position and fire at that yardage you believe you will shoot in the game fields. Sometimes you can shoot from the prone position but this is pretty rare because when you belly down you can not see your animal. More often you will fire from the sitting position which is the most practical. Practice regularly before you go on the annual game quest. It pays off many times over when the chips are down and that sought after trophy is in your sights.

GUNS • OCTOBER 1968

GUN RACK

(Continued from page 69)

look at it or show it to others. The neat black leather case, hand sewn and riveted, holds the knife solidly, with a retaining strap fastened by a large glove snap. The handle, smooth on the top, has finger notches on the bottom that fits my hand perfectly. The sides of the handle are in the natural rough finish and make it easy to hold, even if it should get wet or bloody.

E.D. Henry, P.O. Box 3144, Mission San Jose, California, 94538, has been making knives for over twenty years. He has put a great deal of time into research on steels used, tempering and designs of the blades and in selecting the proper material for handles. For instance, his Bowie knives are a composite of the originals, being combined with modern material when it has proved to be superior.

A customer has his choice of handles, from Staghorn, Ivory, Bone, Cape Buffalo Horn, African Blackwood or East Indian Rosewood. Every blade is made from the best of steels



and made by hand. To avoid stress and warping, each blade is sawed and ground from solid bars of steel. After semi-finishing, the blade is heat treated by a patented and licensed process called "Martempering." Then it is Rockwell tested, individually. It is then stamped with a number (mine is 98), and with D.E. Henry's name. The owners name is hand engraved on the silver escutcheon plate. A knife and scabbard takes from 25 hours for the skinning type to 75 hours for the 13 inch Smithsonian Bowie knife, to complete. About five hours per inch of blade length.

Current prices, \$25.00 per inch of blade length, measured from guard to tip. At present, deliveries are about 6 to 8 months after the order is received.

Besides being one of the finest working knives available, Henry knives are already considered collectors items. For anyone who wants a hunting knife or a Bowie, that is tops in workmanship and is quite definitely something more than ordinary, I certainly recommend a D.E. Henry, obtainable direct from the maker.—Les Bowman

Redfield Variable Scope

The new Redfield 3X-9X scope contains the 4-Plex reticle. This is an etched crosswires with tapered hairs at the juncture. Tried on hawks it was found excellent at the very longest ranges. The tapered hairs cover only ¼-MOA at 100 yards. Redfield has revamped its vari-power scopes, these to include the 2X-7X, the 4X-12X, and the 1X-4X as well as the 3X-9X which we tested.

The outer tube and the objective bell are now one-piece. This eliminated a threaded joint and now



makes for a more rugged scope. The windage and elevation adjustments are sealed against moisture and the new style caps are now only protectors and not seals. The adjustments are made of rust-proof alloys and are "O" ring sealed. The adjusting knobs are both knurled and slotted for either coin or finger adjustment. There is enough drag on the knobs to prevent creeping under recoil. The knobs are nonremovable with positive stops at both ends of the adjustment range.

The total movement in the new 3X-9X has been increased from a former 40 minutes to 70 minutes. This is a good thing for sometimes with a poor scope mount it requires a lot of adjustment within the scope to bring the rifle to a proper zero. Internally the variable has a steel pivot tube and screw similar to the fixed power Redfield. Before the scope adjusted by pivoting the erector tube on a rubber tubular hinge. It was found that rubber contributed carbon particles to the interior of the scope. The new steel pivot tube is simple of construction and much more rugged.

The 3X-9X was attached to a Remington Model 700 rifle 7 mm magnum caliber in the Redfield Junior bridge-type mount and sighted in for 200 yards. It was then fired back to 500 yards with standard factory 175gr. Corelokt cartridges. The new 4Plex reticle worked ideally on the bullseye targets. Windage and elevation adjustments were tested both with a coin and by hand. These performed ideally. At 500 yards 10 shots were fired with the power set on 3X, on 5X, on 6X and on 9X. There was no notable change or shift in zero.— Col. Charles Askins

Mossberg Varmint Rifle

The new Model 800V rifle in .22-250 and .243 caliber weighs 91/2 pounds with a 24-inch bullgun barrel. The stock is a Monte Carlo with a cheekpiece and sports a non-ventilated recoil pad. This pad is not to take up recoil but to anchor the gun butt on the shoulder. Length of pull is 14", drop at Monte Carlo 15%." This makes it ideal for scope useage. The rifle is without iron sights. It comes from the factory tapped, drilled and mounted with scope blocks. It is also tapped and drilled for iron sights if the owner wants 'em. This baby is a natural for glass sights!

The stock is an improvement over that one put on the standard M800. This stock fits comfortably for prone shooting, has a fullness in the comb and the forestock that lends to steadiness. It is checkered at pistol grip and



forend. There is no carving. This action is unusually strong with a bolt that has 6 lugs and a recessed face. The bolt has geen grooved to eliminate stickiness.

The trigger pull is sharp-breaking, at 4 lb. 2 oz., and has a good stop in it. For varmint shooting this trigger adds measurably to the good performance of the rifle.

Equipped with the Weaver 3X-9X variable scope in Weaver mounts the Mossberg shot well. At 200 yards the .243 shot 10 groups that averaged 3.10 inches. At 100 yards, two groups of 10 shots each printed into 1.42 inches. A hawk hit at 272 yards exploded. And a coyote shot at 243 yards, died with a hit through the shoulders. A fox caught crossing an opening in the mesquite at 187 yards was killed with a shot through the neck. The heavy barrel needs practice to hold steady but it delivers the goods.—Col. Charles Askins

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"SHOOTING"—FITZGERALD

(Continued from page 35)

But crowds can become so used to the miraculous that they demand the impossible. Fitz gives two examples:

"... at Englewood (New Jersey) outdoor police range, a large oak tree grew on a bank about 35 yards away. This was in the autumn and the leaves were nearly all off the tree, but (one fell, and) . . . I fired a shot at it as it was doing a tailspin toward the ground. This was the best shot I ever made, and I couldn't do it again in a week. But as the leaf flew in two pieces, cut clear across, some one called out, 'Shoot the big piece!' I opened the revolver, threw three empties and three loaded shells into the bushes (and told them) my revolver was empty!

"At another exhibition a fishhawk, flying so high he looked like a house-fly, attracted the attention of the audience . . . so I fired a shot at him. Shortly afterward, a fish about six inches long struck the ground ... and one of the audience ran and picked it up. He found where the large claws had pierced the side of the fish, showed this to the crowd, and called to me, 'Fitz, why didn't you hit the hawk, not the fish?' I said, 'What, and pay a fine of ten dollars?' I do not think I came within twenty feet of the hawk, but the report startled him into dropping the fish, and the claw marks appeared about the size of the .22 caliber bullet that was used. . .

"Two targets swinging are, of course, broken where they cross. . .

"A small can held shoulder high and released, drawing the revolver from holster, and hitting said can before it hits the ground, is always good. A small can placed on the toe of the shoe and kicked into the air, drawing from the holster and hitting it before it reached the ground will get applause."

And finally: "Marbles, pennies, and empty shells tossed into the air and hit regularly may close the exhibition to the satisfaction of all."

