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you should know what you're spending it for.

... Redfield has introduced the 3200, an internally adjusted target scope, available in 12x, 16x, 20x and 24x. The first two powers are right for target and varmint shooting; the last two are great for target and benchrest work.

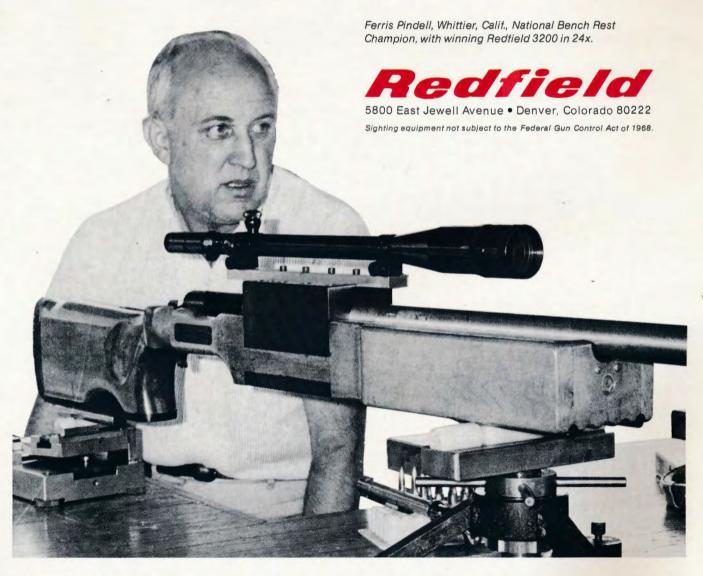
By precision-machining and the use of spring-loaded, hardened steel clicker balls, the Redfield 3200 features crisp, consistent ¼-minute adjustments able to obtain plus or minus ½2-minute-of-angle accuracy on every positive click.

Eye relief is almost three inches. Clarity and definition are built-in for that extra, infinitesimal measure of accuracy.

The 3200, packaged in a handsome, high-impact, styrene carrying case, comes complete with sun-shade, lens caps and ring mounts in smallbore configuration. Big bore thumbscrews also included.

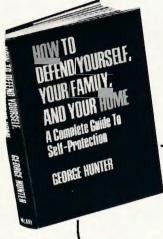
At \$169.95 it's really quite reasonable ...that is if you want the finest target scope the world has ever seen.

Examine the 3200 at your gunsmith or dealer...or write for full information.





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How to Defend Yourself, Your Family, and Your Home

Prevention and protection against all forms of BODILY ATTACK · BURGLARY · HOLD-UP · RAPE · ARSON · RIOTS. Guidance that you, your wife - yes, and your children - must have as the crime rate continues to soar in the Great Society jungle.

94 illustrations 307 pages. Retail price: \$6.95

MAKE NO MISTAKE: this is not a book for the trigger-happy, not for anyone looking for trouble. It is written precisely for people who want to avoid trouble. People who feel a growing helplessness as political voterustlers turn every neighborhood in our country into a happy hunting ground for the thief, the rapist, the drug addict, the pervert, the arsonist, the murderer-for-kicks, the looter. It is meant to lessen the chances that you, your wife or your children may be victims—and greatly improve your chances of avoiding serious harm if you cannot avoid an actual confrontation.

As with accident insurance, we dearly hope you never have to use what you will get out of this book. But merely having all this information is the best guarantee you will never be faced with criminal attack. (Even if you yourself are a burly ex-Marine and feel no need for this book, remember, your wife and children are different.)

FBI, Police, Army Information

Whether you live in a big city, a posh suburb (where crime is growing fastest) or a small town...in a house or an apartment, author George Hunter understands your security problems. Not only has he written and lectured widely on the subject; this book is based on data from organizations like the FBI, the New York City police, the U.S. Army and the National Rifle Association. How much of the following information do you honestly know right now? And yet your safety and your very life, your wife's, your child's, could depend on your knowing any one of these facts:

- The art of locking up. (Hunter shaws that the average hame is relying on "useless junk"!)
- When to be careful about giving your full name.
- Perils of the self-service elevator. 3 ways to avoid danger.
- Defensive techniques to protect yourself in your car. Safety measures when driving through dangerous areas.
- The \$12 device that can fool prowlers when you're way from hame
- The law is not always on your side! How to deal with the legal pitfalls you face when merely defending yourself or coming to the aid of someone being
- How to use time and noise to ward aff an intruder.
- The home security room: how to secure and stock it. Which room to choose.
- The best quick defense against a knife. The best follow-up.
- Where to hide valuables and defense devices in a city apartment.
- What to do if your home is burglarized. The one thing you should never do!

- · How the skilled housebreaker differs from the drug addict and the sex criminal.
- How to use ordinary household objects to defend yourself.
- Tips on firearms that may be new even to an ex-GI. Special techniques for defensive shooting.
- Where to buy tear-gas projectors.
- Helpful advice on finding a safe neighborhood when you move into a strange town. Precautions to take when you move into a new apartment or house. Ways ta protect yourself if you lose your key.
- What to do if you find yourself in a bad neighborhood . . . if you're being
- Precautions to take when you use public transportation
- Everything you need to know about locks of all kinds and about reinforcing outside doors. Pick-proof locks. Two things to watch out for.
- 5 steps to protect your home if you live in an area that may erupt in a riot. Haw rioters and arsonists use even a garbage can to destray.
- A man's best friend: technique for training a watchdag \dots , picking the right dag for your situation \dots escaping if the criminal has a dag.
- The hidden danger if an attacker tries a fist fight.
- Unarmed personal defense: 52 photographs illustrating basic methods, with captions to explain each move. Myths about judo and karate. When not to kick. Why the karate chop will serve you better than your fists. The finger spear. The flying mare. Cultivating the right frame of mind in case you are
- . If the worst happens: how to protect against rape.
- A simple, reliable, do-it-yourself burglar alram for your home.

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GM-3

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TRIGGER TALK

FREE GUN DRAWING!

NNOUNCING the winner of the A Buffalo Bill commemorative rifle by Winchester, our contest for the January issue: Mr. R. E. Wagner of Prairie View, Ill. Congratulations.

We are still having a problem getting verification from some of the winners of the big four-gun contest in Guns Annual, but as soon as these are cleared, we'll have the winners published in this column.

Believe it or not, the following ex-

change took place recently between a bullet maker and a representative of the Internal Revenue Service:

Bullet Maker: "Is it legal for me to send a sample bullet to my sales reps throughout the country, if they are not licensed dealers?"

IRS: "No!"

Bullet Maker: "I produce a "bullet board" which has a single specimen of each of my bullets glued onto a display board. Can I ship these to non-licensed customers?"

IRS: No!"

Bullet Maker: "Can a non-licensed individual ship a bullet or bullets to another non-licensed individual in another state?"

IRS: "Yes!"

Bullet Maker: "Isn't that just a bit ridiculous?"

IRS: "Yes."

I don't think many readers will believe that this actually happened, but it is true, and it took place in a room filled with gun dealers, manufacturers, and reporters. I would comment on this, but I don't think any comment is needed.

Coming up next month, a look at the ID card system of gun control legislation. This is a hot potato, but something that should be explored and understood by every shooter.

THE COVER

This magnificent Browning Field Grade over-under shotgun uses two separate artists to make it what it is. The engraving was done in Japan by the engravers of REI Engraving, Park Forest, Ill. The thumbhole stock, a work of art in itself, was made up by Reinhart Fajen of his fine grade of choice walnut. The photo was taken by Harry C. Knode of Dallas, Texas.

May, 1969 Vol. XV, No. 9-5

George E. von Rosen Publisher



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Reloading in a nutshell

Looks like a nutcracker . . . performs like a completely outfitted bench press — the Lyman 310 reloading tool is the one piece of reloading equipment that you can carry right with you into the field. Hunters . . . target shooters . . . it just takes the palm of your hand to produce the ammo you want — on the spot, simply, with precision, within minutes.

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tell you that this trusty "tong tool" goes with him on his hunting trips or out on the range . . . complements the heavy-duty bench equipment in his basement. Ask any novice — he'll tell you that it's easy as 1-2-3-4-5, as safe as houses. And complete with dies, the 310 tool costs just \$16.50.

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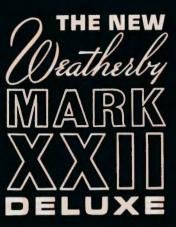
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... classic .22 automatic for perfectionists!

Granted, the Mark XXII is unsurpassed for knocking the "o" out of soup can labels...or making confetti out of an "x" ring...or punching a rodent's ticket to Waterloo. But its superior accuracy is only part of its total excellence.

The Mark XXII boasts the first and only "single-shot" feature ever found on a .22 automatic. A selector button lets you switch from semi-automatic to single-shot fire (empties are ejected but the bolt stays open until you push the selector button to chamber the next round). Great safety feature for beginners...and a must for range shooting where an open bolt is required after each shot.

The total rifle, all 421/4 inches, bears the unmistakable pedigree of the famous Weatherby Mark V Magnums. Hand-checkered stock with Monte Carlo comb and cheek piece. The rosewood fore-end tip is echoed in a rosewood pistol grip

cap with diamond inlay. And a non-skid rubber butt pad is not only a shoulder hugger...it prevents "spills" when the rifle is placed in a leaning position. No other .22 is so equipped.

The safety is a shotgun type tang, easy to see and operate.

A single pin take-down makes disassembly quick and easy (only 5 seconds). Five and ten shot clips are provided.

If you feel "any .22 will do," the Mark XXII with its hand-bedded barrel is probably not for you. But if you're a perfectionist, you'll want to see it soon at your Weatherby dealer.

For full information on the entire line of Weatherby rifles and scopes, write for FREE 16-page color brochure. Or send \$2 for new 15th edition of "Tomorrow's Rifles Today." Weatherby, Inc., 2781 East Firestone Boulevard, South Gate, California 90280.

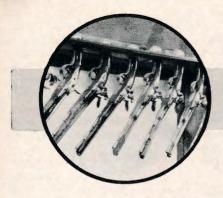
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GUN RACK

"Triple-Plus"

Federal Cartridge Company has a new development in wad columns. This consists of an over-powder wad which is cup-shaped and has in the center of the cup a plastic column. This column rests against the shot pouch and when the cartridge is fired the plastic column acts as a cushioning agent, saving the shot from jamming and flattening in the shell casing. Pattern tests of the new load in a field 12 gauge filled with 3-3/4 drams, 11/4 oz. 6 shot, showed splended distribution with no indication of flattened



pellets. This new two-piece wadding, to be known as the "Triple-Plus" wad column, will be especially worthwhile in heavy duck loads where powder charges run up above 31/4 drams equivalent. Sizeable charges of powder together with hefty shot loads place a premium on such devices as this which tend to soften the blow delivered by the propellant before it sets the shot into motion. Whether the new development will be placed in target loads isn't known. While the dram load and the shot charge in skeet and trap cartridges isn't heavy, shooters are always looking for every possible advantage in their shells. It is presumed that Federal will come along with the "Triple-Plus" wad column shortly for competition cartridges. -Col. Charles Askins.

Commonly Needed Handgun Parts

One of the most common requests we get is for a source of replacement grips (stocks) and magazines for obsolete and foreign automatic pistols. It seems grips are most often damaged and magazines lost. Two different sources are prepared to supply these items for an astonishing variety of guns.

Sports, Inc., (5501 Broadway, Chicago, Illinois) can supply excellent plastic grips in no less than six colors and at least one style for over 275 different guns, including such oddities as the Astra M400, Stock, Reising, Radom, Orgies, Webley, etc. In addition it can supply grip blanks, screws, escutcheons, and other related items. A complete catalog is available for only 25¢.

Magazines in a similarly wide variety can be obtained from Triple-K Manufacturing Co., (P.O. Box 20312, Department C, San Diego, California 92120). Not only are many previously hard to find models now made by this firm, magazines will be custom-made for your gun if not otherwise available-and the price isn't prohibitively high, as you might expect. A catalog is available on request.

Herters .22 Long Rifle

Herters of Waseca, Minnesota, is now importing a .22 long rifle high velocity cartridge from Canada. The headstamp indicates the cartridges are loaded by the Dominion Cartridge Company. The ammunition is put up in brass cases with a plain lead bullet lightly waxed to prevent barrel deposits. Velocity runs 1310 fps MV from an 181/2-in. barrel, taken with

Quality gun accessories by



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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fittings make it easily removable and it can be stored in its plastic display and shipping box. Full step by step installation instructions make it easy to install. All installation instructions make necessary hardware is supplied. Price \$12.50.

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the Oehler chronograph. Accuracy at 50 yards with the Mossberg M315C autoloader (from a benchrest with Weaver scope) ran 2.75 inches for 50 shots. Fired with the rifle held at hip level and the trigger fammed as fast as it could be struck, the cartridges gave three malfunctions out of 100 rounds. Two of these were failures to eject, one was a failure to load.

Tried on cans, bottles, half-bricks and other targets tossed into the air, a second 100 rounds ran off without a hitch. An inspection of the barrel



after all the firing indicated no leading and the amount of powder fouling was slight. A hundred rounds fired through three auto pistols functioned normally. There was one failure to eject. There was an abnormal collection of fouling on all breechlock faces and about the breech facing of the barrel. This would have to be kept wiped off or ignition would go to pot as this fouling cushions the cartridge when it is struck by the firing pin.-Col. Charles Askins.

Testing The Super Vel 9mm

Tests of the new Super Vel 9mm cartridge loaded with 90-grain jacketed hollow point bullet (loaded by Super Vel Cartridge Corp. Shelbyville, Ind.) indicate it is in the 1500 fps MV class. The new load, like most of Super Vel ammunitions, is loaded for law enforcement groups. Fired into a car body at 35 yards the bullet penetrated the front seat. Fired through the safety glass of the left front door it bored a .40 caliber hole through the glass and completely passed through five pounds of moulding clay.

Fired into three telephone directories, a total of 1,890 pages, water soaked and closely tied together, it penetrated all the books and blew out a 2 inch hole in the back. A standard loaded 9mm with 115-grain round nose bullet at 1140 fps, punched

through all copies but did not upset. Tried on seven-eighths inch pine boards, each 1" apart, it knifed through eight boards, lodged in the ninth. The standard 115-grain factory load broke through nine boards. The Super Vel was expanded to .43 caliber, held together and did not shed jacket or core.

Jackrabbits hit with the hollow point died instantly. Wounds were large at point of entry and exit, there was evidence of pronounced shock on impact and it appeared there was considerable hydraulic effect in the performance of the bullet. This is the best of the 9mm loadings so far tested. -Col. Charles Askins.

Front-Loading Trapdoor Springfield

Shooting the muzzle-loading charcoal burners is becoming more and more popular. Undoubtedly, the recent Federal restrictions on the sale of cartridge arms will cause an even greater increase in this sport. Of course, original guns are quite costly, and often not safe to fire. Many different makes and models of replicas are available as are replacement parts for many original guns. However, even that route can be rather expensive.

Bill Hiser, "The Gunsmithy," has come up with a cheap way to get into muzzle-loading—cheap, that is, if you have a .45-70 Trapdoor Springfield laying around in the house. Bill makes an insert that replaces the original firing pin. Its rear end isshaped as a nipple and a flash hole extends its full length. Take out the old firing pin; seat the insert in its place; place a .45-70 case (containing a drilled-through fired primer) in the chamber and you've got an efficient muzzle loader. Use .45 caliber round balls, a thin patch, and 70-80 grains of FFG black powder. It will shoot as well as most roundball front loaders of comparable caliber and all for the \$7.50 cost of the conversion kit.

It's easy to clean, too. Just open the breech, extract the case, and clean as usual. The insert should also be removed and cleaned after each shooting session. Best of all, simply replacing the original firing pin prepares the gun for use with regular .45-70 ammunition.

Kit at \$7.50 from The Gunsmithy, 500 S. W. Adams St., Peoria, Ill.-G.N.



HANDLOADING BENCH

By MAJ. GEO. C. NONTE

FROM TIME TO TIME we get inquiries about the use of corn meal, Cream of Wheat, and similar granular fillers in conjunction with light, cast bullets loads in rifle cartridges. As near as I can determine, this practice originated many years ago when most cartridge cases were more or less cylindrical, with the maximum bottleneck being like the .30-30 Winchester. Under those conditions, the filler was placed over the powder charge in sufficient quantity to fill all the air space. It served to hold the small powder charge against the head of the case, near the primer flash. This contributed to uniform ignition. It worked rather well and many guns shot their best with such filler loads.

Straight or slightly bottle-necked cases don't impede movement of the filler very much, but today's sharplynecked designs are another matter. The filler is compressed longitudinally by powder gases, causing it to try to expand radially-at the same time it's being squeezed down to go through the small case neck. Under these conditions, the filler can become, at least momentarily, virtually a solid plug ahead of the powder gases that can cause erratic and elevated pressures, reducing rather than improving shooting accuracy.

It does other things, too, I've examined 7mm Mauser and .30-06 cases whose neck and shoulder walls appeared to be literally sanded (from inside) to half-thickness after repeated firing with filler loads. On one occasion, an 8mm Mauser case separated at the junction of shoulder and body after a few filler loads. The neck and shoulder portion pulled off cleanly. It was never found, so is presumed to have been carried out the barrel by the semi-solid plug of compressed corn meal.

Since those observations, I've been quite cautious about granular filler loads and recommend them only in straight or tapered cases such as the .45-70, .38-55 and .32-40. Where bottleneck cases are concerned, a light, fluffy filler is much better. Kapok fluff or Teflon powder seem not to abrade cases like granular materials. They give no evidence of "plugging" in the neck/shoulder area. Both are costly and somewhat difficult to obtain, so I fall back on the old standby; a small crumpled square of toilet tissue. This has given me results just as good as the more exotic materials. Just crumple the paper and roll it into a ball that can be pushed through the case neck. Once inside it expands to hold the powder charge in place, yet produces no undesirable side effects whatever. It is very light, and usually is partially consumed by the powder flame, and does not tend to raise pressures.

Granular fillers are useful for bullet-less fire-forming. For many years I've used 10 grains of Bullseye, topped by filling the case with corn meal, to fire from .35 and .400 Whelen cases. No bullet is needed, just a plug of soap or grease in the case mouth to hold the filler in place. This produces a much more neatly expanded neck than the use of conventional expanders. Another similar method of bulletless fire forming consists simply of about half the case full of 2400 powder without anything in front of it. It may sound crazy, but it works. Just keep the muzzle elevated to hold powder back near the primer, and fire. Sim-

NOW AND THEN a requirement crops up for a lead bullet of nonstandard diameter. This happens often when loading for some of the obsolete black powder numbers, especially those of British or European origin. Special molds can be ordered from Lyman, but the cost is mighty high, often in excess of \$50, and can involve many weeks of delay.