Experts who have tried these tricks will know that some of them are relatively easy, others extremely difficult; will know, too, that very often the relatively easy shot will get more applause than the hard one. Hitting a horizontal line (cutting a string stretched horizontally across the target) is not only "harder," as Fitz says -it is something few exhibition shooters will even attempt. You need a gun specially sighted for it; and you had better not let any one see you try to sight-and-hit any other target with that gun!

The question is often asked, "Who was (or is) the best of all the great marksmen?" It's an impossible question, like "What is the perfect allaround rifle?" Fitz has to have been one of the greatest-with the handguns; I don't even know that he could shoot a shotgun or rifle. I would guess that neither Captain Hardy nor Ad Topperwein could come close to Fitz with handguns-but that both could far outclass him with shotgun or rifle.

Bill Jordan has to be one of the fastest, deadliest men who ever lived, with a revolver; yet he says himself he is "not much good" on aerial targets. Ed McGivern was literally incredible on aerial targets, but I'd back Jordan to beat him in a "shoot-out."

Usually, in my experience, the man who is superb with a handgun will be good with a rifle, not so hot with a shotgun. A superlative shot with either of the long guns may not be able to shoot the handgun at all. Ex-National Pistol Champion Charles Askins is an exception: don't bet against him with any weapon! . . . And so it goes.

Too, just by way of making the question still more difficult, there are days . . . and days. Days when you can't miss; and days when you couldn't hit a bull with a bucket. When those bad days come, relax. Read Fitz's book! It is hardly likely that you will ever be as good as he was, but . . . it's fun trying; And the ammunition companies will love you!



Sign of Things to Come?

A new Massachusetts gun law, which requires an ID card for gun owners, also states a gun shop shall not display any guns in their window, or where they can be seen from the outside. I wonder if the gun shop of the future may not look like a tavern, with the windows painted over and only a peep hole opened to the street?



MUZZLE LOADERS

Box 2446, San Diego, California 92112



SHOPPING WITTH GUNS

A NEW NAME, Model 1400 MARK II, goes along with the new styling and functional improvements offered in Winchester's popular automatic shotgun in 1968. One of the chief innovations is the addition of a serrated push-button carrier release that speeds and simplifies loading. With the action open, the first shell dropped in can be chambered instantly at a touch of the release button. Other new features include an improved trigger, straighter contoured pistol grip, trimmer forearm and crisper checkering plus a black steel pistol grip cap. The Mark II comes in a choice of 12, 16 and 20 gauge. For a complete rundown write Winchester-Western, Dept. G-10, 275 Winchester Ave., New Haven, Conn.

THE PACKAGE OF G-66 Gun Stock Finish contains G-66 Polyurethane Spray which produces a hard, scratch resistant, weather resistant finish on new or old gun stocks. The Gun Stock Finishing Kit also contains G-66 Aerosol Gun Stock Wood Sealer and



Filler and an ample supply of deep penetrating walnut stain. This item retails for \$2.98 per kit and should be available at your shooting goods dealer or from Jet-Aer Corp., Dept. G-10, 165 Third Ave., Paterson, N. J. 07514. When ordering specify stock number 1090. "HOW TO RATTLE A BUCK" is the first (and a most valuable) instruction recording for deer hunters. This long play recording contains 45 minutes of information about the most effective method ever devised to call the white-tailed buck. It teaches the history of rattling, physiological aspects, season of the rut, the weather factor, why bucks respond to rattling, scrapes, rubs, preparation of the antlers, and many other important



points. This recording will make you a better deer hunter regardless of whether you choose to rattle antlers. Send no money! After receiving this recording, if you agree that it contains the most valuable deer hunting instructions you've ever received, send \$5.00 plus shipping charges within five days. If not satisfied, simply return to Johnny Stewart, Waco, Texas 76710.

THE "BLACK MASTER" is a new West German imported knife from Tracy-Rene Enterprises. The blade is $5\frac{1}{2}$ " long, of Solingen Steel, and engraved with the words "Me fecit Ern." The sturdy black plastic handle carries the insignia of an Eagle bearing a snake in its claws. The knife comes complete with a genuine split cowhide leather sheath. Allow two to three weeks for delivery. Send just 9.95 ppd. (order No. 1021-A) to Tracy-René Enterprises, Dept. G-6, P.O. Box 533, Daleville, Indiana.



New Trophy scopes. Windage and elevation adjustments are in the scope. Fits any standard mount. Fixed $2\frac{1}{2}x$, 4x, 6x and a variable $2\frac{1}{2}x$ to 8x. From \$49.95.



Famous Custom scopes. Adjustments are in the mount. One scope works with every rifle on the rack. Fixed 2½x and 4x. Variables are 2½x to 5x and 2½x to 8x. From \$49.95.

In both types, field of view, brightness, definition, eye relief and all other factors are carefully balanced to provide the finest optical performance. These scopes are tough, fogproof and as fine as modern technology and meticulous craftsmanship can make them. Send 25¢ for manual, "Facts About Telescopic Sights". Bausch & Lomb, Rochester, N. Y. 14602.

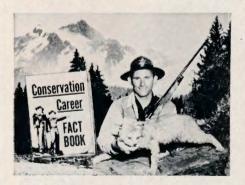


There are two kinds of Bausch & Lomb scopes. There is only one Bausch & Lomb. FOR THE FIRST TIME, Woods Bag and Canvas offers a complete line of Canadian woolen hunting and sporting clothing. One of the many new items in the Woods line is the Jac Shirt, Model 303... A rugged, warm garment, the Jac Shirt is designed to please both the male and female outdoor types. The shirt has been designed as a straight bottom garment so it may be worn as a jacket or a shirt. The button front has two generous breast pockets. Manufactured



from 18 to 20 oz. Canadian wool which will provide warmth on those chilly days, the collors offered are: red-/white plaid; blue/white plaid; green-/yellow/brown plaid; and the traditional red, red/black or green/black buffalo plaids. In sizes small, medium and large with a slight extra charge for over sizes. Priced at about \$14.95 at sporting goods dealers, or write for information to: Woods Bag & Canvas Co., Dept. G-10, 16 Lake St., Ogdensburg, N.Y. 13669.

YOU CAN BE a government hunter, game warden, or forester. Three free guides reveal a plan to prepare men from age 17 up for a vacation career in Wildlife-Forestry Conservation. Such a career offers adventure,



thrills, public service, good pay, low living cost, and security. For your free guides write: North American Conservation, Dept. GP, University Plaza, Campus Drive, Newport, Calif. 92660.



E. C. BISHOP AND SON, Inc., manufacturers of shotgun and rifle stocks, are now offering their 50th Anniversary Catalog, showing their full line of



stocks and accessories. The 52-page catalog is available from gunsmiths, hardware and sporting goods dealers free of charge; or send 25¢ to cover mailing and handling to E. C. Bishop and Son, Inc., Dept G-10, P.O. Box 7, Warsaw, Missouri 65355.

REAL .22 RIFLE looks and features are slated to make the new Daisy Model 572 Fieldmaster B.B rifle a favorite with young shooters. The Daisy Model 572 B.B rifle is a "spittin" image" of the famous Remington Fieldmaster .22 rifle. The under-bar-



rel magazine loads same as the Remington, and the Daisy cocking action is also similar to the Remington, cocking half on the forward motion, half on the return. For safe shooting, the Daisy Model 572 has a cross-bolt safety, also like the Remington. The Daisy Fieldmaster has a 45 B.B. loading magazine and famous Daisy controlled velocity. The super-strength, molded stock is wood-grained, and the forearm is a ribbed, pump grip. Sights are bead front and step adjusting rear. Overall gun length is $42\frac{1}{4}$ inches. For information write Daisy/Heddon, Dept. G-10, Rogers, Ark.