There is a simpler and cheaper approach. Select an available mold that produces a bullet of about the right shape and weight, but of slightly less than the desired diameter. Then simply have your friendly lathe operator Dept.E-5P.O.Box1919, Oroville, Calif. '95965



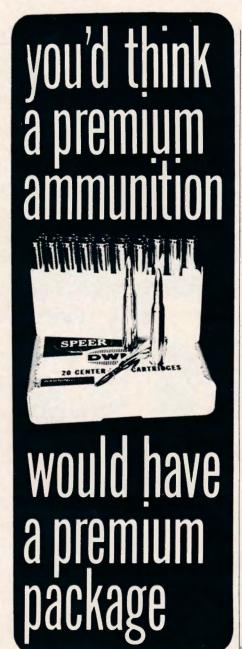
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use a boring tool to increase the cavity diameter. This is done by cutting the bearing band recesses deeper in the mold blocks. No reshaping of the nose cavity is required, so this is essentially just a simple boring operation. Any desired diameter can be produced in this fashion. Of course, only molds whose cavity is large enough to admit a boring bar can be given this treatment.

. . .

Occasionally in the past, I've inherited batches of .30-06 military brass which had heavy green corrosion inside the necks, while still in good external condition. There's no way of knowing if such cases are good for use until the crud is removed. It may have eaten away enough brass to leave the necks too thin. The simplest way I've found to remove this mess (and polish the inside of the necks at the same time) is to chuck a .30 caliber brass bore brush in an electric drill-then, with the drill running, press each case over the spinning brush. This is a lot faster and far less messy than using a chemical solution.

Everyone who does much handloading sooner or later acquires a few bushels of U. S. military brass in .30-06, .45ACP, and 7.62mm (NATO) (.308 Winchester). Unfortunately, much of this brass—even though when it was new was the finest in the world—isn't in very good shape. Consequently, it pays to check it over carefully before blithely loading it up to 50,000 psi.

The '06 first: many have been fired in Browning machine guns with headspace improperly set. In guns with headspace set too short, the heavy bolt slams the cartridge into the chamber with enough force to set the shoulder back. When such a case is reloaded and fired in a standard chamber, a condition of excess headspace is created. That's bad! When Browning headspace is set too long, cases stretch, even to the point of complete rupture. At best they will be weakened just ahead of the web, creating a potential separation after a very few reloadings.

Cases fired in many M1 rifles will have rims bent rearward by the extractor. That isn't dangerous, but makes it difficult or impossible to insert the case in a shell holder, and can also make chambering difficult.

Incipient separations and bent rims are revealed by visual inspection. Throw the former away; the latter can be salvaged by dropping the case over a rod and tapping the bent rim segment back into place with a light hammer. Stretching and short headspace can be detected only by means of a case gauge. You can't afford to

be without one, and both RCBS and Wilson make excellent ones. Shortheadspace cases can be salvaged by careful fire-forming after necking up and back down to create an auxiliary shoulder. Possible, but not worth the effort, instead save such cases for reforming jobs which require setting back the shoulder. Stretched cases are potentially dangerous and cannot be salvaged—throw them away. Generally speaking, the same deficiencies will be found in 7.62mm, but bent rims will constitute 95% or more of the damage.

Many .45 M1911(A1) pistols used for training produce fired cases with a larger than normal bulge at 6 o'clock. That's where part of the chamber is cut away to form the feed ramp, and the unsupported case swells into the cut. In extreme cases, this causes a crack inside where the case wall joins the solid head. This can cause the case to split or crack upon reloading. If the bulge is really big, throw the case away. Moderate bulges can be ironed out during resizing, but some dies don't complete the job. To iron the bulge out completely, lay a flat piece of steel across the shell holder. Set the case on top of this, and force it completely into the die, then drive it out from above with a 3/8" or 7/16" brass rod. To speed up the job, make a ram to fit inside the case mouthshaped on the other end to fit the shell holder head slots-and use it to force cases, base-first, completely through the sizing die. This, incidentally, used to be a popular method of resizing any .45ACP fired brass. Some older handloaders converted bottle-cappers and tobacco cutters into special presses for this purpose, using Lyman vise-type resizing dies.

Many .45 cases also show up badly dented. Most common is a deep V-shaped dent at the mouth, caused by the case striking the slide or frame as it is hurled from the gun. This can be corrected by expanding the case mouth before resizing. In extreme instances, grind extra taper on the expander plug so it can enter the constricted case mouth. Submachine guns often bend .45 case rims as already described. Same solution—drop the case over a \%" or \%\%" rod and hammer (lightly) rim back down where it belongs.

Any damaged case, even though relatively safe for standard loads, will not stand repeated reloading well. A rim that has been bent, then straightened, may well pull off in a self-loading gun. When dented cases are straightened, repeated firing and resizing will soon cause cracks to develop where the original dent overstressed the brass.



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Panel of Experts

Martini-Henry Ammo

I have an opportunity to buy a Martini-Henry in either .577 or .476 caliber, but would like to know that I can do some shooting with the one I buy. Are there any black powder cases around that will fit or can be adapted to these actions? For example, could .45-82, .45-70, or .50-70 cases be used?

> Bruce Banzhof Boulder, Colorado

There are no U.S.-made cases that can be reformed and used in the .577 and .476 calibers. In the .577, 28 gauge shotgun shells, available from Alcan, can be used. These are Italian-made by Fiocchi, and are reloadable with Alcan primers. Most Martini rifles in this country are the British military model chambered for the .577/450 cartridge. This caliber ammunition is available from Blackhawk Small Arms Ammunition, Loves Park, Illinois .- G.N.

Scope Problems

I would like your expert advice on two problems: for my .308 Norma Magnum rifle, I have a choice between a Bushnell 4x and a Weaver 4x. As the Bushnell is cheaper, I suspect that it might not hold up as well to the shock, but I have heard it is adequate.

Roger Mallett Stettler, Alberta

Both the Bushnell and Weaver scopes will stand the recoil of a .308 Norma Magnum rifle without difficulty. The characteristics and specifications of these two telescopic sights are close enough that your choice would be based on purchase price or personal preference. I myself have had thirty years of satisfaction with Weaver products, but if saving money is a main consideration, by all means settle for the Bushnell, which is entirely adequate for your purposes .- G.N.

Bridesburg Conversion Musket

I read your magazine every month and have an old muzzle-loading gun that is about 16 gauge and marked "U.S. Bridesburg." There is no date or serial number to be seen. It is in real fine shape and I wonder what it is worth.

> Lloyd Van Ploy Albia, Iowa

The converting of military Civil War muskets was largely done at the Bridesburg Machine Works, operated by Alfred Jenks & Son. This system of converting with a breech-block that swung to the side was called the Needham system. Collectors value would be about \$125 if in fine condition.-R.M.

.243 From 7.62mm. NATO

I hunt mostly deer with two rifles (an M88 and an M70 Winchester) and am well pleased with my record of one-shot kills. I would like your opinion on necking down military 7.62 mm (.308) brass to .243 Winchester. I have heard that the reformed 7.62 cases might be too short and cause barrel throat erosion in the .243 rifle. I have already fired a few of the reformed cartridges, and have detected no signs of excess pressure or case separation.

J. P. Busalacchi San Diego, California

Necking 7.62 mm NATO cases to the .243 Winchester caliber does produce a case that is slightly short of factory The difference, standard length. though, is not sufficient to worry about. It would take several thousand rounds to produce any significant erosion of the uncovered chamber neck. Most .243 reloaders I know regularly shoot cases made from military brass (which often requires neck reaming after forming) without qualm or difficulty.-G.N.

(Continued on next page)

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(Continued from page 11)

Spanish Mauser As Sporter

I would appreciate your opinion on the Spanish M1893 Mauser surplus rifle as a hunting weapon. Mine is in the 7mm caliber and in fine condition. I understand that bullets come in all sorts of different weights, but do not understand why. What weight bullet would be most useful?

The Spanish Mauser is a well-made gun. However, as with most bolt action rifles, the precaution of shooting glasses is a must! Cartridges do fail on occasion, and if you want to keep your head, put something between it and potential trouble! The 7mm cartridge was and still is one of the great ones. It is currently available in America in one bullet weight (175 grains) and four styles recognized as adequate for most American game. From Europe, it is sold in about eight different weights and six styles. These do not include what can be made up from handloading materials. Truthfully, the M1893 Mauser is neither a "hunting" nor a "target" firearm. It is a military rifle, made for military purposes, and lacks many sporting refinements. Balance, weight, sights and appearance are not ideal for sport use, and conversion would eventually cost more than a commercial American sporter.-S.B.

Douglas McArthur vs. The .276

I understand that Gen. McArthur disapproved the .276 Pedersen cartridge in favor of the old .30-06 in February, 1932 and that he supposedly did so for good reasons. What did he have against the .276?

> James C. Adamson Kenosha, Wisconsin

General McArthur's decision that the new semi-automatic Garand rifle be developed and manufactured in .30 caliber was based on a number of practical considerations. First of all, to adopt a new rifle in an altogether new caliber would require complete retooling of ammunition production facilities. This would to a large degree negate the value of stores of .30 caliber in inventory. In addition, adopting a new rifle caliber would necessitate either manufacturing different ammunition for both rifles and machine guns, or adoption of new machine guns in the latest rifle caliber. Neither alternative could be tolerated under the economic conditions of the Depression and the tight defense budget of the day. In addition, there was considerable opposition to adoption of a cartridge possessing less power and penetration than that of the .30-06 which had performed admirably in WWI. That the decision was a correct one is certainly borne by numerous happenings in WWII. First of all, the U.S. was able to enter that war with rifles and machine guns of various vintages, but all chambering the same cartridge, and backed up with large production facilities for that cartridge. Had the .276

Pedersen been adopted with the Garand in the mid-1930's, new ammunition plants would have been needed. Also, the extensive stocks of M1903 rifles in .30 caliber would not have been useable in combat when mixed in with Garands, as they in fact were to be, during the first years of the war. Thanks to McArthur's foresight, the '03 was produced in tremendous numbers by Remington and Smith-Corona during WWII, and served well as a substitute standard shoulder weapon.-G.N.

Winchester .45-90 Deer Gun

I have a Winchester .45-90 rifle, patent date Oct. 14, 1887, which I would very much like to load up modern shells for, but I do not know where I can get any components. The gun has its original accessory tools. This same gun was used in my family for shooting deer for market before World War One, and that is what I want to do with it.

> Clint Hangeberg Bend, Oregon

The .45-90 Winchester cartridge was discontinued by major manufacturers many years ago. At the present time, the only source for new cases in this caliber is Robert Pomeroy, 45 Wyoming, Waterbury, Connecticut. Pomeroy takes the shorter .45-70 case and reworks it to the proper length for .45-90. I have used several hundred cases he has altered and can speak well of them. I suggest that you write Mr. Pomeroy your requirements .-G.N.

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Two Questions

For some time I have read your magazine with great interest and enthusiasm since I am a handloading nut. I normally get my information from colleagues and don't bother to write magazines but there are questions that I have that require higher authority.

Recently I obtained about two pounds of military powder as used in 7.62mm NATO ammunition loaded by the Lake City plant with regular G.I. bullet. The cases were loaded with 46.5 grains each, manufacture date 1966. I have no .308 caliber guns, so have tried some plinking loads with 7x57 and 8x57 Mauser materials, 43 to 45 grains behind a 139 grain bullet in the 7, and 45 to 47.5 behind a 159 in the 8. All cases loaded with the lesser amounts had powder smudge around the necks. Do you know what kind of powder this is? Is it okay for .30-06 loading?

W. Kroekel Denver, Colorado

I cannot recommend that you attempt to use your salvaged military powder except in the 150 grain bullet with .308 brass that it was intended for. Powder as supplied to Army loading plants is not blended and regulated as closely as the powder that is sold commercially for handloaders. As military powder may vary from carload lot to carload lot, the loading plants have always worked up their own loads to conform to standard pressure and velocity from each lot as

it arrives. It is simply cheaper and quicker for them to do it this way. In view of this, there is no data available by which you can load salvaged powder with absolute safety and predictability.—G.N.

Walther Bundeswehr P. 1

I have an opportunity to buy a new condition Walther 9 mm service automatic pistol. The seller identifies it as the latest lightweight model of the "Bundeswehr (West German Army) P-1." As I intend to do target work with it, how does it compare with the P-38 imported and sold commercially in this country? Is the P-1 identical to the P-38? I have heard that parts tolerances are closer on the commercial model, making it a better shooter.

Michael P. Bucklo Chicago, Illinois

The West German standard military pistol is the P-1, identical to the standard commercial Walther P-38 except for grips and finish. Generally speaking, I would expect identical accuracy from the military and commercial models of this pistol. However, I would not consider any P-38 capable of producing sufficient accuracy for use in serious registered competitive shooting. It is quite likely that a P-38 can be "accurized" to produce fine shooting capabilities, but the procedures for accomplishing this have not been refined as they have for the U.S. .45 Auto. Many people have been disappointed in "accurizing" foreign service pistols.-G.N.

Loading the Super-Vel .38/.357

I have been an avid reader for years, and, as a professional police officer, was very interested in the introduction of the .38 Special and .357 Magnum ammo by Super-Vel. I believe that these bullets are by far the best thing to come along in many years for law enforcement use. However, I have handloaded for a long while and never been as stumped as by the problem these bullets have presented. Due to the extremely short body of the bullet and the crimping cannelure being of a smaller radius than the caliber, I have been unable to crimp the cases and the bullets drop into the case. How can I remedy this, and what loads would you use for 6" and 21/2" barrels?

> Carl Phillips Fremont, California

Apparently the expander plug which you are using is too small in diameter to provide a tight case grip on the jacketed Super-Vel bullets. This is easily corrected by polishing the expander to a smaller diameter. If this does not do the job, then perhaps your resizing die is not reducing the case neck end sufficiently. If this is the case, a new die is in order, with a note specifying the use to which it is to be put. RCBS, Inc., Box 729, Oroville, Calif., can supply such special dies. Super-Vel has worked out loading data for their bullets for all sorts of special purpose loads, and it is available from them .- G.N.



OUR MAN IN

WASHINGTON







By CARL WOLFF

TIME SCALE FOR LICENSING AND REGISTRATION

Congress has at last gotten down to business. Crime is the number one issue facing Congress and the White House. Gun legislation is sure to be part of this anti-crime drive.

The concept every sportsman should oppose is licensing of gun owners and the registration of their arms. The shooting fraternity has proposed an identification card system instead. Their idea has merit and will eventually be the only alternative to the shooting sportsman. His role in the controversy is to make his objections to licensing and registration known as strongly and as forcefully as good judgment allows.

The shooting sportsman is needed to form a strong united base in opposition to "anti-gun legislation." Let the experts propose the compromise of an identification card system. The sportsman's opposition to "anti-gun legislation" will give the representatives of the shooting sportsman room to bargain.

If this sounds like predicting the eventual licensing and registration of all firearms, or accepting the identification card system, it is. There is no point in us lying to each other. The tide is going the other way. When crime starts to decrease; when our cities stop expanding, when more people start to shoot and hunt rather than fear guns; then, maybe all the misguided shouts for licensing and registration will decrease rather than increase.

How far away is the choice between the identification card system and the licensing and registration? No one knows

for sure, but most experts agree it is no further than the next Democrat from the White House. It is the city people that want licensing and registration, and the Democrats must promise them what they want in order to get their votes.

There have, at this writing, been five licensing and registration bills introduced in the House. Four of these measures were introduced by New York City Congressmen, all Democrats.

Last January the most anti-gun president this Nation ever had, a Democrat, left for his home in Texas. While he is no longer President, he still leads the Democratic Party and the Democrats still control both Houses of Congress. What turned this rootin, tootin, soft-spoken Texan into an anti-gunner? A feller named Gallap taking public opinion polls would be my guess.

In his farewell address to Congress, President Johnson had this to say about anti-gun legislation: "As I leave office, one of the greatest disappointments I carry with me is our failure to secure passage of a licensing and registration act for firearms. In order to 'reduce the incidence of crime,' I believe Congress should adopt such a law."

A couple of days later he made another farewell address. This one to the National Press Club. We were having our annual meeting and he dropped by. He asked for questions. Mine was this: "Your administration's gun registration bill" (sent to the Hill only a few days before) "would use wildlife funds to pay the cost. Has it become anti-conservation in its old age?"

My guess is that he didn't know about this fine print in the proposed law. The question caught him off-guard, and his answer supported the observation. For some three or four minutes he spoke on how he didn't want to hurt the shooter and the sportsman. The funds could come from some other place, he finally suggested. How much funds are involved? We now have a study entitled, A Preliminary Cost Analysis of Firearms Control Program. Ordered and paid for by the National Commission of the Causes and Prevention of Violence which the President, himself, set up last year, it gives the first impartial figures. The cost of a national firearms registration system, according to the report, would be \$25,-500,000 for the first year and \$22,-500,000 for each year thereafter.

Many people as asking why the Administration's bill suggested the use of wildlife funds. The people in the Justice Department that proposed this are not subject to "voice of the conservationist." They are bureaucrats, hidden behind civil service protection. The higher officials were Democratic politicians and leaving office with the old Democratic Administration.

Their thinking can be explained in two ideas. One, the Democrats want licensing and registration and Sen. Edward Kennedy will be the next President. The second, and most important idea, shut up the conservationists who now back the shooting sportsman by agreeing to change this provision of the legislation.

When the Democratic Administration's registration bill went to Congress, it

could officially go only to two places. One was the Speaker of the House. The other, the President of the Senate. In the House the measure was introduced by Congressman Emanuel Celler from New York City. He also chairs the House Judiciary Committee to which the bill was referred. This is the same set-up we had last Congress.

Here, too, is an exception to the rule that only Democrats want anti-gun legislation. Ranking minority member, Congressman William M. McCulloch of Ohio, played a key role in passing the anti-gun measure of last session. It was Rep. Mc-Culloch who allowed ammunition to be added to the bill in committee. And, it was he who expectedly supported the more stringent Senate version when differences were worked out in conference.