FIRST TO OFFER a jacketed bullet in the powerful .44 Magnum, Norma has now added a 236-grain hollowpoint in the same caliber. Except for the forward cavity, construction is essentially the same, featuring the famous Norma Tri-Clad jacket for avoidance of the well-known problems arising with lead bullets at high velocities. Devoted .44 Magnum hunters load their carbine with the softpoint flat-nose bullet for shots at close range and follow up with hollow-



points for second and third shots at longer range, where quicker expansion is needed. Accuracy is comparable to that of top-grade rifle bullets at carbine ranges. Like the soft-point flat-nose, the new hollow-point is cannelured to facilitate crimping in the big .44 Magnum case. The Norma .44 Magnum H. P. bullet is packaged in boxes of 100 and available at leading sporting goods dealers' everywhere.

THE FAMOUS 2.146 oz. can of Dri-Slide, still in demand in Vietnam and packaged with a stainless steel hypodermic type (.0026 ID) application needle that fits on the plastic can spout, is now available to everyone. The applicator needle controls use of Dri-Slide to 1/3 drop for vital applications on reels, guns, and household equipment in spots where overlubrication is not desirable. The needle also allows reaching of inaccessible lubrication areas and can be hand formed to use in otherwise impossible to reach places. Get yourself a can, or further information, from Dri-Slide Inc., Dept. G-10, Industrial Park, Fremont, Michigan.

SHOPPING WITTH GUNS

JACK O'CONNOR, famed hunter, author and long-time Arms and Ammunition Editor of Outdoor Life, has high praise for the recently released 1969 Gun Digest. O'Connor states, "This is easily the best Gun Digest ever," and preliminary information fully justifies his statement. The all-new 1969 23rd edition has been enlarged to 416 pages -2½ pounds of fact filled stories and

THE COMPANION SEAT enables a sportsman to seat himself comfortably on a tree to wait for game. Excellent as a deer stand or for varmint hunting, the Companion seat is also easily carried with compact folded dimensions of just 6" high, 2½" thick and 15"



across. When open for use the seat measures $12\frac{1}{2}$ " by 15" and the total weight is only $3\frac{1}{2}$ lbs. and is capable of supporting a man of 250 lbs. The Companion seat is also useful in other outdoor activities wherever a tree is available and a seat required. For information write Glo-Carm, Dept G-10, 304 Wilson St., Syracuse, N.Y. 13203.

RICHLAND ARMS offers a high quality, light-weight case for all take-down shotguns with barrels up to 30" long. Sectionalized for greatest strength and protection of the firearm. the interior is also cushioned and sections are lined with orlon pile that has been treated with silicon to help prevent rusting. Room for a cleaning kit and other articles is also provided. The exterior features a heavy duty and scuff resistant leatherette cover. All fittings are chrome plated, and lock and key add to security and protection of your firearm. Priced at \$29.95, more information on the case is available from Richland Arms Co., Dept G-10, 300 W. Adrian St., Blissfield, Michigan.

WEAVER'S all-new 1.5-power K1.5 was designed for all big game hunting at short range and in heavy cover. where a wide field of view and speed of aim are important. Low-power, a 58-foot field and large exit pupil make it easier to locate, aim and place accurate shots on fast moving targets. The K1.5 offers extra long eye relief, fine Weaver-crafted optics, triple weatherproofing and shockproof reliability. Crosshair, post and crosshair and Dual X reticles are available at no extra charge; dot reticle can be ordered at extra cost. Retail price \$29.50. For your free Weaver catalog write W. R. Weaver Co., Dept. 58 G-10, El Paso, Texas.

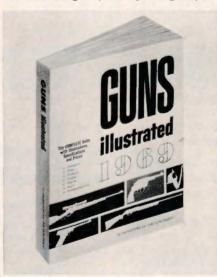
COMPASS INSTRUMENT and Optical Co., Inc. has added to its binocular line the highest-powered model available, with a 30x magnification and extremely large 70 mm objective lenses for brilliant light transmission. These binoculars are an excellent choice for those desiring extreme long range ex-



ploration. With a viewing field of 150 feet at a distance of 1000 yards, this item also features fully-coated optics, and chromium trimmed eyepieces and centerwhell. For information write Compass Instrument and Optical Co., Inc., Dept. G-10, 104 East 25th St., N.Y., N.Y. 10010.



information about guns and shooting by the world's greatest gun experts. Included, as always, is the most complete catalog of guns and gun accessories with full specifications and latest retail prices. Still only \$4.95. In addition, an all new book, Guns Illustrated, is being offered for the very first time and is sure, like its sister publication, to become an annual classic. Guns Illustrated 1969 is a new guide to current model handguns, rifles, shotguns, air



guns, scopes, sights, handloading tools, ammunition and reloading components manufactured in the U.S. or imported into the U.S. This new book is full of information, specifications and retail prices that will help keep you up-todate on the guns market. These two fine books should be in your library. From your local dealer or: Gun Digest Ass'n, Dept. G, 4540 W. Madison St., Chicago, Ill. 60624.

.45 vs. .38 SUPER

(Continued from page 24)

bullets have been designed to entirely eliminate bullet expansion.

Bullet Expansion Tests of Factory Ammunition

Cal45 ACP	Recovered bullet diameter
Brand A	0.452
Brand B	0.452
Brand C	0.453
Brand D	0.453
Cal38 Super ACP	
Brand A	0.357
Brand B	0.356

These expansion figures clearly prove how expansion has been kept to a minimum in factory ammunition thus holding the conversion of mechanical energy to physical energy to a minimum. Just because a bullet has a listed FPE of 386 does not mean that all of these Foot Pounds of Energy are converted to physical energy. Far from it. Only bullet performance can take the potential mechanical energy shown on paper as the Foot Pounds of Energy and transfer this into stopping power. Even hollow pointing a heavy jacketed bullet will not cause any increase in bullet expansion and this has been demonstrated in the expansion tests.

Bullet Penetration Tests of Factory Ammunition

	Number of
Cal45 ACP	panels penetrated
Brand A	11
Brand B	7
Brand C	10
Brand D	11
Cal38 Super ACP	
Brand A	14
Brand B	14

The performance of bullet B in the cal. .45 penetration test is due solely to the hollow point that retarded bullet penetration.

It would appear that none of the factory bullets in either caliber deliver more than a fraction of their inherent Foot Pounds of Energy into the target. Drilling holes in targets cannot and will not stop the target. The potential energy is carried by the bullet but this energy must be released and this can only be done by producing bullet performance.

The performance of factory ammunition would tend to indicate that both calibers are about equal despite the additional velocity plus Foot Pounds of Energy carried by the cal. .38 Super. This is a debatable subject but I do know from personal experience on game that the cal. .45 ACP factory bullet has a tendency to drop game more reliably than the .38 Super. In my opinion, this is due to its larger mass and frontal area. If I were restricted to using only factory ammunition, I would choose the cal. .45 over the .38 Super for ranges under one hundred yards.