Over in the Senate, it is tradition that no bills be introduced before the President delivers the "State of the Union Message. " laving out his legislative program. Pending on the President of the Senate's desk was the Administration's licensing and registration bill. Only the State of the Union Message this year was Mr. Johnson's swan song. Going with him was the President of the Senate, Vice President Humphrey.

The Administration's anti-gun bill was still on the desk when the new President of the Senate, a Republican, took over. It is still pending there at this writing. It is being held up because the new administration has its own anti-crime measures.



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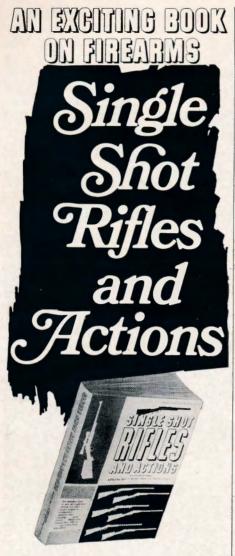
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POINT BLANK

By COL. CHARLES ASKINS

T HERE IS a good deal of mystery as to just what a bullet does when it strikes game. Autopsies can indicate the wound channel and only if the missile lodges can it be studied. But this falls a good deal short of telling the whole story. The Army Medical Corps, in an attempt to learn more about wounds, made an exhaustive study using high speed cameras and an X-ray that required only one-millionth second exposure. From this they have been able to contribute a great deal to our knowledge of what goes on when a bullet strikes living tissue.

In any discussion of how a bullet performs when it strikes its target there are always two schools of thought. Those old timers who hold for the big caliber, heavy, slow-moving ball as opposed to those who go for small caliber, lightweight, high-velocity slugs. The former have all the evidence of the past three-quarters century to support their case. The latter have much less evidence, but this does not deter them a whit in contending that high velocity is the final answer.

The Army, in conducting its laboratory experiments to determine just what occurs when a bullet strikes living tissue, did not concern itself so much with heavy slow-moving projectiles. It did test quite exhaustively, however, bullets at high velocity. It found that velocity has a most profound bearing in the wounding effect. In the military text, Wound Ballistics it states; "Of all factors to be considered in the missile casualty, impact velocity is decidedly the most important. It determines the character of the wound and in turn only too often the fate of the victim. With lowimpact velocities wounds are found to be free from the so-called explosive effect. In medium velocities wounds are more extensive with considerable tissue destruction and with some explosive effect. Super-high velocities make small missiles deadly. Comparatively enormous tissue damage can result from the penetration of small missiles at the super velocities."

This is all very well but consideration has to be given to the weight of the bullet, its shape, its construction and is sectional density. The .220 Swift with its 48-gr. bullet and 4100 fps MV was not a reliable killer. It tended to expand too quickly, oftimes on the surface of the animal, and the only time the load looked good was on small game. Col. Frank Chamberlain. who conducted many experiments for the Army Medical Corps, while writing in Ackley's book Handbook for Shooters and Reloaders mentions that he had Winchester make up a test lot of solid copper bullets for his .220 Swift. These weighed not 48 grains, but only 39 grains. In tests fired with these special bullets performance was quite spectacular. The bullets were tough enough to stand the high impact velocities.

On the score of velocity as a prime source of wounding effect, the British Army Textbook of Small Arms, 1929, has this to say: "Of all the factors which influence wounding power the velocity of the bullet is the most important. (Note: At the time of writing the British were using the .303 with 174-gr. pointed bullet at a muzzle velocity of 2440 (fps). It is intimately connected with that variety of wounds incorrectly termed "explosive." In these wounds there is commonly a small wound of entry in the skin and an enormous crater-form opening at the exit from which protrude masses of damaged muscle and other tissues with tendons and fibrous structures, all bound together by blood clot. Fragments of bone are often found among the lacerated parts and even outside the wound. The parts present, in fact, the appearance of having been subjected to effect of a local explosion. The destructive effects are observed at some distance from the actual track of the bullet. Small hemorrhages, separation of aponeurotic planes, laceration of muscle fibers, and destruction of cellular elements of glands have been observed an inch or more from the bullet track. These wounds are commonly observed in association with

bone injury. The bullet impinging on a hard substance like bone breaks up the bone into fragments, large and small, and then imparts some of its energy to these fragments so that they become secondary missiles and thus magnify the destructive thrust of the bullet through the tissues. It is not necessary that the bullet should break up. It is only necessary that it possess sufficient velocity."

When bullet velocities at the point of impact are upwards of 2,000 fps the bullet converts the bones and tissues into secondary missiles and it is then that an explosive effect is apparent. The higher the velocity, the more pronounced this effect. When impact speeds range between 3,000 and 4,000 fps, force will be transmitted through the blood vessels and ruptures will occur at a distance from the bullet's path. Nerves will be paralyzed but may show no evidence of physical damage. Muscles will split along fascial planes for a considerable distance from the passage of the bullet. Bones are fractured and again this may occur outside the projectile's track. All of this occurs along with the violent setting in motion of secondary missiles in the shape of tissue, muscle, tendon and bone splinters. Col. Chamberlain, in writing about this in the Parker Ackley book, says: "In a live animal the large wounds are without a doubt due to liquids in the tissues and cavities. Here your liquids are put in motion by shock waves or hydraulic effect, but with liquid-filled tissues the effect and destruction of tissues extends in all directions far beyond the wound axis."

The Army when conducting its studies used animals under deep anesthesia and by the employment of its high-speed X-ray discovered that the wound has two cavities; a permanent cavity and a temporary cavity. As the bullet tears through the body of the animal there is the formation, in 1/1,000 of a second, of a temporary cavity. This may attain a volume some 27 times larger than the permanent cavity. The temporary cavity reaches its greatest size after the impact of the bullet and after it has left the wound track. Tissues are known to be elastic and it is for this reason that the cavity reaches its greatest diameter after the passage of the bullet. The temporary cavity goes through a series of pulsations, each of lesser duration than the one before it. It leaves the permanent cavity after these pulsations have subsided.

The temporary cavity explains the so-called explosive effect of high-velocity bullets. It accounts for tissue (Continued on page 52)

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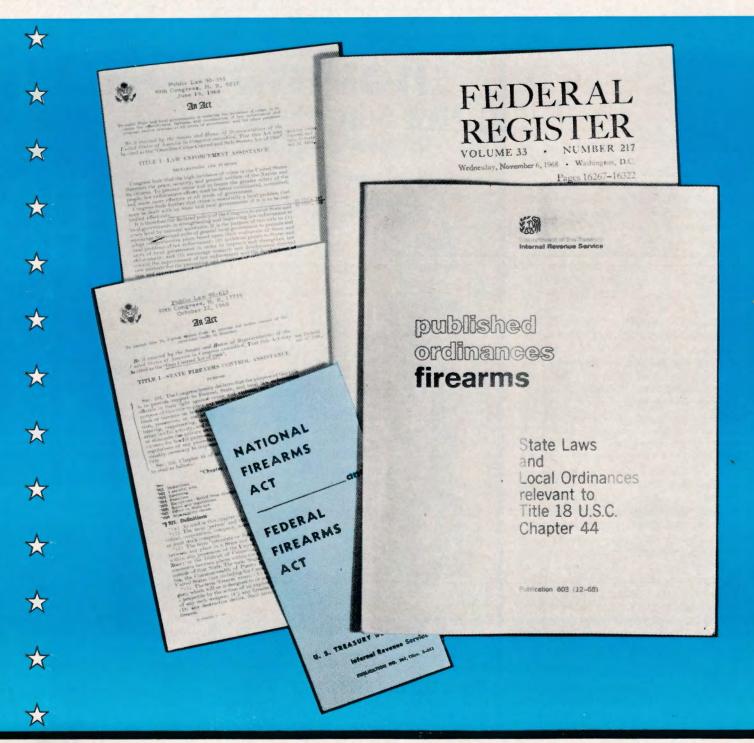
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FEDERAL LAW

AND THE

GUN COLLECTOR

By JAMES E. SERVEN



TITLES IV and VII of the Omnibus Crime Control and Safe Streets Act of 1968 (Public Law 90-351 of June 19, 1968) and the Gun Control Act of 1968 (Public Law 90-618 of October 22, 1968), all effective December 16, 1968, have placed new and troublesome restrictions on the centuries-old hobby of gun collecting.

In fairness, it must be said that the Congress could no longer delay action to correct some of the abuses which existed in the mail-order sale of firearms. But it is unfortunate that tragic events, followed by the fanatical zeal of anti-gun proponents, have triggered an over abundance of gun controls.

Although not wholly without responsibility for some of the situations which have led to abandonment of the long-standing National Firearms Act and the Federal Firearms Act, the gun collector generally has been caught up in a skein of intolerable circumstances not of his own making.

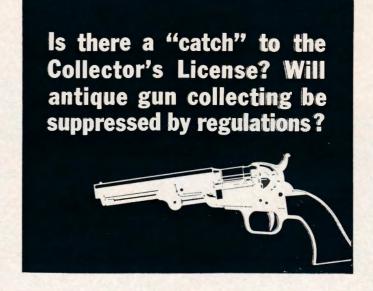
Looking back to the many hearings and the submitted testimony before enactment of the 1968 gun laws, collectors were fortunate in having their views ably presented by representatives from various national and state shooting and collecting organizations as well as other interested individuals. Their dedication and tenacious pursuit of reasonable regulations resulted in final laws that were far less burdensome than might otherwise have been the case. Letters sent by constituents to individual congressmen were another factor in helping to support the collector's legitimate interests.

Primary objectives of the new laws are to end interstate shipments of firearms to individuals; to curb and control the possession of "destructive devices"; to keep firearms from the hands of those whose possession of them could endanger public safety. Stating its purpose in rather innocuous terms in the preamble to the Gun Control Act of 1968, Section 101 of the law reads:

"The Congress hereby declares that the purpose of this title is to provide support to Federal, State, and local law enforcement officials in their fight against crime and violence, and it is not the purpose of this title to place any undue or unnecessary Federal restrictions or burdens on law-abiding citizens with respect to the acquisition, possession, or use of firearms appropriate to the purpose of hunting, trapshooting, target shooting, personal protection, or any other lawful activity, and that this title is not intended to discourage or eliminate the private ownership or use of firearms by law-abiding citizens for lawful purposes, or provide for the imposition by Federal regulations of any procedures or requirements other than those reasonably necessary to implement and effectuate the provisions of this title."

The declared purpose of the act is, of course, quite commedable. The big question is how this purpose may be pursued through new controls and regulations which will affect the lives and activities of millions of law-abiding American citizens.

A matter of some special apprehension among collectors is the broad power specifically granted to the Secretary of the Treasury "to prescribe such rules and regulations as he deems necessary to carry out the provisions." Collectors and shooters recall only too well occasions in the past where it was felt that the Secretary's regulations tended to rewrite the laws rather than interpret them. They recall the Alcohol and Tobacco Tax Division's adamant



classification of a little .32 caliber palm pistol (for which ammunition had not been made for 50 years) as a "destructive device," and subject to registration. The ATTD lost the case in California's Superior Court, but subsequently harassed an Ohio collector with the same demand for registration, declaring the California decision without effect in Ohio. Another thing remembered is that the Treasury Department's ATTD agents in various areas have placed different interpretations on the regulations.

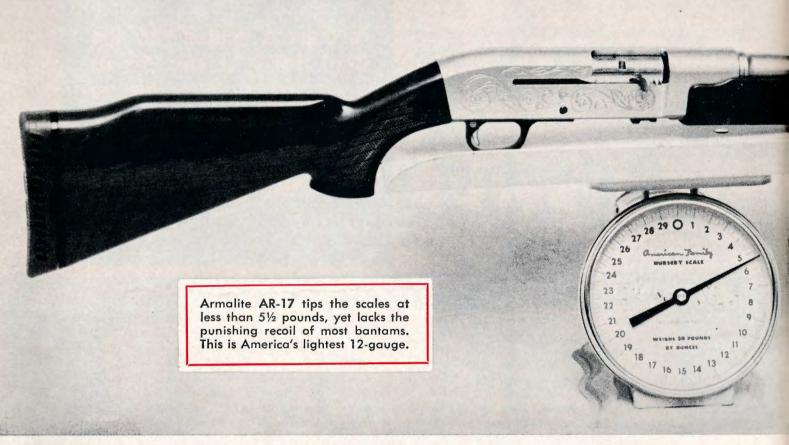
We are not concerned so much with the past, however, as with the clear and precise delineation of the rules under which collectors may now peacefully pursue their hobby. There have been favorable indications that those presently responsible for administration of the firearms laws are as desirous of clear-cut and understandable regulations as are gun owners.

It is too early to state all the precise and final firearms regulations under the new laws, for some are still subject to review and negotiation. A public hearing was held in Washington on November 21, 1968, to provide an opportunity for testimony and discussion of the proposed regulations. These were first published in the Federal Register of November 6, under the heading Department of the Treasury, Internal Revenue Service (26 CFR Part 178), Commerce in Firearms and Ammunition, Notice of Proposed Rule Making.

At the hearing some changes in regulations were immediately accepted by the Treasury Department and others were taken under advisement. In the Federal Register of December 14, just two days before the gun laws went into effect, the changed regulations were published, and as of this writing are presumed to be relatively final.

One of the first-time features of the new laws is the provision for a "Collectors License" at a cost of \$10 per year, available to qualified persons who are 21 years or more of age.

Under Chapter 44 of the Gun Control Act of 1968 a collector is described as "any person who acquires, holds or disposes of firearms or ammunition as curios or relics, as the Secretary shall by regulation define, and the term 'licensed collector' means any person licensed under the provisions of this chapter." In the December 14 regulations an "Antique Firearm" has been described as: "(a) Any firearm (including any firearm with a matchlock, flintlock, percussion cap, or similar type of ignition system) manufactured in or (Continued on page 68)



BANTANVEGAT BANTANVEGAT BIG BORES hunted in country that mountain goat fits (sage on flat plateaus—but where an oxygen mask to the sage of the sage

By CLAIR F. REES

ONE DAY, not too many years ago, I was lugging my 8-pound 12-gauge "shoot everything" gun up the side of a nearly vertical mountain in quest of the elusive chukar when it came to me that I was ill-equipped for the job at hand.

Not that the 12 gauge isn't an excellent choice for these hard-flying western birds—there are times when you wish you were throwing more than 1½ ounces of 6's each time you slapped the trigger. No, my choice of gauge was right—but the gun I was carrying was threatening to bring on a coronary seizure in the rarified 8,000-foot atmosphere.

Up until then, the only feathered game I had spent much time on were ducks and geese. And for banging away at passing waterfowl, my eight-pound, full-choked autoloader was just the ticket. The extra weight helped cushion the recoil of the several rounds of high-brass 12's I fired each day, and the gun's tendency toward muzzle heaviness helped slow down and smooth out my swing.

For my occasional forays after pheasants and rabbits, the same gun fitted with a modified-choked barrel seemed to fill the bill handily. That is, it did until the day I left the flat pastureland in the valleys and went *up* after upland game. That year, some newly found hunting friends introduced me to chukar partridge, sage grouse, blue grouse and franklin grouse. Aside from being strictly western birds, these fowl all have one thing in common—they are

hunted in country that would give a mountain goat fits (sage hens are found on flat plateaus—but at elevations where an oxygen mask would be a most welcome piece of equipment).

After spending several consecutive weekends panting over hill and dale with that eight-pound cannon growing heavier each oxygen-starved mile, I decided to go shopping for a gun that would be a little easier to carry. I finally settled on a 12-gauge Ithaca "Featherlight" model 37 pump. This modified-choked gun weighed in at 6½ pounds, and was a great improvement over my old field piece for upland hunting.

Carrying a pound and a half less gun during all-day hunts on western deserts meant that I was able to enjoy myself a great deal more. I was less tired at the end of the day, and I found myself getting on target much faster. My gun handling improved so much, in fact I finally went to a more open choke for pheasants and other tight-holding game.

You might even say that trying a lighter gun for one season changed my entire concept of upland hunting. Up

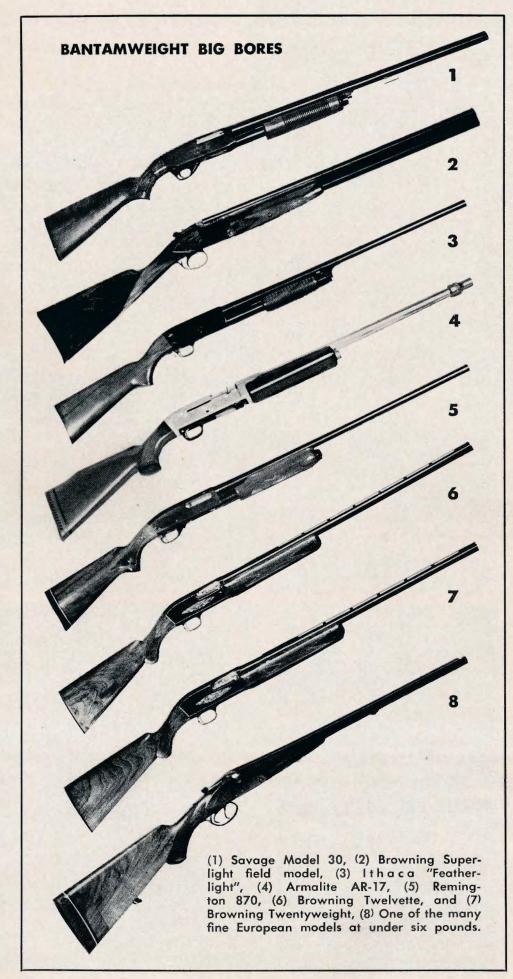


until the time I made the switch, I had heard that heavier guns "kicked" less, and therefore let a gunner shoot more accurately. This is undoubtably true for the waterfowler in a pass shooting situation—he generally sees his birds in plenty of time to get set to shoot, and the weight of his heavy repeater helps him recover quickly from the recoil to trigger accurate second and third shots. And when you fire as many maximum-velocity loads as the typical duck hunter runs through in an afternoon, you'd better have a gun that absorbs at least some recoil.

For upland hunting, though, this concept just doesn't hold water. In the first place, you generally don't see your bird until he is up and away — and you've got to get your shot off before he is out of range. This means that instead of getting "set" for each shot well in advance, you've got to rely on fast, instinctive gun handling. And it's hard to be fast with a muzzle-heavy "duck" gun.