So far the cal. .45 ACP has, in my opinion, an edge over the .38 Super but let us examine the results when the ammunition has been loaded to modern-day standards using modern, high velocity components. After all, the hunter wishes to drop game efficiently with a minimum of tracking and the Law Enforcement Officer is certainly entitled to protect his life with every means at his disposal so



Factory .45 ammo tested.

let us review the components that are available today to both the custom ammunition manufacturer and the individual handloader.

I list below the components furnished me for the following tests and while they do not represent every possible component combination on the market today they do cover the majority. I used CCI primers throughout the tests, not because they are necessarily better than any of the other primers, but simply because it would have been impractical and -I believe—unnecessary to run tests using every type of primer. As it was, I turned to the new Redding Model #25 Turret Head Press fitted with a six station head so that I could mount and lock-in three cal. .45 ACP dies and three cal. .38 Super dies. This enabled me to set up once and then run through cases in either caliber with a minimum of time and effort which proved important due to the

number of rounds that were loaded and fired in these tests. By using this model #25 press, I could re-run tests quickly to verify results.

The following firms shipped components to me:

Norma Precision, South Lansing, Michigan

- 1. 9 m/m 0.355 diameter 116 grain soft point round nose bullets.
- 2. They did not have cal. .45 ACP bullets in stock and would not receive a shipment before the deadline for this article but these bullets are normally available.

Speer Products, P. O. Box 244, Lewiston, Idaho

1. 9 m/m 0.355 diameter 125 grain soft point bullets.

Hornady Manufacturing Company, Grand Island, Nebraska.

- 1. Cal. .45 ACP 185 grain bullets.
- 2. Cal. .357 130 grain Full Metal Jacket bullets.

International Bullet and Ammunition Corporation (IBAC), 1015 East Wellwood Avenue, North Lindenhurst, New York 11757.

- 1. Cal. .357 100 grain DD soft point, long jacketed bullets.
- 2. Cal. .357 140 grain DD soft point, long jacketed bullets.
- 3. Cal. .45 ACP 200 grain DD soft point bullets.
- 4. Cal. .45 ACP 225 grain DD soft point bullets.
- 5. Cal. .45 ACP 180 grain DD soft point bullets.

Hercules Powder Company, Kenvil, New Jersey.

1. Herco and Unique powders.

Because of the dangers of using the wrong powder or the wrong bullet with a specific powder charge I am listing each handload in detail so that those readers who are interested in assembling duplicate handloads for their pistols can do so. Let me repeat that the listed results were obtained in my pistols and any attempt to duplicate these loads must be accompanied by a ten per cent reduction in powder charges for the Model 1911 pistols and a fifteen per cent reduction in powder charges for the Colt Commander pistols. Due to manufacturing tolerances, it may even be necessary in some instances to reduce powder charges even more. The handloader must be guided by trial results in his pistols.

I have condensed the listed data into a single table that lists all vital information and which will allow the reader to make comparisons with a minimum of trouble. (See table p. 24.)

As may be seen from the listed tests, these soft nose bullets commence to expand upon impact and the lead noses increase in size as the bullet plows through the target with resulting terrific de-acceleration. This bullet expansion plus bullet rotation contribute towards converting a large percentage of the mechanical bullet energy into physical bullet energy. The most surprising result of the listed test is the performance of the 130 grain, full jacketed bullet that gave exceptionally good expansion. This speaks well for bullet design and jacket construction. These series of tests have shown that two bullets of identical weight, travelling at identical velocities, will each carry the same mechanical FPE. But compare the recovered bullets and if one has retained its original shape and measurements while the other has mushroomed out to perhaps fifty per cent larger than its original size with no appreciable loss of weight, it is obvious that the latter bullet has converted most of its mechanical energy into smashing physical energy thus out performing the first bullet. These facts are illustrated in the above tables covering both the factory bullets and the handloads. The results speak for themselves.

The question now arises as to which caliber is the best. I have demontrated the capabilities of each cartridge. Knowing all this, which cartridge would be the best all-around cartridge for a man to choose if he could only purchase one pistol? Let me answer the question in this way. I believe that the cal. .38 Super would be the best choice for the man who hunts and who would use this pistol for allaround work such as varmints, home protection, big game, camping trips and similar activities because of the choice of bullets that are available. Even if the man did not handload he can purchase ammunition from firms like IBAC giving them his ammunition requirements.

In my opinion, the cal. .45 ACP is the ideal Law Enforcement Officers weapon. They usually require maximum stopping power at close ranges and do not need ultra high velocity for long distances. As we have seen in these tests, the custom .45 ACP bullets pack a wallop that ranks this ammunition among some of the most potent combat loads ever assembled for close range work. They will turn a vehicle into a sieve and fill the car interior with slugs that have already expanded to seventy and eighty caliber before passing through the far side.

Both calibers are only moderately potent firing factory, full jacketed ammunition. They are adequate, but these tests have shown that they cannot presently compare with custom, handloaded ammunition although I believe that within a few years the factories will join the trend towards assembling highly efficient loads. Norma has taken the first step with their hollow point cal. .45 ACP ammunition and as soon as they alter the nose characteristics of these bullets to provide expansion I believe the rest of the manufacturers will follow suit.

I hope that I have not raised more new questions than I have answered but these two pistols deserve a lot of attention today when their potentials are just commencing to be realized. They make a great pair. Take your choice.







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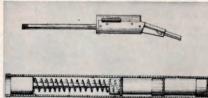
Aer Corporation, Paterson, New Jersey 07524

NEW PATENTS By A. AUGUST TIGER

Patent copies of the product ideas described here are available from the government patent office at 50¢ each. It takes from 3 to 6 weeks to receive them. Should you want fast one day service, send the patent number and remit \$1 for each patent copy wanted to: A. AUGUST TIGER, Box 831, New York, N. Y. 10017.

Adjustable Magazine Plug

A hollow cylindrical container filled with silica gel is removably inserted into the magazine of a shotgun to absorb moisture which would otherwise impair its proper functioning. It also serves, when necessary, to reduce the capacity of the magazine to the two shells as required by law in certain states when migratory birds are being hunted.



The upper illustration shows a side view of the plug in use. The lower illustration shows an enlarged version of the hollow magazine. It is positioned at the left in the upper picture. The enlargment shows the silica gel container at the extreme left and two shotgun shells at the extreme right.

The container is open at both ends with a removable end cap sealing one end. A disc having a central threaded bore is disposed at the other end. The disc has a plurality of holes positioned between the bore and the disc periphery.

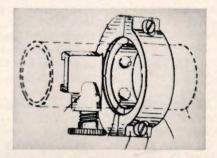
When the container is positioned with the disc inward into the shotgun magazine, the moisture created in the magazine by condensation (as the gun is fired, the resultant heating and cooling of the barrel produces heating and cooling of the magazine) is absorbed in the silica gel. This moisture, if permitted to remain, is said to leave a residue and can result in shell feed jamming and improper functioning of the shotgun.

Patent No. 3,371,440 has been awarded to Charles Cassell, 2708 SW 44th, Oklahoma City, Okla. 73119.

Front Gun Telescope Mount

Recoil shock at the time of gun firing, despite the use of rubber elements, often causes misplacement of the telescope especially when used on late model high powered guns. The misplacement possibilities are increased as the rubber elements lose their elasticity because of age. It then becomes necessary to replace the rubber elements if they constitute the sole contact between the mount and the telescope.