As far as recoil bothering you, you'll find that when the birds are flying you won't feel a thing, even with the hard-





est-kicking shotgun. In your haste to get a shot away, you may find yourself with the gun butt in the wrong place occasionally when the gun goes off—but even then you're not likely to notice it until your wife comments on those nasty black-and-blue marks on your upper arm the next morning.

Actually, proper gun fit has more to do with apparent recoil than does weight. A stock with too large of an angle between it and the barrel line will tend to let the gun recoil upward into the shooter's cheekbone. A too-short stock can cause similar problems, and a stock that is too long will be just too awkward to mount properly.

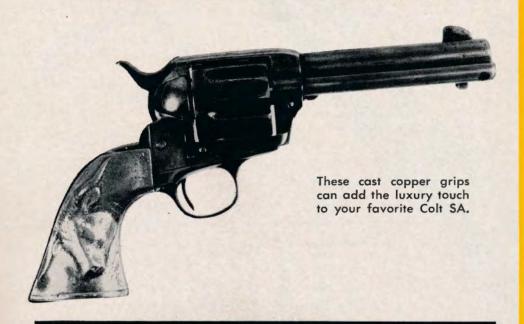
If you're still a little dubious about using a lightweight 12 gauge, try Armalite's AR-17 "Golden Gun." This is an aluminum-and-plastic 12-gauge autoloader that tips the scales at a little less than 5½ pounds. You would expect this to be a real "kicker," but the mechanism of this remarkable gun cushions each shot to little more than a gentle p-u-s-h. Even my eight year old son (who is more of a 28 gauge addict) has no trouble handling the recoil of this gun, even with maximum 1¼-ounce loads.

Of course, you can always go to a lesser gauge to get away from light-gun recoil—but you will be sacrificing some pattern density with standard loads. For most upland hunting, standard one-ounce 20-gauge loads are perfectly adequate. But having that extra quarter-ounce available that the 12 gauge throws can be awfully comforting in some situations. (This is especially true if you're using an open choke late in the season when the birds are wilder and getting up farther away from the muzzle.)

For almost any kind of upland game under almost any conditions, a lightweight 12 gauge is the optimum choice for the average gunner. If conditions are right, you can use light 1 or 11/8ounce loads-but where more firepower is needed for longer range or larger, hardier birds, the ability to throw a full 11/4 ounce of shot can turn those cripples into dead birds and insure a successful hunt. For added versatility, many of the lighweight 12's available will digest the 23/4-inch 11/2-ounce magnum loads. This can enable you to use your favorite pheasant buster on highflying geese (by using the heavier magnum loads for increased pattern density, you can effectively "tighten" your gun's choke).

One ex- (Continued on page 73)

Copper Grips for the COLT SAA



By E. DIXON LARSON

WHETHER it be a new or old Single Action Army, it will always have a certain charm and status with enthusiasts. Research figures from grip manufacturers show that more grips are sold for the Colt Single Action than any other model. No matter if they're plastic, pearlite, rosewood, staghorn, real pearl, or real ivory or simulated, people seem to delight in re-dressing the grips on a Single Action.

This is one model where target grips are seldom seen. Perhaps this is due to the owner's pride in its symbol of the past, or that nothing can be done to improve the imposing grip. Regardless, the Single Action is a favorite and would probably be the No. 1 in the

gun fraternity if put to a vote.

In a search to satisfy the ethics and improve the shooting balance of the Single Action, a new grip was conceived. A pair of inexpensive plastic grips bearing the pre-1941 Colt steer head on ivory grips was selected as a pattern. Grips were used as the mold. Being two piece, this is relatively a simple cast. An 80% copper was used with a ½ bronze butt, cast monolithically. The bronze was merely to provide a stronger wearing surface and improve the contrast in the color of the two metals. With a little effort in cleaning and polishing, a pair of grips can be had that will not only add charm and beauty to the Single Action, but grossly improve the shooting balance. Most shooters object to plastic grips as they are too light. Actual weight added is about 11 ozs. or making a total for the average Single Action of about 2 lbs. 13 ozs. Most local foundries are equipped to handle a small task like this very easily and relatively inexpensive. The real work starts with the polishing of the rough casting, but as most gun enthusiasts enjoy working on their guns in some way, it is a "whilea-way" for television and very rewarding when completed.



Monolithic casts were made by using inexpensive Colt grips as the molds.





The interior was cast in this manner (top) and the exterior (above).

North & Cheney's Are Where You Find Them...

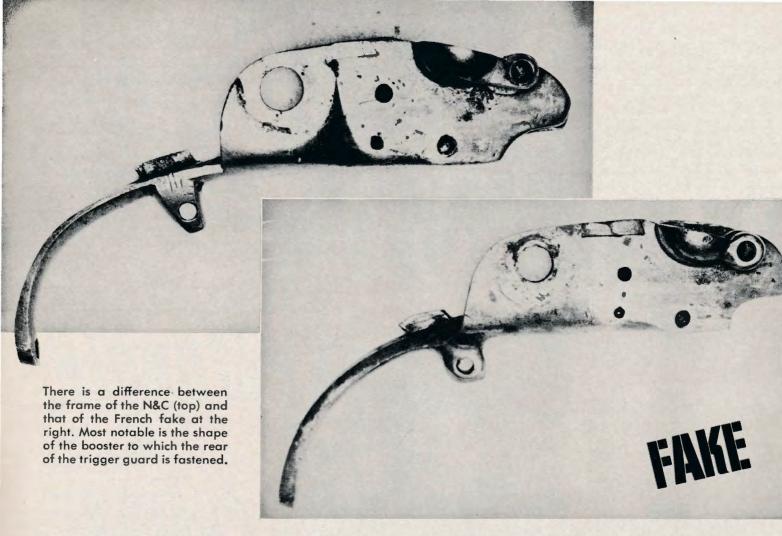
By HARRY KNODE

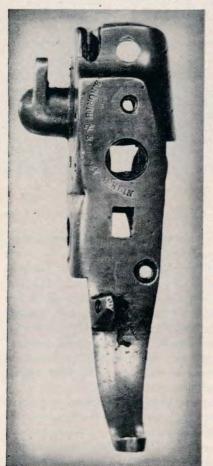
This fine old N&C was once in the author's collection.

MOST EVERY COLLECTOR dreams of someday finding "a sleeper," and if he stays at it long enough, be it firearms, coins, or match covers chances are he will make a find that will be rewarding.

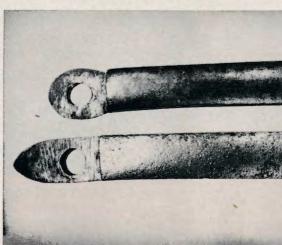
It is not only important to make that lucky find, but also to be able to recognize it when you do find it. To the collectors of United States Single Shot Martial Pistols no doubt the North & Cheney would rank second to the Rappahannock Forge Pistol made about 1775, but as there are about twenty of the North and Cheney Pistols known the odds in finding a N&C are about five to one in favor of the N&C. So let's dwell a bit on the North & Cheneys and a few of the finds that have been made.

About twelve years ago while reading a firearms newspaper known to most collectors, I saw, much to my surprise, a box type advertisement in heavy type stating someone in Memphis had a N&C for sale. As I was a little late in reading my paper, I grabbed the telephone and located the advertiser/owner. He was a rather small dealer and seemed quite surprised at the response the ad had received. He said that he had just finished a call from a man in the Midwest who had asked him to catch a plane and bring the pistol to his home. He had also received a card from an Eastern dealer offering \$500.00 if the pistol was in good working condition and the finish good. I told him that I thought that I could possibly do better than either of the other two gentlemen, and if he would just sit tight I could and would be there the following afternoon, which of course I was. Well, to make a long story short I went to Memphis, met the man and his wife and learned that he had traded a Colt 1851 Navy pistol with a value of about \$50 for the N&C. He knew that he had something, but he had no idea just how valuable his pistol was. He asked me what I would give (Continued on page 49)



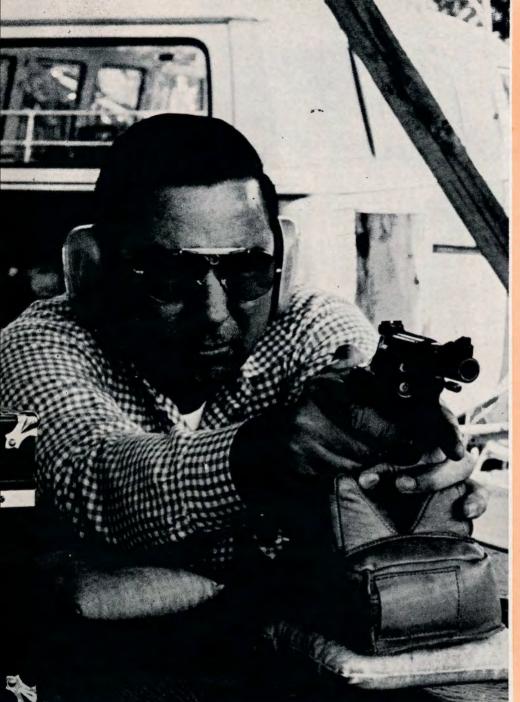






The tangs of the two pistols; the French, at the top, is shorter and rounded on the end. The N&C is pointed and a bit longer.

Bottom view of the true N&C (far left) shows the signing, the hole for the barrel screw, and a rather pointed projection at the opposite end of the casting for the trigger guard attachment. The fake N&C (left) lacks these identifying marks.



Today's lawman needs a weapon with stopping power... here's how one gunsmith with a beat-up old Colt went from—

CLUNKER TO COMBAT

By JOE RYCHETNIK

WHAT'S OFFERED to the law enforcement officer to-day who wants a man-stopping handgun in a short barrel length? The catalogs are paged with descriptions featuring light alloy and standard weight models in .38 Special. The 3½ inch model 27 Smith and Wesson .357, touted as the gun the FBI special agents carry, has never been much of a success. Nearly every law enforcement officer looking for an effective short nosed revolver has considered this model and found it lacking in several respects. The gun is top heavy in many belt holsters, and like the relatively new $2\frac{1}{2}$ inch Colt Python, the effectiveness of the .357 caliber cartridge is reduced by the short barrel.

Officers loading their own have gotten around the short barreled .357's problem by turning to lighter bullets, often soft lead or hollow point, that are propelled with fast burning powders. With these officers, concealability is not the prime requisite for the plainclothes handgun. Most of these men work tough beats where they are well known as cops. The slight tattletale bulges where they wear their business iron—the handgun, handcuffs, and extra ammo—are part of the costume. They want a gun that will speak effectively when asked and that will not require a great deal of attention when asked to perform.

Police reports indicate that 80% of the gunfights between them and their counterparts in the underworld are at night and nearly all of them are at close range. This demands a

handgun-cartridge combination that works.

The FBI and Police Practical Pistol Courses, which are the mainstay of department training programs across the country, have been cited by independent thinking experts as far from practical in the light of what does constitute the average handgun exchange between the law and the out-



Redesigned .45 Colt double action makes an ideal close range police weapon at 3 lbs.

law. The course is a good one which many master annually. Some find it leaves many gaps open in the practical shooting education of the officer. There is almost no training in night shooting, no training in instinctive shooting, and no training by detectives dressed in their everyday wear. To stay alive they have to find the way between outmoded department regulations specifying their weapon, and the far-from-realistic training programs with the weapons they are expected to use—the pistol, shotgun, rifle, teargas projector, and automatic weapons. The departmental stress lays in other directions for a variety of reasons.

The cop who wants a heavy, effective, short barreled handgun that will wear reasonably well on his non-uniform belt does not have much to look at on the gunshop counter. The new snub-nosed Magnums are expensive—list prices run from about \$140 to \$185 (a bit less with usual police



Super Whomper before hammer spur was removed.

Super Whomper fits well in Bianchi styled holster. Note rounded rear sight to prevent clothing hangups. Shot group (below), from 25 yards using nine grains Unique with 258 grain Keith Bullet.



CLUNKER TO COMBAT

tax and other discounts). The gun that was supposed to have saved police from this dilemma—the less-than \$100 model 58 Military and Police Smith & Wesson .41 magnum comes only in a four inch barrel. Hacking off this barrel with its characteristic enclosed ejector lug creates problems. The recoil in the high-powered hunting load or the police load is hefty. The muzzle flash from a shortened magnum is revealing, to say the least.

The answer to the need for an effective detective gun is certainly not unique or original. In solving an officer's request for assistance on this matter, we came up with some good ideas that proved to be more economical than what was offered by the factories today. For lack of a more accurate descriptive title, I call it the Super Whomper—exactly what it does best and what most handguns of this barrel length

are generally called upon to do.

Let's take a look at the requirements for an effective detective gun and see how well the Whomper fills them. The gun should have a two inch barrel to make it practical and comfortable to wear under non-uniform clothing or in the pocket of a winter outer coat. The pistol should be a revolver, as most officers are trained in the use of this weapon, the revolver style lends itself well to operation in the pocket. Also, the revolver offers the opportunity to use heavy lead bullets, digests a variety of reloads, and is inherently safer to use than the auto-loader. This gun should not have excessive recoil, muzzle flash, or loading problems. It should be effective at practical range. And it should be designed with double action, fast reflex shooting in mind.

With these requirements, a gunsmith and I created the Super Whomper for an officer in need. Here is the way we did it and how the costs of the total operation were kept below

a pre-established limit of \$100.

The shops here yielded a variety of used, relatively inexpensive and suitably bored handguns. The .44 Special, long-time favorite of the handloader, was passed over in favor of .45 Colt caliber. The .45 Colt has always had an excellent reputation as a man-stopper. In black powder loading, and in present day smokeless powder loads, the flat-nosed, somewhat conical shaped 255 grain factory bullet has done well at short and medium ranges from guns of all barrel lengths made to handle it. Handloading improves its ballistics.

This cartridge is the most capacious of the standard factory pistol cartridges, holding between 30 and 31 grains of water capacity (.119 cubic inches against the .100 cubic inches of the .44 Magnum and the .081 cubic inches of the .44 Special). Both the heavier Remington solid head cases and the lighter balloon head cases of Winchester- (Continued on page 64)

New Low Cost .22 Autoloader...

By BILL WALKINS

ook through most any gun catalog at .22 autoloading rifles, and you'll be hard pressed to find one priced under \$40; it may even surprise you to find that there are some priced at well over \$70. For this reason, I was a bit apprehensive when Century Arms sent me a brochure on their new Squibman .22 auto rifle, priced at only \$39.50.

I had seen a few under \$40 rifles before, but some were of poor quality, and those that did have some semblance of workmanship had the appearance of a club and pipe. So, I took the words and pictures in the brochure with a grain of salt, Then, some weeks later, I had a chance to examine one of them. It's not fancy-but neither is a fine Springfield sporter. The design of the stock is straightforward, with just the right dimensions-for me, at any rate-with a good, hand-

filling pistol grip. The stock, by the way, is made of Phillippine Mahogany, and the filling and finish of the Squibman I examined would match any of the .22 rifles I've seen, except for the deluxe grades.

One of the bugaboos of most of the lower-priced .22's is in the feeding; even the best of them will have some misfires, hang-ups, or jams. In many cases, the fault lies in the magazine.

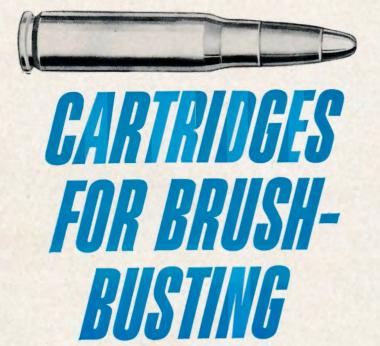
You get a lot of gun with the Squibman .22 for a lot less money than you think. It's available for under \$40.

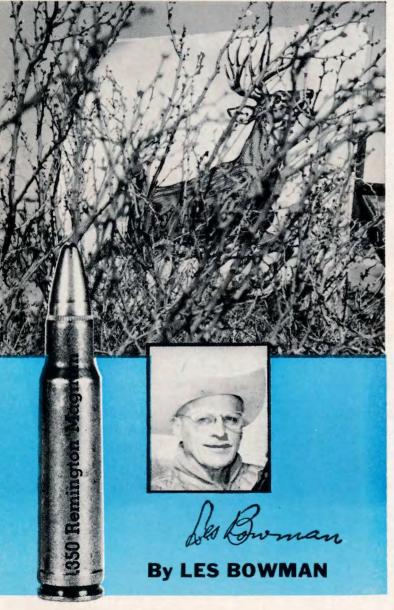
> This one is sturdy, smooth in its action, and it feeds the 15 shots with no indication of stalling, shaving, or hanging up.

> The Squibman has a 191/2-inch barrel, rifled with four grooves, right hand twist, one turn in 16 inches. The receiver has a detachable shell deflector; hold open indent for the bolt; grooves for Tip-Off mounts; and a non-slip safety lever which locks the trigger for complete safety. The rifle weighs about 5\%-lbs., and is 40\frac{1}{2}\-in. over-all.

Perhaps the most intriguing part of the Squibman is the integral muzzle brake. It not only adds to the looks of the slim, tapered barrel, but actually dampens vibrations of the barrel during rapid fire to assure the utmost in accuracy. Century Arms guarantees the Squibman, and each rifle carries a serial number to comply with the new Federal regulations.

While you cannot buy the Squibman direct, deliveries are now being made to dealers throughout the country. If your dealer cannot furnish the rifle, he can order it for you from Century Arms, 3-5 Federal St., St. Albans, Vermont 05478.





O ne argument that is sure to occur whenever a group of gun enthusiasts or hunters get together is: "What is the best caliber and cartridge for a brush bucking rifle?"

I will have to admit that the phrase "brush shooting" gives me the creeps as it always produces a mental picture of someone making one of those "sound shots" that you frequently hear about; the kind where a hunter fires into some brush where he has heard a sound, hoping to hit game.

There is really a lot more than just the selection of a caliber and cartridge to this problem of "brush bucking." Type and kind of game to be hunted, distances at which such game may be shot, how the shooter reacts to recoil, as well as the kind of terrain he is hunting in, all present different problems. There are times when a shooter feels he has a good clear shot and a small twig may deflect the bullet. Even small saplings can be hit if the shooter pulls off a bit when he is trying for a shot between openings in a small growth. Very few shooters are good enough to hit moving game in brush, especially fast running game, yet it is surprising how many try it and get only a tree or bush for their efforts. In some areas there is tall grass that interferes with shooting, although the game may be clearly seen. This stiff heavy grass can deflect a bullet as effectively as a small twig.