This new development provides a front gun telescope mount which reliably positions the telescope over very long periods of use while utilizing the yielding properties of rubber for absorbing shock due to firing the gun. The device permits the aiming telescope to return to its proper



aiming position accurately after severe lateral blows or pressures.

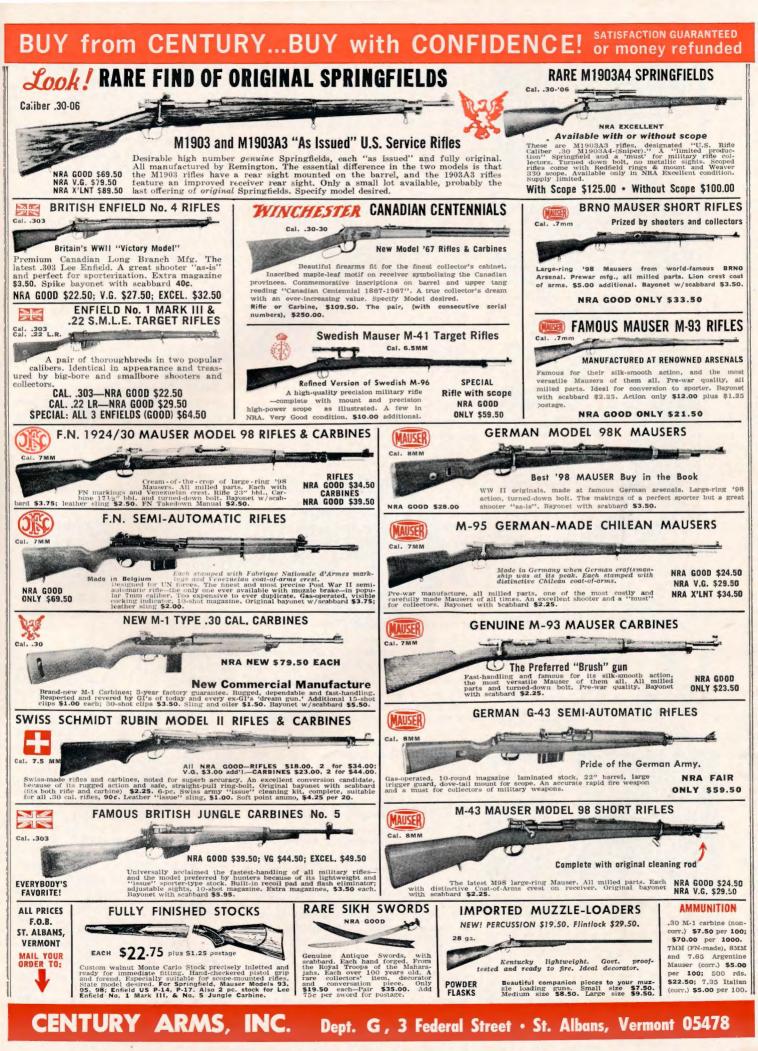
The construction's primary benefit is obtained by gently forcing the telescope against two fixed seating elements which provide substantially the advantages of a solid V mount. The telescope casing may be swung about the seating elements as a pivot through the full windage movements without causing any significant vertical movement of the casing. The integrity of the rubber ring's grip on the telescope body is maintained throughout all adjusting movements of the telescope and it remains secure in spite of severe setback forces at the time of firing the gun.

Patent No. 3,374,544 has been awarded Richard L. Pitchford and assigned to Bausch & Lomb Incorporated, Rochester, N. Y.

Magazine Catch For Firearms

This invention provides a magazine catch which positively fixes the magazine in a predetermined position in the gun, so that its cartridge holddown lips are correctly located with respect to the cartridge chamber and operates easily both in latching and releasing the magazine.

Malfunctions in reloading guns





11320 Burbank Bivd., No. Hollywood, Calif. 91601

sometimes occur, especially in automatic or semi-automatic weapons because the guide members on the magazine may not be properly positioned with respect to the cartridge chamber of the gun. Such misalignment is often due to the difficulty in holding manufacturing tolerances in the magazine catch, and/or in the magazine, close enough to prevent magazine guides from being too high or too low



with respect to the cartridge chamber. The cartridges therefore may not feed properly into the chamber and the gun jams.

The problem is overcome by providing the gun with a latch that engages with the latching surface on the magazine so that it wedges the magazine against a fixed stop on the frame of the gun. The wedging action ensures that the magazine is always held tightly against the position-stop in the gun, so that the guide or holddown lips will be accurately located with respect to the cartridge chamber.

This arrangement will have the magazine catch working easily when it is latched or unlatched. Because of the constant pressure when the catch is engaged, no close manufacturing tolerances are required. In the case of semi-automatic pistols in which the magazine fits into the grip of the pistol, the catch may be positioned so that it is pressed into latching position by the shooter's hand, thereby preventing accidental disengagement of the latch when the gun is fired.

Patent No. 3,372,506 has been awarded Gary Wilhelm and assigned to The High Standard Manufacturing Corporation, Hamden, Conn.



GUNSMITHING TIPS

By WILLIAM SCHUMAKER

FRONT SIGHTS of military rifles such as the 98 Mausers, Japanese Arisaka, Lee Enfield, and 1917 Enfields are not generally accepted as suitable for general hunting purposes. Most hunters who use open or receiver sights want a gold front sight. Among these the Marble's bead and Redfield Sourdough gold inset post types are popular.

Gunsmiths ordinarily remove the military unit entirely and install a sweat-on ramp which has a standard %" milled dovetail notch. This will accept any of the dovetail base front bead sights. Care must be taken to select the correct height ramp. Otherwise the front bead required to achieve a zero will be either too high, or so low that vision is partially obstructed by the ramp.

A ramp height which comes to proper boresight with approximately a No. 34N Sheard gold bead is best. This gives elevation leeway and either lower or higher beads can be used if required. Such an installation includes a ramp of about \$3.95 value, a \$3.25 Sheard bead, and an average of \$2.50 for installation. Plain gold beads such as the Lyman No. 31 at \$1.75 may be substituted. It's a \$10.00 front sight unit any way you look at it, and, of course, is worth every cent of it.

course, is worth every cent of it. However, I've used an economical shortcut many times. Anyone can do this in their basement workshop. Grip the barrel near the muzzle in a copper or tough rubber-jawed vise. Use a caliper to measure the overall height of the front military sight, from bottom of the barrel to top of the sight. Open caliper an additional ½" for later reference and lock. This will be approximately the required overall height. Most military front sights are too low, thus shooting high for sporting purposes, due to their long range setting.

Knock out the military front sight with a brass or copper drift and hammer. Use a small three-cornered file to deepen and widen the small military notch to accept a standard %" dovetail base front bead base.

This isn't a fancy front sight, but it is economical and durable. Should the bead ever be broken, it is easy to replace.

(Continued from page 62)

gun is a pleasure to carry in the field, and a joy to shoot. It is light, responsive, and deadly when pointed right. If you are going to include an automatic (autoloader) in your battery, this is certainly the place for it.