There are a good many caliber sizes and cartridge types that make good brush bucking rifles, although many of the present day rifles seem to be of the high velocity, flat shooting type, that use pointed but efficient bullets. One of the reasons why the venerable .30-30 has stayed popular so long is because it's velocity, bullet shape and weight, plus the relatively low recoil that allows the average man to shoot it well, makes it one of the best "brush bucking" guns a hunter can buy.

Although most of the talk about the "brush bucking" qualities of a gun or cartridge centers around the white-tail deer hunting of the East and South, there are many places in the West and North where such a quality is also desirable. In most of these western and northern hunts the animal or combination of animals hunted requires a more powerful load then do the small deer of the South and East.

For instance, Alaskan brown bear are often hunted, or must be followed after being hit, in high, heavy brush. It is necessary to have a rifle and load that can stop a charging 1000 pound animal, and do it immediately. As a rule, Alaskan Brown bear are shot at relatively short ranges. This means the best rifle is one with enough power to drive a heavy bullet in deep enough to be immediately fatal. At these shorter distances it does not take the excess power that the same weight bullet needs to drive it fast and flat for distance shooting.

My choice of a rifle for brown bear would be entirely different than the one I would choose for Polar bear hunting. Most Polar bear are shot at long ranges, but they too must be stopped immediately or they may get into the open leads or the water where it is almost impossible to recover them.

Jungle hunting in South or Central America is another place where a close range, brush bucking rifle is useful. Rifles that are good for long range shooting are entirely unsuited for use here. The .44 Magnum rifles, however, are very popular.

Most of the elk hunting in Colorado and Wyoming is in areas that consist of fairly open country. The timbered



A clear shot . . . or is it? Depending on the type of cartridge you're using it might be a miss. You wouldn't be the first hunter to miss a prize like this because of an interfering limb or branch.

areas are few, and not too heavily timbered. In western Oregon and parts of Washington, most elk hunting is done in brushy or timbered country and in Idaho there are a number of hunting areas that are covered with a fairly low, heavy type of brush which can deflect a light pointed bullet, but can be penetrated by one of the right weight and shape.

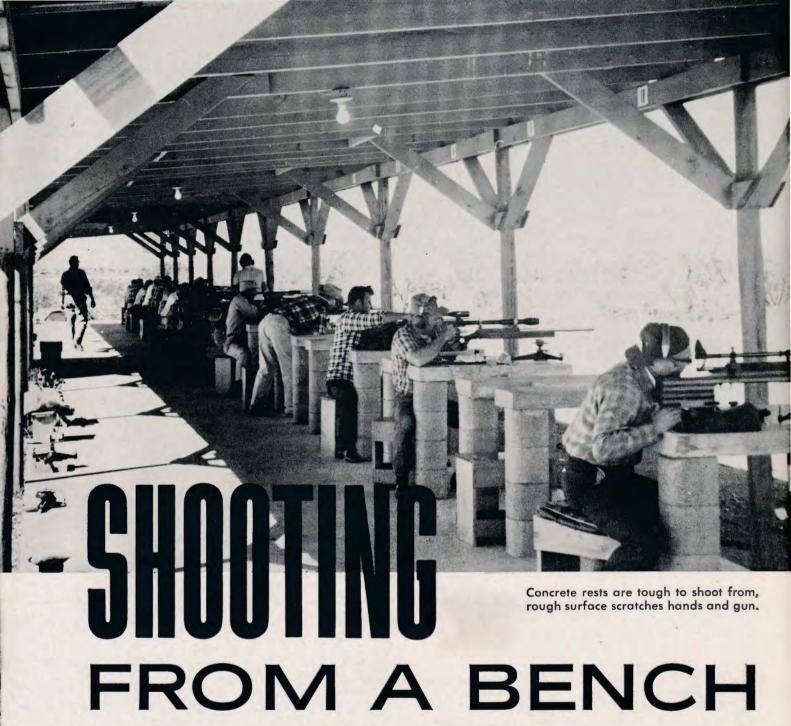
The selection of the right bullet for brush type hunting is more important than caliber size and type cartridge. It does not matter what caliber size and bullet weight and shape you use, if it is not properly structured it will be diverted very easily by brush. A few years ago, when the new .444 Marlin was introduced, I used one in making some comparative brush bucking tests. At the same time, a good friend of mine, Charles Askins, was making the same tests in Texas. He was using simulated brush conditions made by staggering hardwood dowel pins in a heavy plank and shooting at a target behind them. My tests were made on the back part of our house lot, through the exceedingly tough growth of willows that grew there. These willow brances vary in diameter from a fraction of an inch to 1½ inches. I used rifles in different caliber sizes, down to the .224's, and with various weights and shapes of bullets. For the .444 Marlin, both Charlie and I used the regular heavy factory loads.

The tests I made at this time demonstrated that the bullets I was using in the .44 had very poor brush bucking qualities. Many of the shots never reached the big targets I was aiming at. Actually, I found the round nose 100 grain bullets in my .243 and 6 mm's were doing a better job. Later, Charlie told me that his tests confirmed this. Just because a bullet is a heavy weight with fairly low velocity does not make it a good brush load.

One thing these tests did establish was that round nose bullet shapes were much less apt to be deflected by twigs, limbs or grass than the pointed ones. However, even with the best shape, the bullet had to be properly structured to produce good results. A bullet of a certain caliber size, such as the 180 grain .30 caliber, shot from a fairly slow cartridge did better than the same bullet at 300 or more feet per second faster in velocity. Many times the increase in velocity would cause the bullet to disintegrate completely on contact with even small limbs but if it was slowed down it functioned very well. Thus, a bullet properly structured for one cartridge and velocity may be quite wrong in structure for others. I found this to be particularly true in the .30 caliber bullets, as most all companies use the same structured bullet in their low velocity loads, such as those for the .300 Savage, as well as those in the high velocity loads, used in the different .300 magnums.

There are several caliber sizes and case designs that have bullets made especially for them and their velocity. The .30-30 is one, and the .35 Remington, the .350 Remington and the .338 Winchester are other examples. All of these seem to work quite well as brush buckers, regardless of velocity.

My first big game rifle was a .25-35 Winchester, and I used 117 grain bullets in it exclusively. The Redwood country of northern California, where I grew up, is rather brushy country. There were lot of black bear there, and though they were usually found in the brushy berry patches, I seldom found it necessary to shoot through brush to get one. I could always find a large enough opening if I took time to look for one and, curiously enough, I have found this to be true in most all my hunting experiences, when I use modern scope sights instead of the old open sights. Scope sights make it a great deal easier to spot those small obstructions that can deflect a bullet. Except for a couple of special purpose big bore rifles all my guns are equipped with (Continued on page 54)



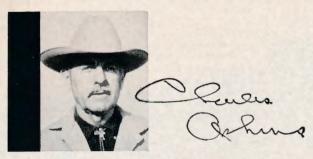


An excellent shooting position; left hand supports toe of the stock, forestock rests on the sand bag.

MOST OF US shoot well from the prone. It is a steady position, and if a fellow wants to get dead steady, a sandbag out in front to support the front end of the shooting iron makes it all the more secure. In the game fields, when the cover and the terrain will permit, there isn't a better shooting stance. But there are better and steadier ways to shoot. The best position is from the benchrest.

A benchrest is a massive table with a comfortable seat, and when the rifleman lays his gun over this support he shoots the closest. Just why this furniture piece is called a "benchrest" is lost in the obscurity of the past. Probably the original rest was a long bench and from this it got its name. Anyway, it isn't a bench anymore but an exceedingly heavy table, built for the use of just one shooter.

When the shooter knows how to make the best use of his benchrest he fires the tighest groups and highest scores. Better than from any other position. The owner of a just acquired rifle needs the bench to sight in. The handloader



By CHARLES ASKINS

has a lot of use for the rest in trying out his kitchen assembled loads. The old rifle with the newly installed custom barrel needs a session at the bench to establish itself as accurate. Tests of new scopes are best done over the heavyduty table. Those huntsmen who quest for the annual venison with a slug-throwing scattergun should sight in on the benchrest. And the handgunner gives it a lot of use, too.

There is a Benchrest Shooters Association and this clan has national matches annually. They do not shoot for a target score as do other marksmen, but shoot for groups. The size of the groups they crank out is so unbelievably small you'd think the shooting had been done from a machine rest. And some of these gunners shoot like human machine rests! The benchrest when fired over by a shooter who is practiced in the art is the next best thing to a machine rest. It is not as good, but it is not as costly either! For the guns-man who is interested in pinning down just what a factory load, a handload, or a rifle, either factory or custom built, will do, the benchrest is an invaluable accessory. For checking a sight zero, the ability of a rifle to hold its point of impact, for locating troubles as when a stock warps after a long hunting trip in rain and snow, for developing whether or not a barrel has been shot out or nearly so, the benchrest is the logical choice.

The only device that will out perform the benchrest is a machine rest. These things run into the thousands of dollars and are out of the reach of most of us. Again, the best thing the machine rest can do is to establish the goodness or the lack of it in the ammo. The only machine rest that is truly successful is the kind with a universal receiver and a series of heavy barrels of different calibers. The user screws the barrel he wants to fire into the receiver, adjusts the headspace and then fires. The results he gets pertain only to the ammunition.

In my neck of the woods there are three public rifle ranges. All of them are equipped with benchrest tables. These ranges get a strong play all year, and especially just before and throughout our long deer season. The benchrest is an aid in getting a rifle into zero and establishing its accuracy, but it is a poor substitute for gamelands shooting practice. It will teach you how to squeeze the trigger and how to line the sights on the bullseye, but it contributes very little to a steady hold, offhand or sitting. I watch a good many hunters bang away from the massive table and conclude they must miss a lot of easy shots once the woods beckon and the benchrest is missing.

You see a lot of shooters who do not know how to shoot off a bench, too. Their position does not take full advantage of the help that can be provided by a proper utilization of the big table. It takes a bit of doing to belly up to the bench and let it do most of the work for you. You see gunners who get both elbows on the slab, who sit back from the edge of the table, who rest the muzzle of the rifle on the sandbag and teeter on the seat as though shooting ducks.



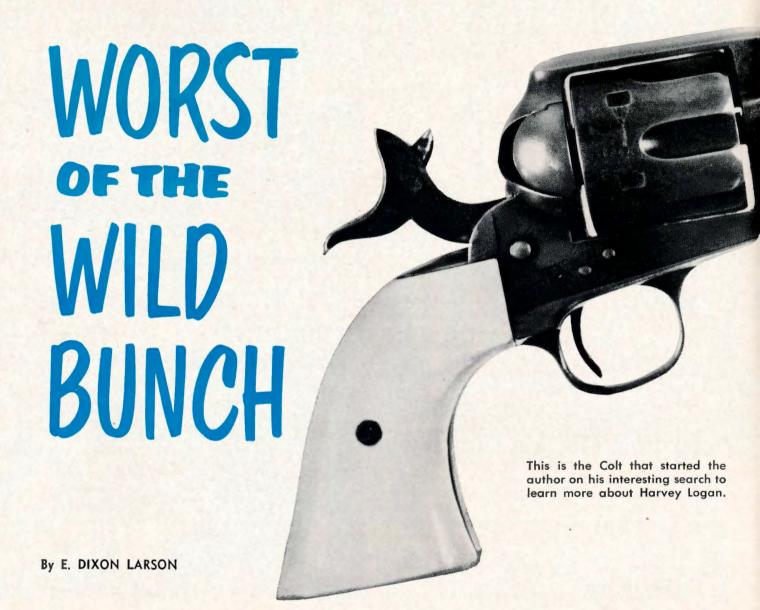
Poor position, shooter not using bench properly. Below, vibrations from continuous bench will affect accuracy.



This is from lack of experience, from too little knowledge of the benchrest, and from a failure to think through and take advantage of the help the big rest can provide.

You see benchrests in some out of the way corners. At the west end of Kodiak Island, on Olga Bay, live two of the greatest guides in Alaska, Bill Pennell and Morris Talifson. These old timers headquarter in an abandoned salmon cannery. In the backyard is a benchrest, a sturdy affair made from pilings and bridge planking. Every sport who plans to hunt with these old sourdoughs has to sit down at that bench and demonstrate that he can shoot! If he can't, he is told to go back home. Over on Terror Bay, also on Kodiak, is another old hand at the Brown bear game. This is Kris Helgason. He has a benchrest set up on the beach in front of his hunting lodge. He isn't quite as adamant as his comrades over on Olga Bay, but he likes his dudes to climb onto the bench and check out their sights. Kris has followed too many Brownies (Continued on page 70)

COLLECTOR'S FIND OF COLT LEADS TO INTERESTING FACTS ON HARVEY LOGAN...



O NE OF THE GREATEST rewards that comes with the collecting of guns is the enriching of ones knowledge and the fun of researching their previous owners — particularly if the arm belonged to, or was used by an infamous character. About three years ago, an old black powder, single action Colt, Serial No. 106721, initiated the research for this article. The gun belonged to a local family, close kin to the "Butch Cassidy" Parker family. The old Colt was documented by letters and an old slip of paper showing the gun was traded by Harvey Logan for a four-year old sorrel mare, in the winter of 1900. The old Colt wasn't too pretentious, but it did possess some interesting features; namely, the tiny initials "H.L."

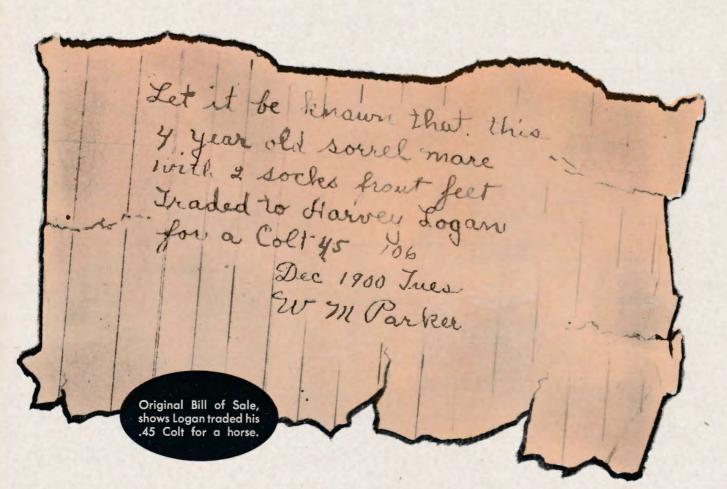
on the butt and the shortest trigger pull I have ever encountered on any single action, indicating there were times when this gun might have been fired without engaging the trigger, such as fanning and holding the trigger steadfast. A weapon with such history and character sparked my enthusiasm and caused me to seek more pertinent facts on Harvey Logan — alias Kid Curry.

Utah has always been heralded for its wonderous scenery and historical events of pioneer origin. Yet, obviously passed over, are the haunts and activities of the infamous "Wild Bunch." A gang named by the Pinkerton Detective Agency about the turn of the century. Actually, the "Wild Bunch" was the last of





Remnants of one of the "Robber's Roost" cabins.



the mounted gangs whose specialty was train and bank robberies. A gang that at times reached army proportions. The progress of communications and the efficiency of the Pinkertons had driven most outlaws Westward by 1900. In an effort to seek out a sanctuary, the outlaws were attracted to the remote southern part of Utah commonly referred to as "Robber's Roost." George Parker, alias Butch Cassidy, the self-appointed leader, having been born near Circleville, Utah knew the area like the inside of most banks. The area today is still very inaccessible and difficult to reach and it certainly is logical to understand why even a posse would hesitate to attempt to capture a gang of armed men in this area — pinacles, peaks,

caverns, meadows, gullies, rivers and cliffs guard the enclosed box canyon. Without detailed knowledge or a helicopter for reconnoitering it would be almost certain disaster to enter the old unchartered "Robber's Roost." Logan, alias Kid Curry, was as infamous an outlaw as the Old West could produce. His life was like a unbelievable Hollywood melodrama, yet late enough in history so that existing documents and records can substantiate it. Until a few years ago Frank Dialo of the Pinkertons was alive to confirm his chases with Kid Curry. From the Pinkerton files, the R&I of yesteryear, one can learn some interesting facts about the No. 2 Commander of the "Wild Bunch," or Butch Cassidy's lieutenant.

WILD BUNCH





Hand drawn map of the gang's inaccessible hideout, "Robber's Roost." Below, Logan's criminal record as was compiled by the Pinkerton Agency.

\$6,500 REWARD.

Complete Criminal File Harvey Logan:

Harvey Logan, alias Harvey Curry, Kid Curry.

Nativity: Dodson, Mo.

Cowboy, train robber, horse and cattle Occupation:

thief, holdup man and murderer.

37 . . . 1902

Eyes: Dark

Age:

5-ft. 715 inches Height:

Weight: 145 to 160 pounds

Color: White Build: Medium

Other features: Prominent nose; dark brown hair,

darker mustache, long arms.

Marks: Gunshot wound on right wrist. Slightly

bowlegged.

Personality: Reserved manner. Drinks heavy, and

has bad habits.

Record: Killed Pike Landusky, of Landusky,

Montana, Dec. 25, 1894. Robbed the

Belle Bourche Bank, S. D., June 27, 1897. Escaped from the Deadwood, S. D. jail, Oct. 31, 1897. June 2, 1899, held up the Union Pacific at Wilcox, Wyoming. June 5, 1899, shot and killed Sheriff Hagen, Conners County, Wyoming. May 16, 1900, killed Sheriff John Tyler of Moab County, Utah, and Deputy Sam Jenkins. June, 1900, killed the Norman brothers. July 26, 1901, killed James Winter, July, 1901, killed Sheriff Scarborragh, Apache County, Ariz. March 27, 1901, killed Oliver Thornton, of Painted Rock, Texas. Dec. 13, 1901, wounded three deputies at Knoxville, Tenn. Captured, but escaped, June 7, 1904, held up the Denver & Rio Grande RR at Parachute, Colorado. June 8, 1904, he killed himself near Glenwoold Springs.

He was a soft-spoken man, reported as speaking in monosyllables, even quiet when drunk. All reports and records state, "he wore a single Colt Peacemaker 45 with ivory handles and was capable of outshooting most gunfighters." One woman reported after the robbery of the First National Bank of Winnemucca, Nevada, September 19, 1900, that Harvey gave her a brooch and helped her across the street. This is the same chivalrous gent whose dossier in the Pinkerton files shows he killed eight men. Records also show he once rode 200 miles to kill a rancher who informed on him (a Jim Winters).