Last fall, High Standard added the 28 gauge to their popular "Flite King" line of slide action shotguns, thus becoming the second manufacturer to offer a "made in the U.S." 28-gauge shotgun. Selling for less than \$100 (with fancier models available), this little gun should certainly help to make the 28 gauge more popular with American shooters. tional guns very carefully to tailor them to your individual shooting needs. If you live in the West (as I do), where country is open and long shots are the rule, you might feel the need for a fairly light gun that shoots a "medium" load in a tight, full-choke pattern. Here, a 16 gauge auto or pump would be a good choice. A properly balanced 16 gauge makes an excellent gun for upland hunting; it is lighter than the 12, and it speaks with more authority than the 20 (with both guns shooting standard "nonmagnum" loads).

A word of caution: When buying a 16 gauge, be sure to select one that

Once the basic four gun battery is established, more specialized guns are added

Winchester and Browning offer their highly regarded over-unders in 28 gauge. I am an ardent overand-under fan, and both these guns have proven themselves on the range and in the field. In addition, a properly proportioned 28-gauge double is a thing of real beauty. Both Winchester and Browning offer their superposed guns in 20 gauge with a second set of barrels in 28 gauge, but these package combinations can get expensive.

Suffice to say that if I were choosing an autoloader or any other singlebarreled gun in this gauge I would specify full choke. The double gun would be ordered in modified and full. I feel that any choke wider than modified would throw too skimpy a pattern with the 28's standard ³/₄ ounce loading to be effective on birds, although the one ounce load might be all right in an improved cylinderchoked gun.

If you must hunt small bird—such as woodcock—in heavy cover where quick pointing and open chokes are required, use your improved cylinder/modified 20 gauge (the second gun in your collection, remember?). With standard loads, the 28 will just not throw enough shot to give effective coverage with an open choke. With standard ³/₄-ounce loads, the 28 is deadly on quail, dove, and other smaller species. The one-ounce load makes it right for pheasant and other medium-sized game.

With this four-gun battery, you are prepared to hunt any game bird that flies. Now that you have a collection of guns that will give you the "right" tool for almost any shotgunning situation, you need to select any addiis built on a 16 gauge frame (such as Browning's "Sweet Sixteen"). Many 16-gauge guns are merely 16-gauge barrels married to 12-gauge frames. Such a combination gives you none of the weight advantage of going to the smaller gauge.

If you live in the South or some other area that has very dense bird cover, you might select a fast-swinging featherlight 20 double, choked skeet No. 1 and skeet No. 2 in favor of a full-choked 16 gauge.

The sixth gun I would choose for my growing battery would be the diminutive .410. This bastard gun (.410 indicates caliber—not gauge) is not a gun for beginners, as some people think; it is a gun that should only be used by an expert. Too many well-meaning fathers begin their son's shot-gunning career with a single-shot or bolt-action .410, and then wonder why they get discouraged so quickly.

Since I mentioned bolt-action shotguns, I would like to say that this action would be my last choice for a shotgun. Bolt-action rifles are fine, but I think that this action is not well suited to shotguns. Speaking personally, I would far rather own a breaktop single shot than a bolt-action shotgun. Neither type can be fired fast enough to get off two shots at the same bird, and the break-top single has a more "solid" feel and more graceful lines.)

The .410 has a very light recoil, but the thin patterns produced and the resulting limited range will give consecutive misses in all but the most experienced hands. This gun can be a rewarding gun to shoot, but it should never be used at ranges much



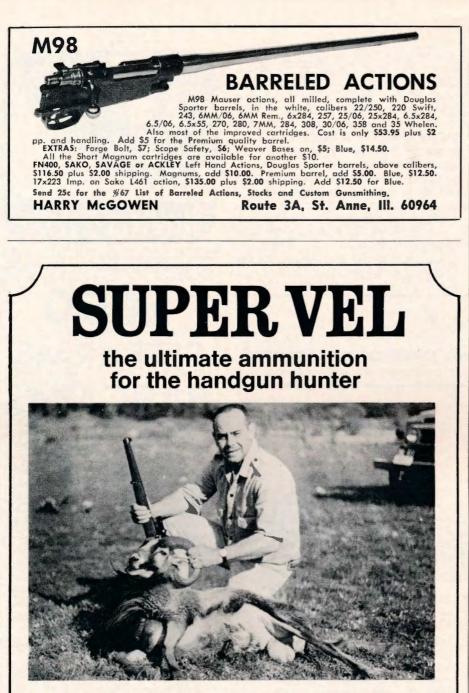
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Lee Jurras, Indiana sportsman, shown with a Mouflon Sheep he took at the Burnham Bros. Ranch in Southern Texas. Lee dropped his sheep at 113 yards with a Super Vel .44 Magnum, 180 grain Jacketed Soft Point.

Mouflon Sheep aren't the only game Super Vel ammunition has put down. Brown bear in Alaska, Wild Boar in New Guinea, Grizzly Bear in Montana, Crocodile in South America are just a few. Super Vels' extremely high velocity and superior bullet expansion give the ultimate in hydrostatic shocking power, capable of dropping any game that you dare to tackle with a handgun. This revolutionary bullet, the result of years of field testing, is designed to give you the maximum potential of your weapon. The Super Vel cartridge is the choice of experienced handgun hunters internationally.

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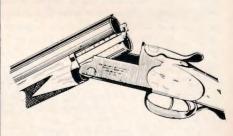


past 30 yards, as excessive crippling is almost certain even with good marksmanship.

A full-choked .410 pump or auto is fun to shoot, and can be effective at short ranges on birds even as large as pheasants. However, I would highly recommend limiting its use to smaller species. The .410 can also be an excellent gun to use on handtrap-thrown clays to sharpen up the shooting eye before the seasons open. If you can score well on clay pigeons with your .410, you shouldn't have any trouble later with larger guns on live birds.

Your last selection might be a 10gauge magnum. This is the largest shotgun made today—if you could find a larger one, it would be illegal to use on most game. Stoeger, Richland Arms, and others import several European single shots and doubles in 10 gauge; these guns are available in most larger sporting goods stores.

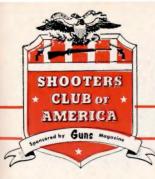
The 10-gauge magnum is perhaps the most highly specialized shotgun I've named—which is the reason for saving it till last. It will throw only



 $\frac{1}{8}$ ounce more shot than the threeinch 12 magnum, and it is suited only for passing shots on geese or other very large species. If you do a lot of this kind of hunting, and if you are not bothered by excessive recoil, this gauge can be a profitable addition to your collection and should complete your hunting battery.

I say "hunting" battery because this article has not even attempted to mention guns for trap or skeet shooting. These sports breed their own particular brand of gun nut, and you would need at least one separate shotgun for each. Of course, by the time you have acquired the seven shotgun types named in this article you will probably have already joined the thousands of enthusiasts who delight in shattering clay pigeons between hunting seasons. And although you can have a lot of fun on the trap or skeet range with any of your hunting shotguns, the time will come when you will feel the urge to have the equipment that is specifically designed for the sport.

GUNS • OCTOBER 1968



News from the **SHOOTERS CLUB OF AMERICA**

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

With Senator Kennedy's recent death still a bad memory, you can be sure of unabated pressure for strong anti-gun legislation. Politicians. hoping to curry favor with the anti-gun element of the population, can be expected to out-do each other in advocating preposterous legislation aimed at harassing the legitimate shooting sportsman while allowing the criminal element to remain as unfettered as at present. The Senate adoption of tighter hand gun controls is a case in point, and for your information, we are publishing the roll call vote on the proposed amendment which would ban interstate mail order sales of rifles and shotguns.