Logan had three brothers, Lonny, Johnny, and Henry-all died with their boots on except Henry who lived a respectable life. For relatives in Dobson, Missouri, they had the two Ketchums "Black Jack" and Tom and the Lees. Harvey and his brothers were orphaned at an early age and raised by an aunt whose statements relate that they were well mannered, attended Bible school, but went wrong from reading Ned Buntline's magazines. Harvey picked up the alias Kid Curry after serving his apprenticeship on "Flat Nose" George Curry's cattle rustling gang in Wyoming. This, too, is how George Parker adopted his alias of Butch Cassidy after the well-known rustler, Mike Cassidy who worked for his father in Utah. Apparently, Logan possessed a homicidal rage which seemed to overpower him. For example, after brooding over a romance that he had experienced in Landusky, Montana, he rode from Utah to Montana, arriving Christmas Eve 1894, whereupon he killed the irate father of the pregnant girl, who had reported him responsible.

Ezra Lay, the educated member of the "Wild Bunch" engineered all the train robberies that Harvey participated in. Planning the Union Pacific \$30,000 robbery at Wilcox, Wyoming, June 2, 1899, where a new technique was used and the security car dynamited, the robbing of the Colorado Southern Pacific, New Mexico, and the \$100,-000 Great Northern at Wagner, Montana, (Continued on page 58)



AIR GUNS



us something new. This is a new breed of air rifle that goes far beyond the elementary types of our boyhood. The Europeans, mostly the West Germans, have developed a family of air-powered rifles that not only far outclass our best, but are so refined that they will, at their best yardage, actually outshoot the .22 rifle.

These air rifles are match guns. Made to shoot all their pellets into one hole, and represent the finest in engineering skills. The new guns have been produced since the end of World War II and part of the reason for their being lies in the fact that the Germans wanted to shoot but the Allies had forbidden them any arms. They turned to the harmless air rifle and because of the intense interest among German marksmen, such firms as Anschutz, Walther, Feinwerkbau and others, the best engineering brains were put to work to develop a super air rifle. This has now been done.

The rifle the Germans developed bears scant resemblance to our conception of an air rifle. It looks more like an international free rifle. The stock is a massive affair. A man's stock. The rifle weighs 9½ pounds, again a critical detail which makes it a man's gun. The sights are adjustable and are refined to micrometered movements of only ½-minute. The firing mechanism is painstakingly finished and fitted.

A good deal of the same care goes into the action that is bestowed on a quality watch. The trigger pull is the equal of the high grade accessory triggers we put on our finest match rifles. Accuracy is superb. On the order of one-eighth inch at the match distance. This is ten meters or 33 feet. The caliber is .177-inch.

During the past three years these new air rifles have begun to reach our shores. Their introduction has been a slow thing, for after a preliminary introduction it took some time to produce the models in any numbers. It has also required a concentrated effort to acquaint the American shooter with the new arm. The present imports all come from West Germany. The Anschutz, as made by the famous rifle firm of Anschutz, is brought into this country by the Savage Arms Corporation. The Feinwerkbau is imported by Daisy-Heddon. The Air Rifle headquarters, Grantsville, West Virginia, also sells both these rifles as well as the Weihrauch, Walther and Diana. The Interarms Corporation, Alexandria, Virginia regularly sell the Walther line, and HyScore Arms Corporation of Brooklyn handles the Diana guns. Here, more recently, the Winchester-Western Division of Olin Incorporated has started to sell the Diana air rifles.





The National Rifle Association, aware of the fine potential inherent in the new rifles has actively furthered an air rifle shooting program. This is called the "333" air rifle training program and includes both shoulder-to-shoulder and postal matches. An unlimited re-entry match is fired at the National Matches each year and the air rifle is now a regular event in the biannual World Matches. On the Continent the air rifle is fired by thousands of marksmen, Horst Berghofer, a design engineer for Anschutz, says that in West Germany there are almost a half-million competing marksmen and annual matches are fired in Europe for the championships, both individual and team, among such countries as Sweden, Denmark, Switzerland, Norway, Hungary and West Germany. Our interest is still in the beginning stages.

Target shooters among the powder-burners are a minority group in this country. The idea that there will be a great many targeteers with the new air rifle is pretty optimistic. The chances are their numbers will always be comparatively modest. What is the good of the new breed of gun for the average fellow? The shooter who is more hunter than match gunner?

This German arm is a decided asset to the hunter who

wants to keep hand and eye in tune 'tween seasons. It has all the weight and the balance and the feel of a high-powered hunting rifle. It has the same excellent sights and the splendid trigger pull and the accuracy of the best of our sporting firearms. Along with these good points it can be shot anywhere. It isn't like the .22 which must be hauled out of the city and fired into a substantial backstop. The air-powered number can be shot in the house, in the back-yard, in the basement, or the garage.

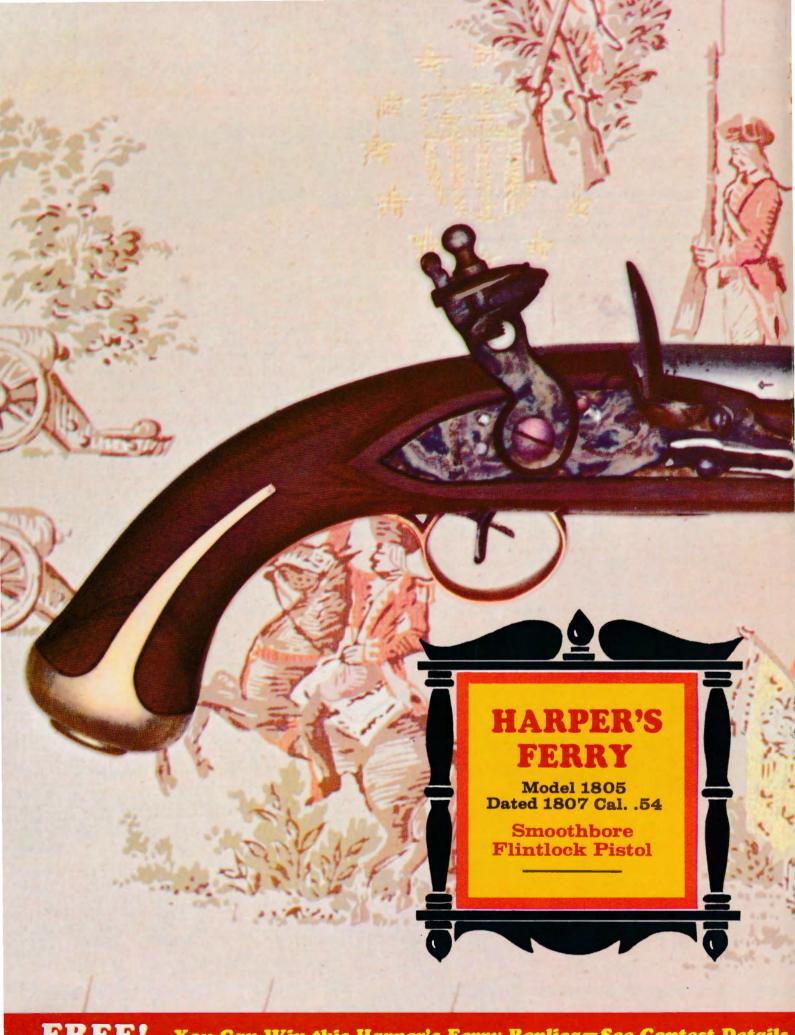
Cost is another item. The expense is approximately a penny per shot. This is the cost of a fancy match type pellet, the most accurate kind to be had. This is an item which cannot be touched even when firing the .22 long rifle.

The new rifle has been purposely stocked for offhand shooting. This is because the shooting game as played with these arms is shot entirely from the hind legs. If you will ask any practicing huntsman he will tell you, if he is reasonably honest, that he has more trouble in the game fields with those shots he must make from the standing than from any other position. The practice with the air rifle from this stance will do him inestimable good during the game season. While the rifle has been stocked for offhand work this is not to say that it cannot be (Continued on page 56)



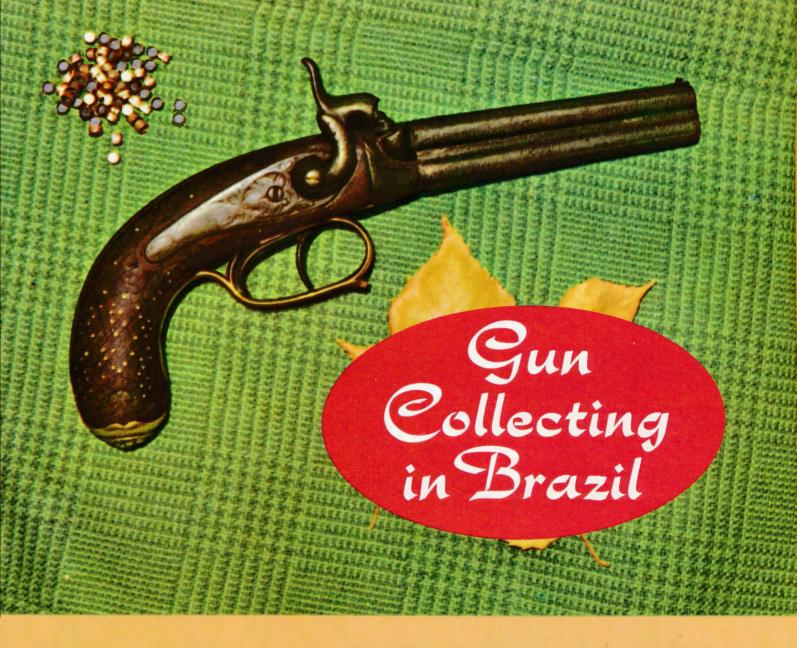
Tight shot groups, shown at right, were fired with the Anschutz Model 250 high precision air rifle, from the sitting and offhand positions.







Elsewhere in this Issue (Replica by Centennial Arms Corp., Lincolnwood, Ill.)



You don't have to go searching for rare guns in Brazil, it seems that everywhere you go someone offers you one

By DWANE SYKES

I BECAME A GUN COLLECTOR almost overnight—in Brazil—mainly by accident. I'd really gone there on a four-year-stint as a range management professor to conduct agricultural research on an American foreign assistance team and to help a Brazilian university develop its graduate program. But when I saw how many brasileiros in the bush country of Minas Gerais walk around with a garrucha pistol tuckéd under their belts, my Utah-reared curiosity developed into an interest that soon made me a garrucha owner, too. But I put mine on the walls of our home, there, and in Alaska where I presently live.

I knew nothing about antique guns, except that perhaps one or two would look nice over the fireplace. I ran onto my first caplock garrucha at the corner gas station in Vicosa, Minas Derais, where I lived. My friend Vico de Vino, the station owner, had it in a drawer in the back room. To me the weapon looked merely like a nice "pirate pistol," so I bought it from him. It was a caplock, apparently of European make, with double $4\frac{1}{2}$ inch barrels

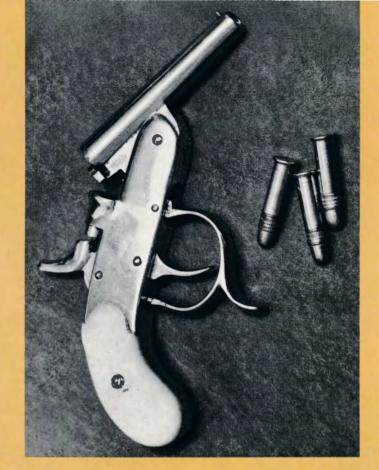


A .22 caliber deringer, hand-made from a bolt and a section of railroad track. Small enough to fit in a watchpocket.



This functional muzzle-loader has a wooden grip and an umbrella tube for a barrel. It belonged to a young boy!

Brazilian handguns are modest in quality and much more modest in price. The Lerap and Rossi shown here can be purchased in any hardware store. Cost—both under \$10.







These Chumeiras are not considered to be antiques in Brazil. They are carried as protection against bandits by many backwoodsmen who frequent the Interior.

of .36 caliber mounted over-and-under. The weapon was worn smooth from frequent but careful use. Working order was excellent and all parts and finish apparently were original, though, of course, at the time I knew nothing about any condition criteria. The trigger guard was of embossed bronze as was the cap box cover located in the butt. Side plates, hammers and grip were also engraved. The second gun was a gift from my wife and boys. She had learned the whereabouts of a .44 caliber Winchester Model 1873 and vaguely remembered it from a movie some years ago, The Gun That Won The West.

While driving along the narrow dirt roads of the interior, one frequently passes the caipiras, Brazilian backwoodsmen, hunting birds or small game. A hunter myself, I often stopped to inquire what luck they were having and to take a look at their guns. The espingarda or shoulder arm of these caipiras was almost invariably a muzzle-loading, double-barrel caplock. Most of these were of quite

small bore, thin and smooth, for use with shot. They were usually very intriguing with well carved stocks and metal trimming. Many were homemade in part or in whole.

"¿Por quanto vende?" I occasionally asked the caipira, or "What will you take for your espingarda?" If the gun struck my fancy I would dicker with him, usually down to a price about half the first-quoted value—a figure he'd placed at three or four times the gun's probable worth. Then, handling him the money, I'd take the gun and fire the charges at a stump—invariably the gun would be loaded—thank him, and continue on my way, both of us pleased with the exchange.

Thus, I unintentionally began accumulating old guns. The majority of Brazilian men in the "interior" carry a handgun hidden on their person, especially when traveling. The dyed-in-the-wool caipira's sidearm is a double-barreled caplock, whereas that of the town-folk usually is a revolver, depending upon the city dweller's financial means.

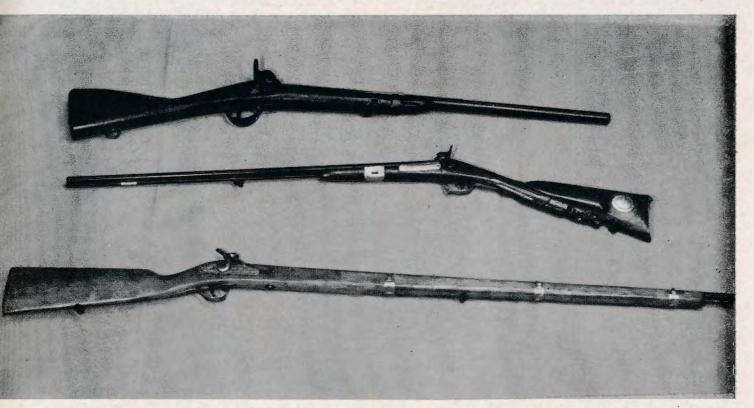


This .36 cal. caplock with 41/2-in. double barrel was the authors first find. A bargain at \$8.00.

Gradually, as word got around about my innocent interest in old guns, men began stopping me on the street and coming to my home and office with guns to sell. Though many of these guns are collector's items in other countries, to the Brazilians they are merely guns for ordinary daily use. There was such a variety of them that my gun accumulation grew and I had to begin turning away most offered arms. Eventually I found myself in possession of 26 old Brazilian handguns and 16 longarms stacked in boxes

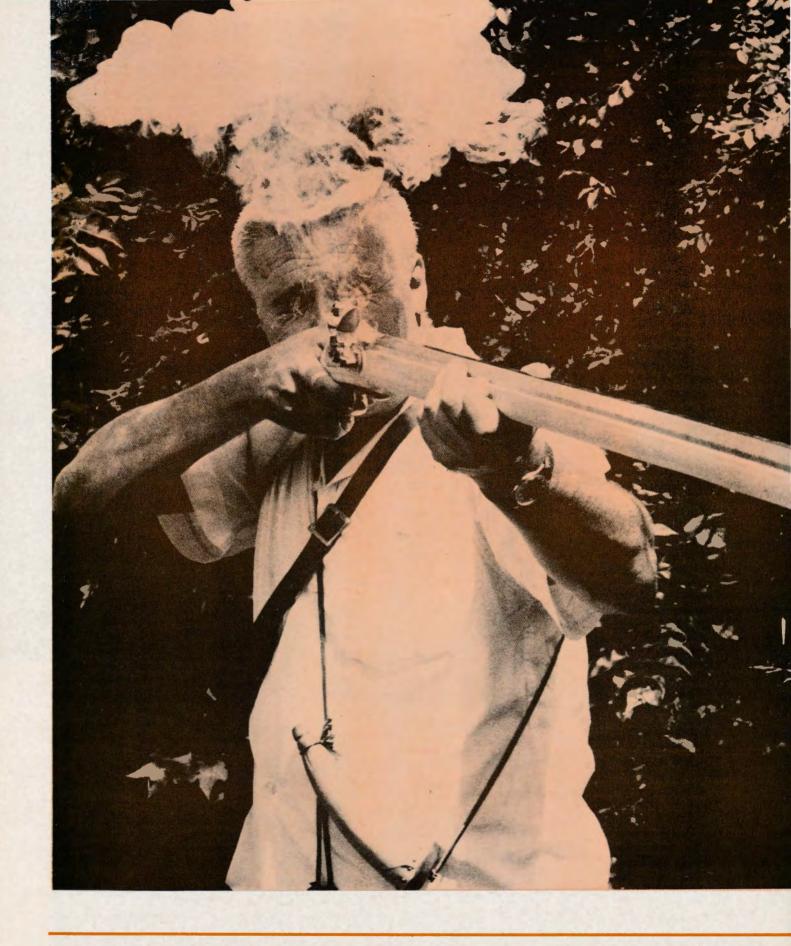
about the house, not counting the five regular hunting guns that I had always had.

There were the handguns. Mostly caplock muzzle-loaders. Some had a single barrel, many had double barrels mounted both side by side and over-under. Some of the double barreled cartridge weapons had tip-up action. Many were imported from Europe and America. Their origins were as varied as their calibers. Some were more recent cartridge pieces and revolvers, including (Continued on page 67)



Caplock shotguns: Top, a Belgium made 10 gauge. Center, a common Belgium double-barrel, right barrel choke bore (.42-.45 cal.) the left barrel .42 cal. cylinder bore. Bottom, new .45 cal.

GUNS • MAY 1969



SHOOTING THE FLINTERS

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THERE'S A RESURGENCE OF INTEREST IN THE FRONTIERSMAN'S FIREARM

By GEORGE C. NONTE, JR.

E MPTY RIFLE, just fired. Target in the trees yonder. No matter if it's Indian, Spaniard, Redcoat or game, it's got to be hit, and a belt-hung tomahawk or knife is a mighty short-range weapon.

Slide the rifle down through the left hand; snatch the slung powder horn and yank the stopper with the teeth; guess the right amount of powder into the muzzle, no time for the hollowed horn-tip measure and never mind what's spilled. Spread two fingers quickly over the muzzle, releasing the rifle-ball capped there between well-worn callouses; a quick stroke with the ramrod, then drop it clear; slap the lockplate to jar powder into the vent, thumb sweeping the hammer to full cock; splash powder into the pan; and knock down the frizzen.

Only then could the slender Kentucky or hefty plains rifle be cheeked and swung on target for that life-giving second shot. Even then, the naked ball wouldn't carry as fast and true as if there'd been time to patch it properly. The frontier rifleman had a rough go if he missed that all-important first shot or was faced by more than one hostile target. But for three centuries, the flintlock was the best firearm to be had. For war or sport, it was the only standard.

Today, we've got pretty fair machine guns and automatics for warrin' and feudin', and not many people care to draw a bead on Redcoats or Indians. But, the flintlock is far from forgotten.

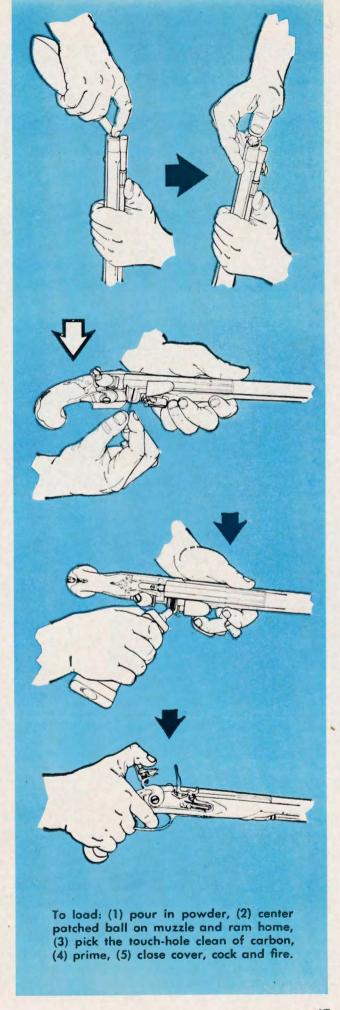
There's a resurgence of interest in the frontiersman's long rifle. Once again, lanky (and some not so lanky) figures in fringed buckskin swing Kentuckies to shoulder, spark-shot white smoke boiling up from flashpan and spouting from muzzle. In most of us, there lies dormant the urge to emulate those early mountain men, and it breaks through the surface in all sorts of people; doctors, airline pilots, bankers, bus drivers, and even housewives and secretaries. Give a man a long rifle and powder horn, and strange things begin to happen to him.

Original flintlock rifles and pistols aren't plentiful today; and when in good, servicable condition, they're too valuable to shoot. But, that's no deterrent to fun. At least a half-dozen large foreign and domestic makers turn out tens of thousands of creditable copies of original guns in basic types and styles.

In addition, dozens of custom-makers and small shops turn out superb flintlocks, equal to the finest examples of the 18th and 19th Century gunmakers' art. Shootable new flintlocks can be had at prices ranging from \$20 or \$30 to well over \$1000. And, like in every other field, you get what you pay for. Quite good quality pistols can be had in the \$35-\$75 range, rifles at \$75-200. For convenience sake, we've appended a partial list of flintlock suppliers at the end of this article. Get their catalogs and you'll see what is available.

So, to shoot your new flintlock, you need round; pure lead balls, patch material, FFG or FFFG black powder, fine (FFFFG) priming powder, vent prick, and some spare flints. Of course, the usual cleaning gear, too. Muzzle loaders take lots of thorough cleaning. Some means of measuring powder is necessary. A brass cartridge case trimmed to hold the correct charge works nicely, but the traditional powder horn is much more (Continued on page 59)

GUNS



MAY 1969 47



ORMALLY when you mention plating it brings to mind visions of boiling tanks, elaborate wiring systems, and expensive quantities of gold, silver, and what have you. And, naturally enough, should you have plating done, it is expensive. Were you to have a handgun gold-plated, you could probably figure on paying upwards of \$100.00 for this luxury. But, how about doing it yourself for only a matter of a couple of dollars! If you're halfway handy with tools, enjoy working on your guns, and can follow simple instructions, this may readily be accomplished. Kits for this are available from Wisconsin Platers Supply, 3256 Milwaukee St., Madison, Wisc. 53714, and with a little work and practice, truly professional results may be obtained.

Mrs. Alma Madis runs this unique organization, and she's no stranger to the firearms field. Her son, George Madis, of Dallas, Texas, is a noted Winchester collector, authority, and is the author of *The Winchester Book* which is basically the standard reference for Winchester collectors.

Kits available are:

Gunsmith Special. Plates three large handguns with 24 karate gold, three with pure silver, and three with nickel. Comes complete with sufficient copper undercoat, brush, wires, clips, etc. Price \$15.00.

Gold Set. Plates three large handguns with 24 karate gold, sufficient copper undercoat, wires, clips, and brush. Price \$10.40.

Silver Set. Plates three large handguns with pure silver. Includes necessary accessories, copper undercoat, etc. Price \$5.40.

Nickel Set. Plates three large handguns, set complete with all necessary accessories. Price \$5.40.

In addition, refill compounds are available and may be used with any set. Each ounce will plate three average sized handguns.

The kits are complete with the exception of batteries, and the instructions specify the use of either two or three No. 6, 1½ volt dry batteries. For a heavier current, and I hoped, better results, I didn't try it at all with just two batteries, but purchased three of them, and as the instructions specified, connected them in series. Two might possibly work alright, but the results were especially gratifying with three.

Before plating the metal must be polished and prepared as it would be for bluing. The instruction sheet says that the work you do depends 75% on the surface you plate and this is certainly the case. The necessity of having the metal well polished and cleaned can't be stressed too strongly. The success of the entire plating operation depends on it. I found that a buffing

wheel was just about a necessity. While jeweler's rouge worked fairly well as a buffing compound, a valve grinding compound was far superior. Very fine abrasive cloth should be used for working into corners and tight places where the buffing wheel will not reach.

After the metal is well buffed and polished, it must be cleaned and degreased. This may be done by boiling it in soapy water or by scrubbing with carbon tetrachloride. Again, a good job must be done in cleaning the metal and especially in working into corners, such as sight bases, slots in the cylinder, hammer checkering, etc. For this work, as well as the entire plating operation, I found it necessary to completely dismantle the gun and work with each part individually.

After the metal has been buffed, polished, and cleaned, and the batteries connected in series (the wire with which to do this is included in the kit), you're ready to begin the actual plating operation. The negative wire from the batteries is attached to the piece to be plated. The positive wire and clip is attached to one of the brushes, and the brush dipped in the plating compound you're using. Incidentally, neither the gold nor the silver will adhere to metal, so prior to applying them, a coat of copper must be applied to the metal. With the plating paste on the brush, it is applied to the metal, preferably in even strokes. The instructions say to work on each area of one square inch or less for at least thirty seconds, but I found that if the time was doubled, a heavier, more uniform plate occurred. After each part is plated, all extra compounds are rinsed off or wiped off with a damp cloth. I found it best to thoroughly dry each piece after rinsing it, then buff it lightly with the polishing wheel, and then lightly polish it with a soft cloth. For a heavier, more durable plate, I found it advisable to again clean the plated part with carbon tetrachloride and repeat the plating process.

If these instructions are carefully followed, the home craftsman may turn out a professional looking job that he can be proud of. If the instructions aren't carefully followed—you can end up with a ruined gun.

Handguns offer many chances to use plating, some of them being: Brass-plated backstraps, nickel-plated hammer and trigger, silver-plated ejector rod housing, or the grip or side safeties on a semi-automatic. The ideas are unlimited and if you exercise care, an otherwise drab gun can be easily personalized and beautified. Give it a try—I think you'll like the results.

NORTH & CHENEY'S ARE WHERE YOU FIND THEM

(Continued from page 25)

and although I always hesitate to make offers I did make him an honest offer, backing it up with a letter from a friend telling me what he had paid for one. He looked at me rather startled and said, "Is it really worth that much?" "Yes," I replied, "At least that to me." I believe that honest offer got me the pistol.

Another time in March 1954 a friend asked me if I wanted to buy a pair of North & Chenevs as he was unable to handle them. I laughed at him and said, "A pair of North & Cheneys?" I went on to state that I had never heard of a pair and he replied, "Well, then two N&C's." And then gave me the man's name and address in El Paso, Texas. If there is any place that I wouldn't start looking for N&C's it would be El Paso. but I figured I couldn't lose much more than a stamp in writing (and postage was cheap then). I wrote the gentleman and with my great wisdom explained to him that possibly he had two French Model 1777 Army Pistol from which the American North & Cheney Model 1799 was patterned, but should he by chance have N&C's I would be very interested. He wrote back that he did "by chance" have two N&C's and sent me photos to prove it and gave me the serial numbers. They were rather well used, some small parts missing, some of the wood rather bad but still two honest N&C's.

I phoned him. He said that he had an offer and set a price for the pair. I accepted. He then said that he had promised a friend that he would let him see them before he sold them and if I would ship them back to him for a day or two he would then return them to me. The pistols didn't come back, he apparently sent more photos out over the country and about a month later my secretary received a call in my absence saying that he had an offer for twice as much as we had agreed upon. I didn't get the pistols and it took me several years to learn where they went.

An astute Eastern collector was visiting in a large Southern city, the home of an avid collector of U.S. Single Shot Pistols. The visitor shopped a second hand store near the collector's place of business. To pass some time away, he asked about firearms and was shown several pieces that showed traces of original metal and he controlled himself. He

asked the storekeeper if that was all he had and the owner asked if he liked flintlocks. Our hero said he might like one to hang on the wall, what did he have? Yes, you are right, the man brought out a fine North & Cheney which the Easterner reluctantly bought and then graciously showed to the local collector.

In a gun magazine about nine months ago there appeared an interesting story and picture of a N&C that had been dredged up from the Meramec River, not far from St. Louis. This piece was still loaded but in terrible condition. Another showed up in Texas quite a few years ago. The years had taken their toll -it looked like it had been run over by a wagon. It would be exceedingly interesting to know how these U.S. Contract Pistols got scattered all over our country, and just how many more are still around if the entire 2000 pistols covered by the two contracts were made.

Within the past year two supposedly North & Cheney pistols showed up in a collection in the West. Although the collection had previously been appraised and both pistols passed as good, the dealer who later handled the collection immediately saw that one was an out and out fake. This brings us to the conclusion that should you find that "Sleeper" be sure that it is a "Sleeper," not just a plant.

In the case of North and Cheneys, I have seen several fakes and in each case they have been made from the French 1777 Army Flintlock Pistol. When you know what to look for the differences are easy to spot. The barrel of the N&C is one inch longer, but of course barrels can be stretched. The shape of the bronze frame casting is quite different in spots, but it is a lot safer to have an authentic one to compare with. The French Pistol has no barrel screw under the frame, this could possibly be added. The pictures here show other differences such as the tangs, the trigger guard lug, plus others not mentioned. Also, remember the minor discrepancies could vary since both pistols were hand made. The same holds true today-we have some very clever mechanics around. So take things slowly and give the other guy credit for possibly knowing what he has.

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H UNDREDS of thousands of people complain bitterly about the vicious attacks on shooting and shooters ground out by the ultra-liberal and left-leaning press and public news media. But, few of the complainers do anything constructive about the problem. It is a pleasure to report that at least one organization has taken a positive step in the right direction.

The First Annual Outdoor Writers Olympics, hosted by affable Andy Morgensen of the Oakland Tribune, for American Sport Company, an Oakland, California based toy and sporting goods distributor, did a lot of good for clay target shooting and for shooters in general.

The guest list for the outdoor writer's shindig included outdoor columnists from every major newspaper, most of the state's outdoor magazine people, and broadcasters from both radio and television. Air transportation, lodging, meals, prizes, and royal entertainment were provided by American Sports.

Each of the guests fired at least one round of trap at a near-by Alameda trap club. I heard many of the outdoor people confess that this was their first try at clay targets, and it was obvious from their comments, both on the range and at the cocktail party and dinner which followed, that it would not be their last. The sum of their comments further indicated a much more favorable public relations image for both shooting and shooters. It seems to me that it is along these lines that we can most profitably wage the battle for a better public relations image.

As I see it, there is little we can do to win over the strident and vocal anti-gun people. They will remain, for the most part, anti-gun despite our best efforts. Our target must be the vast middle ground of uncommitted people, between the anti-gun and pro-gun proponents.

More and more events such as the Outdoor Writer's Olymipics can tell a more favorable story of shooting and shooters. This is the way to reach the uncommitted, those who really hold the power to sway the pendulum from one side to the other.

Speaking of clay target shooting publicity, there was a story in the January issue of *Trap & Field*, the trapshooters magazine, which ought to be re-told. From my own association with news media personnel, I'm aware that human interest stories like this have an almost universal appeal.

The story, a brain child of former ATA president Phil Shields, told of the Pine Valley Gun Club at Berlin, New Jersey hosting a trapshoot honoring the area's octogenarian shooters.

Nine of the area's 19 active octogenarian trapshooters braved the elements on a miserable day, and seven of them fired the program. Total age of the nine gunners was 742 years! Even more newsworthy were the scores of the over-eighty marksmen. Eighty-two years young Dr. Arthur Vickers, president of the Pine Valley Club, recorded a 96 to pace the 16yard squad. Joe Ulmer, who admits to 83 years, overcame a wobbly start with a last-post straight for an 89. Steve Crothers, the first shooter to record a 200 straight in the Grand. when he won the 1925 North Ameri-Clay Target Championship, dropped only 16 targets, at age 82. The senior of this squad of seniors, at 86 years, Dr. J. S. D. Eisenhower, posted a very respectable score of 80. Richard Burke, who had just reached the honored age, was low man with 68, but that 68 was fired under the pressure of having to finish the course in time to keep a pressing appointment. Eighty-three year old H. L. Beyer, and four-score Charles Hicken passed up the 16-yard race in favor of a 50-target handicap event. Ralph Willis and Ed O'Brien coached their

peers on this raw and windy day.

In an era of competetive sports when participants in other games are old men in their thirties, and greybeards in their forties, here is a competitive game in which participants twice these age levels can and do compete meaningfully. It becomes obvious that trapshooting is a sport which is still open to a man (or woman) who has retired, and which opens new vistas for recreation and outlook.

On the International sport shooting scene, NRA will sponsor two squads to compete in the Clay Pigeon (trap) and Skeet Championships portions of the World Moving Target Championships, slated for October at Madrid, Spain. Texas International Gun Club of San Antonio, will host the final shotgun tryouts July 11 through 20. The Texas club also hosted final tryouts for our clay target teams who competed in the 1968 Olympics at Mexico City. The four high guns in each sport will represent the United States at Madrid.

These final tryouts will provide a "next year" for the shooters who failed to win coveted places on the 1968 Olympic team, and offer a chance for the shooters who wore our colors at Mexico City to compete on the International level again.

Over on the East coast, Paul F. Collins of Pemberton succeeds Warren Horre as president of the active New Jersey State Skeet Association. Lou Ferrari turns over the reins of vice-president to John Delessio of Penns Grove. Carol Severe of Cranford takes over as keeper of the books and purse, from Betty Roschen.

Paul Hamby of North Brunswick joins incumbents Don Beddiges from Bloomsbury and Westfield's Ed Meehan to stand in nomination for NSSA National Directors.

Thunder Mountain Gun Club, at Ringwood, will host the annual New Jersey State Tournament June 6, 7, and 8, with one hundred targets each in four guns. A separate International-style skeet championship is scheduled over the traps of the Grouse Ridge Gun Club, at Clinton.

B ack once more to the publicity and human interest element in the clay target sports. Sport pages of the nation's dailies have been filled with accounts of the distaff sex trying to break into sports that are traditionally one hundred percent male in character. In the world of shooting, it is no "man bites dog" story when one of the fair sex clobbers her male counterpart at his own game. Such

happenings are neither rare nor infrequent. In one of the most recent of such stories, Mrs. C. G. Alio tied four well-known and top drawer trapgunners for high gun at the Aronimink Gun Club, Newtown Square, Pennsylvania.

In the shootoff, Mrs. Alio smashed 25 straight to turn back a quartet comprised of Pierre Houdry, Jack Kofron, Fred Hooven, and H. L. Beyer, Jr.

After recording the shooting exploits of octogenarians, and revealing that upon occasion females are the more deadly (marksmen) of the species, there is still more on the human interest side to be found in the clay target sports.

Fourteen year old trap-boy Bill Mesker of Tulsa, Oklahoma put aside his mundane trap filling duties long enough to break 100 straight skeet targets and win an open championship at the Southern Hills Gun Club. This performance is somewhat akin to a ball-boy taking over quarterback duties from Broadway Joe Namath and throwing the winning touchdown pass (which would produce a passel of publicity). Only this did happen, and it didn't get much publicity. Maybe we're at fault, myself and my fellow clay target gunners.

It's a pleasure to report that a great guy and fine host, Joe Sullivan, from Springfield, Massachusetts, a fellow Indian from the same reservation, has been honored by being named, along with Fritz Widergoot of Southboro, to all five of the Massachusetts All-State Teams in skeet (all-around, 12, 20, 28, and 410 gauges).

I don't have the pleasure of knowing Fritz Wiedergott, but I do know Joe Sullivan, and the Bay State honors could not have found a greater recipient.

1969 could be a very significant and rewarding year for the shooting sports, if every reader of this magazine, and every shooter with whom our readers are in contact, would take it upon themselves to make sure that all the human interest stories that abound in the shooting game are communicated to the news media.

If you will perform this small service for the game, you may be surprised at the reception you'll get from some of those writers and broadcasters who have not been noticeably on our side. While many of them are not pro-gun, they are still in the business of competing with each other for an audience

Why not give news-hawking a try, if only once, in 1969. Who knows, it may open a new career, and it can't help but benefit the shooting sports.

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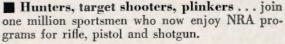
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pulping and other damage at a distance beyond the permanent cavity or apparent bullet track. During the stretching of tissue with the expansion of the temporary cavity, nerve trunks are often stretched to such degree that function is destroyed without apparent physical injury. The permanent cavity will be surrounded by an area of damaged tissue and extravasated blood. There will be damaged and disrupted nerves along with damaged blood vessels. Bones may be found fractured although without evidence of a direct hit.