	FOR THE	MENDMENT-29	
	Dem	ocrats-20	
Brewster (Md.) Byrd (W. Va.) Clark (Pa.) Dodd (Conn.) Gore (Tenn.)	Kennedy (Mass.) Lausche (Ohio) Long (Mo.) McIntyre (N.H.) Mondale (Minn.)	Pell (R.i.) Randolph (W. Va.) Ribicoff (Conn.) Smathers (Fla.) Spong (Va.)	Symington (Mo.) Tydings (Md.) Williams (N.J.) Yarborough (Tex.) Young (Ohio)
	Repu	blicans-9	Contraction of the second
Brooke (Ma Cooper (Ky Fong (Haw	(.) Javits	(N.Y.) Smith	(III.) (Mo.) ams (Del.)
	AGAINST THE	AMENDMENT-53	
	Dem	ocrats-31	
Anderson (N.M.) Bartlett (Alaska) Bayh (Ind.) Bible (Nev.) Burdick (N.D.)	Byrd (Va.) Cannon (Nev.) Jackson (Wash.) Jordan (N.C.) Long (La.)	Mansfield (Mont.) McClellan (Ark.) McGee (Wyo.) McGovern (S.D.) Church (Idaho) Eastland (Miss.)	Ellender (La.) Ervin (N.C.) Gruening (Alaska) Hart (Mioh.) Hayden (Ariz.)
Metcal Muskie	Ala.) d (Fla.) f (Mont.) e (Mo.) l, (Wisc.)	Proxmire (Wis Russell (Ga.) Sparkman (Ala Stennis (Miss.) Talmadge (Ga.	a.)
	Reput	olicans-22	
Allott (Colo.) Baker (Tenn.) Bennett (Utah) Boggs (Dak.) Carlson (Ken.)	Colton (N.H.) Curtis (Neb.) Dirksen (III.) Dominick (Colo.) Fannin (Ariz)	Hatfield (Ore.) Hickenlooper (Iowa) Hruska (Neb.) Jordan (Idaho) Miller (Iowa)	Mundt (S.D.) Murphy (Calif.) Scott (Pa.) Thurmond (S.C.) Tower (Tex.)

Hruska (Neb.) Jordan (Idaho) Miller (Iowa)

Tower (Tex.) Young (N.D.)

Dirksen (III.) Dominick (Colo.) Fannin (Ariz.) Hansen (Wyo.)

Carlson (Ken.)

The SCA feels an obligation to present information of this type whenever available, and all other pro-gun information useful in the coming controversy. We are not opposed to equitable gun control laws which can be fairly administered and will not create a burden for the law abiding citizen, but we will continue to oppose legislation which is conducted as a vendetta against legitimate gun owners. To provide you with a ready store of facts, we have obtained copies of the famous pro-gun publication, "The World of Guns." They are now available on direct inquiry to the SCA for the reduced price of \$1.75 each, or free if you enter a membership or renewal on the application form below.

"The World of Guns" is the only complete source of pro-gun information. Articles by noted firearms industry members and nationally recognized figures from outside the firearms world present a full and positive profile of the shooting sports and their place in the American scene. The 13 chapters offer a complete arsenal of information you can use effectively in the pro-gun struggle.

Some of the well known contributors to this important pro-gun volume are: Stewart Udall, on guns and natural resources; Joe Foss, for the rewards of recreational shooting; Joyce Hornady, on hand-loading; Col. Rex Applegate on guns and the law; and Robert Abels presents gun collecting as an art form. These are only a few of the many informative feature articles which make "The World of Guns" so important to the pro-gun struggle.

Now is your chance to obtain this authoritative volume free! Just enter your renewal or new membership on the coupon below and mail it back to us today. In addition to the many outstanding bene-fits already offered SCA members, you will receive your free copy of "The World of Guns."

If you wish to order extra copies of "The World of Guns" and are already a member of the SCA or do not want to join at this time, just mark the coupon below for the number of copies you desire. But either way, don't wait until it is too late—use the coupon below right now and be prepared.

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NEW Zipedo bullet has been accepted by target shooters for proved consistant accuracy and moderate pressures

SHOPPING WYITTH GUNS

CHARTER ARMS has introduced custom engraving services for its .38 special Undercover revolver in both the 2 and 3" versions. Custom engraving is offered in three different styles varying only insofar as the amount of coverage is concerned. Special engraving for presentation purposes is also available. The three types offered employ a special American style scroll designed exclusively for the Undercover by the A. A. White Company. Style "A" is the most

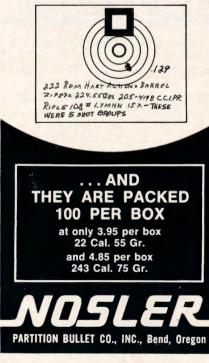
profusely engraved of the trio offerings. Style "B" is similar to "A", but offering approximately one-half the coverage; with "C" offering about one-third the engraving coverage of "A". For complete information write: Engraving, Charter Arms Corp., Dept G-10, 265 Asylum St., Bridgeport, Conn.

A RUGGED successor to the famous No. 45, the No. 450 offers a new experience in operating ease and accuracy with even the largest cast bullets -and with the hardest of alloys. Specific features include a short stroke, power-link leverage, and a massive iron-steel casting with enclosed lubricant reservoir, precision bored to insure absolute die alignment. The No. 450 is designed for use with conventional Lyman G, H and I dies. Price, less dies, is \$22.50 from Lyman Gun Sight Corp., Dept. G-10, Middlefield, Conn.



Mr. J. W. McPhillips of 285 Mastick Ave., San Bruno, Calif. writes:

"You won't have to be ashamed of these and I challenge anyone to do any better with anyone's bullets. Those bullets are extremely accurate and will shoot with the best of them. The weather was ideal for testing. Low over-cast with no mirage and no wind."



REDFIELD GUN SIGHT Co. announces its new 32-page, full-color catalog for 1968. Showing the company's new products, the informative catalog includes the "3200" Target Scope with internal adjustments and a unique new mounting system; a line of all-new design Variable scopes in 2x-7x, 3x-9x, 4x-12x and a new entry in 1x-4x, featuring a wide 82-foot field-of-view at 100 yards. Also new is the VARD (Variable Diopter) which is of particular significance to shooters with visual problems in metallic-sight match shooting. The catalog is available free from Redfield Gun Sight Co., Dept. G-10, 5800 E. Jewell, Denver, Colorado.

new 4th Anniversary Edition, probes into every phase of ammo reloading. Editor John T. Amber, also of Gun Digest, uncovers authors and articles with often controversial but always useful and worthwhile material on reloading all types of guns. This Digest has something for those in every stage of reloading prowess, including an illustrated catalog of tools and accesso-

THE HANDLOADER'S DIGEST, in a



ries which aids in comparison of price features. New propellants, and cracked cases, 10 gauge Magnum shells, powder and safety, military calibers-a wide variety of subjects are covered in the new 4th Edition. A valuable reference book for every shooter, the Digest goes for just \$4.95 ppd. From Gun Digest Assoc., Dept. G-10, 4540 W. Madison St., Chicago, Illinois.

SHOPPING WITTH GUNS

THE "SPORTSMAN" IS a new concept in design made especially for the outdoorsman. The rugged frames are made of a super-tough nylon that are unbreakable and carry a life-time guarantee. The Sportsman's optically perfect lenses are interchangeable; use the amber lenses in over-cast weather for sharp definition or simply snap in the soft green lenses for total glare elimination in bright sunlight. The Sportsman is a very helpful item for the hunter, the angler, and the marksman. Packaged in a handy carrying case, the Sportsman is available for \$2.95 at sporting goods shops everywhere, or from NORSKI, Dept. G-10, 1209 E. 19th St., Brooklyn, N.Y.

THE CASE BOWIE is a reproduction of the Bowie knife made for survival and fighting during WWII. The 9¼" blade is specially tempered and of super-strong Van-Kro steel, mirror polished, etched and honed to razor sharpness. It is 2" wide and is reinforced with a removable heavy brass "parry" channel across the top. The full tang is secured with three brass rivets in a nearly indestructible black. GUN TOTE PROVIDES a completely new method for protecting, transporting and storing your valued guns. Of contemporary smart-looking styling, the cases are molded of finest virgin vinyl on a heavy duty aluminum frame. The contoured foam interior features a serrated lid lining and flat



base which pressures guns in place without slippage. Lightweight, the cases come in three sizes: two pistols --\$12.95; four pistols--\$14.95; 30" barrel shotgun take-down--\$24.95. From Elgin Arms Co., Dept. G-10, 1820 Vine St., Cincinnati, Ohio 45210.



hard rubber handle guard. The Case Bowie is 14" long with the weight and balance to perform heavy cutting jobs. It fits into a handmade sheath of full grain genuine steerhide, reinforced on both sides and tipped with polished solid brass. Send \$24.95 ppd to the Alaska Sleeping Bag Co., Dept. G-10, 334 N. W. 11th Ave., Portland, Ore. 97209.

FEDERAL has added plastic 20 gauge target loads to its line. The paper 20 gauge load will be retained, and both come with 7/8 oz. of sizes 71/2 and 8 shot. In 28 gauge a plastic target shell replaces the former paper loading and has 3/4 oz. of No. 9 shot. Size 8 shot has been added to the line of 28 gauge game load shells, with a 7/8 oz. load in a paper case. In 12, 16 and 20 gauge game loads, Federal continues to offer only plastic shells in its Hi-Power (high brass) line and both plastic and paper shells in its Field Load (low brass) line. A complete listing is available from Federal Cartridge Corp., Dept. G-10, 2700 Foshay Tower, Minneapolis, Minnesota.



INDEX OF ADVERTISERS

Air Force SURVIVAL	INDEX OF	ADVERTISERS
FLIGHT JACKET Authentic reproduction of the Air force L2B Flight Jacket manufactured by prime Govt Contractor. The outractor. The outracto	ROBERT ABELS, INC.64P. O. ACKLEY'S66AIR RIFLE HEADQUARTERS83ALASKA SLEEPING BAG CO61AUSTIN BOOT COMPANY86BADGER SHOOTERS SUPPLY56BAUSCH & LOMB, INC.79BEAR ARCHERY COMPANY57BENJAMIN AIR RIFLE CO.68BILL'S MILITARY STORES67E. C. BISHOP & SON, INC.73BISONTE COMPANY, INC.83	MARS EQUIPMENT CORP73HARRY McGOWEN.88MERCHANTEERS, INC64MERSHON COMPANY.78FRANK MITTERMEIER.72MODERN GUN REPAIR SCHOOL.66O. F. MOSSBERG & SONS, INCCover 2THE MUSEUM OF HISTORICAL ARMS62S. D. MYRES SADDLE CO83NATIONAL RIFLE ASSOC17RAY NELSON.67NEUMANN & BENNETTS, INC74
Nam. Sized: 634 to 754. 5.95 Air Commando Camouflage Hat 6.95 Add 75¢ ship. chg. The second	BO-MAR TOOL & MFG. CO	NORTH AMERICAN SCHOOL OF CONSERVATION
When answering ads, please	CENTURY ARMS, INC	PACHMAYR GUN WORKS, INC 10
mention Guns Magazine SHOOT YEAR 'ROUND	CONETROL SCOPE MOUNTS	PENDLETON GUN SHOP
Red Devil	STAN DE TREVILLE	RCBS, INC. 12 RADIATOR SPECIALTY COMPANY 78 REDFIELD GUN SIGHT COMPANY 3 REFORESTATION, INC. 58 RICE GUN PRODUCTS 61
TARGET TRAP "The Family Trap"	ELGIN ARMS COMPANY77	ROCKET CHEMICAL COMPANY61
	REINHART FAJEN	S & K MFG. COMPANY
Designed for the Active Shooter Priced for the Occasional Shooter. Throws singles and doubles. E a sy Cocking. Solid Construction. Mounts on your spare tire — bolts, wrench and trip cord included.	J. L. GALEF SON, INC	SPORT-LORE, INC
suggested retail - \$24.95	HARRINGTON & RICHARDSON, INC 7 HERRETT'S STOCKS	TARG-DOTS72
TRAP	DON HUME LEATHERGOODS	TIMNEY MFG. COMPANY
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BOX 25 CLEVES, OHIO 45002 92	INSTRUMENTS	THE ZERO BULLET COMPANY91 GUNS • OCTOBER 1968

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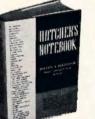


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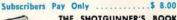
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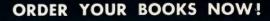
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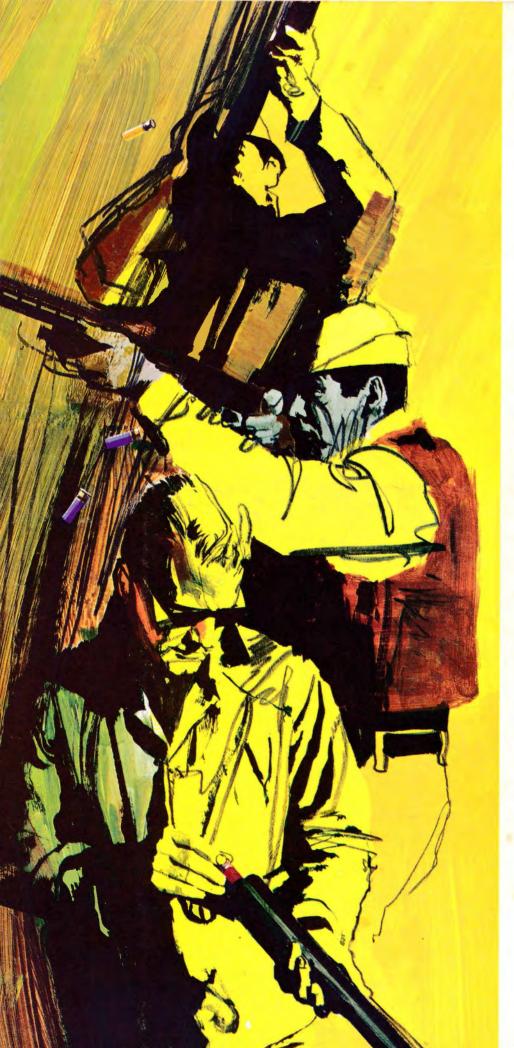
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