The viscera, fluid-filled, may be blown apart through the hydraulic pressures which are generated. When super-velocity bullets penetrate the brain cavity, it is pulped and in some cases the bones of the skull separate along suture lines just as though there had been an explosion within the brain. These are the forces which are evident during the formation of the temporary cavity. These can now be seen through the use of high-speed cameras and the X-ray.

The Medical Corps experiments I found that bullet yaw had a marked bearing in the production of the wound. Yaw, as everybody knows, is the deviation of the bullet from its normal line of flight. Yaw is increased some 800 times in animal tissue. This causes some complex bullet motions. Yaw tends to retard the missile in living tissue and thus increases the delivery of kinetic energy to the object struck.

The modern rifle bullet with its long, arched point is maintained in a point-on position through the spin given it in the rifle bore. This in turn effects what we call the "overturning couple." The center of gravity on the spitzer-pointed bullet is near the base of the slug, along the axis of the projectile. Forward of this point, and also in the axis, is the spot where the retarding forces are resolved. The distance between these points is the "overturning couple." The spin stabilizes the bullet between these points.

While the bullet is spun quite rapidly it is never in a perfect form of revolution, and because the center of pressure and the center of gravity are never exactly in the axis, there is always some yaw present. While the bullet is in the bore it is compelled to rotate about the center of form, but once free of the barrel it rotates about its center of gravity. It is then that

the vaw becomes apparent. These variations are gyroscopic and at one instant the point of the bullet is foremost, and in the next the axis is at an angle to the line of flight. The angle of yaw increases to a certain extent and then decreases until it is zero.

(Continued from page 17)

The studies found that the first yaw occurs at a distance of only 10 to 20 feet from the muzzle of the rifle, taking 1/1000 of a second. The bullet continues to develop yaw at periodic intervals during its entire flight. When it strikes living tissue it may be pointon, but after a penetration of only three inches will be tipped as much as 90 degrees, whereas during another three inches of passage it will have righted itself again.

A vaw of as much as 170 degrees increases the retardation factor by 172 times. A vaw of this amount was observed and photographed while a bullet made a passage of six inches through a laboratory animal under anesthesia. This explains in some part why a high-velocity bullet is retarded so greatly when producing a damaging wound. The extreme retardation with the accompanying yaw can result in a wound of comparatively enormous destruction, tissue pulping, bone shattering, and other manifestations of extreme damage.

A bullet may enter tissue point-on, but in a few inches will be tipped as much as 90 degrees and thus present an area that is broadside. The spin, plus the principle of the "overturning couple" will tend to stabilize the bullet and return it to a point-on direction. As a consequence, in a few inches it will right itself and may leave the body of the animal through a small exit wound. Neither entrance nor exit wounds will give an idea of the extensive interior damage caused by the vaw of the missile during its passage.

Col. Chamberlain, who conducted his experiments apart from those reported by the Army Medical Corps, experienced yaw in the bullet wound. "The gross or microscopic instability of the bullet, "yaw," plays a very great part in the internal destruction found. When a bullet is off its gyroscopic axis it almost always "leans" or kicks sideways upon striking a body, from a few degrees to 90 or more, presenting more bullet surface to the tissues and just thrashes hell out of them as it moves through the body.

"I have one photo where a bullet

entered a hog's belly making a 3/8" wound of entrance about 11/2 inches above the surface (the pig was strapped to a litter and under anesthesia). The exit wound was the same diameter. When I opened the hog I found the bullet had yawed at least 90 degrees or perhaps as much as 180 degrees. In doing so the point had cut a knife-like wound in the liver 4½" in length, had then righted itself and exited through a hole the same size as that of entrance.

"During the hog shooting, even though we used a Mann rest and heavy Mann barrels, now and then a bullet would crease the wood 1/8" to 1/4" below the pig's belly. This would cause only a shallow split in the belly and nothing more. However when this hog's chest was opened, in every case such as this where the bullet had traveled just under the skin or even through the subcutaneous layer of fat without entering the chest, a large blue area 2 to 31/2 inches in diameter would be found on the anterior surface of the lungs.

These phenomena proved to be some of the most interesting to me of all the wounds made. From the standpoint of ballistics these dark areas in the lungs demonstrated the lateral

distribution of the bullet's force on the animal, without, in some cases, making a scratch on the skin."

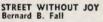
When the Army considered the .223 cartridge as a military load, the AR-15 rifle, which was chambered for the cartridge, was shipped off to Vietnam for a field test. It was found that the .223 produced markedly severe wounds in the enemy. The .223 fires a 55-gr. bullet at 3200 fps MV. Despite the poor sectional density of this peewee slug it wounded severely. This was due to the yawing tendencies of the missile once it struck its live target, plus the high velocities at which it was delivered. Fighting in Vietnam is at close range, oftimes at under 50 yards. Impact velocities were on the order of 3,000 fps, and at these speeds there is a considerable amount of the socalled explosive effect noted so frequently by the Medical Corps during their studies.

Our greatest hunting sportsman is Herb Klein. He has shot on every continent and in all the better gametaking spots around the world. A surprisingly large amount of the game he has bagged has been taken with the .257 Weatherby magnum rifle. This rifle drives an 87-gr, bullet at 3825 fps MV, a 100-gr, at 3555 fps, and the 117-gr. at 3300 feet per second muzzle velocity. Klein has tried all three bullets and the game he has shot has not all been the small to medium species. He has taken moose, grizzly, African eland, Indian sambar, and the greatest trophy of them all, the Marco Polo sheep, with this caliber. If he can be said to have a favorite rifle it is the .257 magnum.

This rifle and its cartridge do well for this remarkable sportsman because of the velocities attained. The speeds are high enough at game ranges to produce the explosive effect which contributes so much destruction within the animal.

Roy Weatherby, who designed the .257 magnum has always been an ardent exponent of hyper-velocities. His .300 magnum, another high speed number, has a splendid reputation as a killer. Here again, velocity has a great deal to do with its success. An indication of this is the fact that the .30 '06 fires the selfsame 180 gr. bullet. It develops a muzzle velocity of 2700 fps while the .300 magnum attains 3200 fps MV. The bullet in each casing is precisely the same, the higher speeds in the .300 accounts for the better performance.

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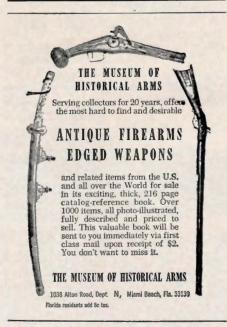
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CARTRIDGES FOR BRUSH-BUSTING

(Continued from page 31)

scopes, even the rifles I use for the big Alaskan brown bear, at close ranges. The Redfield 1 to 4X, and others similar in type and lower power, have completely changed the outlook on all close up shooting.

Last winter, on a visit to Maine, I had an opportunity to talk with quite a number of guides and hunters about hunting equipment. I was a bit surprised to find a general tendency to the use of the .243 Winchester, the 6 mm Remington's, and like calibers, and all of them with scope equipment. Of course, the .30-30 and the .35 Remington are still very popular. there are a great many of them still in use, and I expect they will be popular for many more years to come.

There is no question that a heavy round nose bullet of fairly large diameter, will at moderate speed, penetrate brush better than a lightly structured high speed bullet. However, there is a limit to the recoil that the average hunter can tolerate and still shoot accurately. This recoil factor has helped the popularity of the .35 Remington as well as keeping the use of the old .30-30 active.

If I were asked to select the caliber that would give a shooter the best brush bucking qualities; one that was adaptable to reduced loads for special purposes, and one that had the most specially structured bullets made for use in it, I would choose the .35 caliber above all others.

The .35 caliber has been with us, in many forms, for a long time. Some, such as the .35 Winchester Self Loading, were made for special rifles. The rimmed .35 Winchester was made for the Model 1895 Winchester and also chambered for in some Remington Lee rifles. One of my first heavy duty, big bore rifles was a .35 Newton. This was comparable to the .358 Norma Magnum of today. Two of the odd .35's that have continued to be very popular are the .35 Remington, still chambered for in several production rifles, and the wildcat .35 Whelen.

The .358 Norma Magnum is not chambered in any American gun, but custom or foreign rifles can be obtained in this caliber. It is one of my favorite big game calibers if a heavy load is required. However, it has so much recoil that, for me, it is not a pleasant rifle to shoot for general use as a brush rifle. It is, in fact, more powerful than is necessary for this kind of shooting, unless it would be for ridge to ridge shooting at elk, where brush might intervene or for moose, at long ranges in brush country.

The .358 Winchester cartridge used in the Model 70 Featherweight was a good cartridge and rifle combination, but it never seemed to become popular and chambering for it has been discontinued, although the cartridge is still being produced. Made up on what is essentially the .308 Winchester case, it lacked the power capacity and so did not have the performance potential of the .35 Whelen wildcat. However, it is a fine brush bucking combination for deer, black bear, etc.

SERVICEMEN NEED PERMITS FOR GUNS

Returning servicemen who intend to bring firearms into the U.S. must obtain a permit from the Internal Revenue Service. Under the new federal Gun Control Act, unlicensed persons are generally prohibited from importing firearms and ammunition. The major exception to this rule is that a member of the Armed Forces on active duty outside of the U.S. may import a firearm to his home or permanent duty station.

The Gun Control Act limits the type of firearms that can be imported

to "those generally recognized as being particularly suitable or readily adapted to sporting purposes." While surplus military firearms may not be imported, servicemen may import firearms or ammunition determined by the Department of Defense to be "war souvenirs."

Servicemen may obtain an application for import license, Form 6, from

IRS officers or through military command channels.



There is one contemporary rifle and cartridge combination now in production and becoming very popular that is as close to an all round gun for brush and power killing qualities as anything on the market. This is the Model 660 Remington rifle and the .350 Remington Magnum cartridge. This is a close to medium range rifle and cartridge that can be used on the biggest game on this continent. It can also be loaded down for use on deer and small jungle animals in heavy cover or thick brushy areas.

Originally, the 600 Remington had an 181/2 inch barrel, but in the Model 660 it was changed to 20 inches, improving the rifle quite a bit. It is short enough for quick handling in brush country, and just heavy enough to absorb the recoil that goes with the heavy 250 grain bullets. Shooting this rifle is not too much punishment, even for the recoil conscious shooter. With the lighter 200 grain factory loads, recoil is still further diminished. By handloading a shooter can make his rifle one he really likes to shoot and still retain all the power he needs for general light to medium type game, in brushy country.

It has enough punch for elk at medium ranges (up to 250 yards) and for deer at a bit longer ranges, It is my favorite brown bear rifle and cartridge for the bushy country of Alaska. I killed the first brown bear ever taken with this rifle. At 145 vards the 250 grain bullet went completely through, from the left to the right side, breaking the off-side shoulder and leaving a 2½ inch exit hole where it came out. The bear just fell forward, grabbed a mouthful of driftwood and was dead. I left that rifle on Kodiak Island with the well known brown bear guide, Park Munsev, and it has taken many big bear and moose in equally good fashion since then. Although the .35 Whelen will do everything the .350 Remington Magnum will do, ballistic wise, it is strictly a wildcat rifle and must be handloaded.

A good brush bucking rifle should be light, short, easy and fast to handle, with enough killing power at the range intended. If I ever need a longer distance big bore rifle and cartridge for any reason, I use my 24 inch barreled, .358 Norma Magnum, custom made for me by Al Biesen. With this rifle I have one that will do the same as the .350 Remington Magnum, but will reach out another 100 yards in range, although it is slower to use, heavier to carry and produces more recoil.







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AIR GUNS: A NEW BREED

(Continued from page 39)

shot kneeling, sitting, or prone, too. It can. And anyone who gets a new model and plans to use it to keep hand and eye sharp should plan to shoot from all these positions. The rifle is a single shot and must be cocked and loaded for each shot. This is no chore from any of the shooting positions except prone. Here it is something of a problem. But from the kneeling and sitting it is no trouble at all.

For the past three years I have practiced daily with a succession of the rifles, First with the Walther LG 55M, then with the Feinwerkbau 150 and more lately with the Anschutz 250. I fire 20 shots offhand and follow this with 20 shots sitting. This does not seem to be a great deal of training but it serves to keep me in excellent form for the game fields. The weight of the rifle, 91/2 to 10 pounds, is a good load for the shooting muscles and serves to keep them in tone. The trigger pull adjusted to 16 oz. is lighter than my hunting rifles, but it requires care and this contributes to a sharpness in the trigger finger. The fine sights, I use iron sights just as they come on the rifle, help to keep the shooting eye in tune with the trigger finger. But best of all, I believe, is the good that this practice does to the entire body. That is, assuming the shooting position, whether offhand or sitting, and learning to keep all the muscles under such control so as to maintain a steady gun without strain. This isn't easy and unless the hunter does some kind of firing throughout the year he will find when he gets into the game lands that he quivers and wobbles when he tries to kneel or assume the sitting position.

This, as I see it, is the great advantage of the new air rifle. It is of inestimable value to the shooting man who likes to shoot and who is eager to stay in good form. He need not leave his home base to keep eye and hand in trim.

Everyone who is a hunter likes to possess those guns that can be used for game stalking. The new air rifle is not much as a game killer. In the first place it is big and bulky and not handy to carry. In second place it has no great power. The preferred caliber is the .177. This caliber fires a pellet which weighs only 8 grains. It starts off with a velocity of 600 fps at the muzzle. It loses 30% of this velocity in the first 100 feet of travel. At 50 yards it is going only 350 feet per sec-

ond. And while accuracy is still quite acceptable at 50 yards the piddling energy of the tiny pellet at this range is not enough to make it acceptable for any kind of animate target except the very smallest.

Around my quarters I shoot English sparrows in great numbers with my Anschutz. These pests are taken at distances up to 50 feet but I make it a point to not shoot beyond. The trajectory starts to arch pretty strongly if you try shots beyond 50 feet and then you will miss. Proponents of the air rifle like to make a case for the gun on such game as squirrels, rabbits, crows and even woodchucks, but I hold a lot of reservations when I hear these tales. The new breed is a short range affair and should be held to that kind of practice which will benefit the gunner when he swaps off for his big bore hunting rifle.

A happy side development to the perfection of the air rifle has been the introduction of some outstanding air pistols. The best of these, in all probability, is the Feinwerkbau 65 target pistol. It is imported by Daisy-Heddon. A second pistol which is just as meticulously turned out is the Walther LP-2 which is imported by Interarms Corporation. It is a bit more difficult to cock, and for that reason I do not like it quite as well as the Feinwerkbau. However, so far as shooting qualities go, it is quite the equal of its rival. For the shooter who is bound to hunt small game with the air arm these pistols provide the proper answer. Both weigh 42 oz. and are infinitely more portable than the heavy somewhat unwieldy rifle.

The Feinwerkbau 65 is a single shot, 177 caliber, with a 71/2-in. barrel, a weight of 42 oz. and an adjustable trigger pull. The sights are finely micrometered and are readily adjustable. The pistol has the configuration of an excellent .22 automatic pistol. The barrel-to-stock angle is 28 degrees which is splendid. The pistol may be shot either one-handed or two-handed. It is side-cocking with a lever which lies along the left side of the receiver. When the trigger is pressed it releases a sear which permits the entire action to float. While the driving spring is forcing the plunger forward thus providing power, the action is moving backward a fractional part of an inch. This acts as a dampener on the vibration which is set up by the driving spring. As a result of this exceedingly novel innovation the pistol is recoilless and thus shoots much more accurately.

The Walther LP-2 is also a .177 caliber, has a barrel of 9.4 inches, a weight of 42 ounces, an excellent trigger pull, micrometered sights, and a firing system which incorporates a vibration dampener. The LP-2 cocks by swinging down an underlever. This lever hinges in the bottom of the stock and swings upward to latch into the forward loop of the trigger guard. It takes considerable force to operate it. The barrel tips downward to load. The pistol is a single shot. Power is applied by a driving spring which has a piston on either end. When the trigger is pressed this spring uncoils. Going forward it compresses the air and drives the pellet down the bore. Driving backward it counteracts the vibration of the spring as it shoves the sideration and the 8-grain slug could be offered more cheaply than the 14grain .22 pellet. Barrels were standardized with 12 lands and grooves, right hand twist, one turn in 18.5 inches.

In considering the make-up of the new rifle consideration was given to CO2 gas. It was rejected for the reason that a sameness of chamber pressure cannot be maintained. This is ruinous to velocities and adversely effects accuracy. Air must be delivered to the pellet under identical pressures shot after shot. The system finally standardized is simple. It consists of a spring which is compressed and is released by the action of the trigger sear. When it is loosened it drives forward carrying with it a plunger which compresses the air before it and drives the pellet down the bore.

In accomplishing this simple opera-



Auschutz Model 250 match air rifle open at the breech.

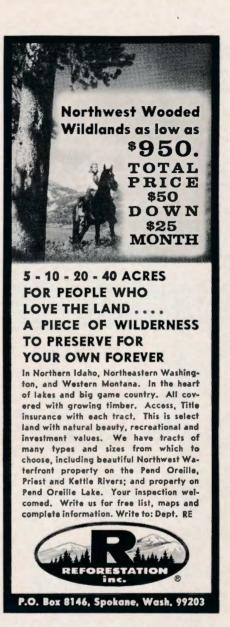
plunger forward. This acts as a very positive dampener on the recoil or vibration.

Accuracy with these high quality pistols is extremely good. I have consistently shot groups at ten meters with the Feinwerkbau, off a rest, of .25 inch. With the LP-2, ten groups of five shots each had an average of .22 inch.

During the development of these new air arms a number of problems were undercovered-and licked. The matter of accuracy was not as difficult as might at first appear. The choice of bore size lay between .177 and .22. The latter has always been the popular pellet diameter in this country. German engineers found that it was not as accurate as the .177; they therefore settled on the smaller projectile. It was discovered for best precision that velocities in the neighborhood of 600 fps were best. This could be achieved more readily with the lighter .177 pellet. Cost was another contion the engineers ran into a really knotty problem. That was the business of the vibration which occurs when the 50 pounds of force generated by the driving spring is released. This is referred to as recoil by the air rifle gentry. It really plays hob with good performance for it shakes the rifle from stem to stern. This occurs while the pellet is traveling up the bore and before it quits the muzzle.

The Anschutz Company, to compensate for the vibration, developed two pistons. The conventional forward piston which compresses the air and forces the pellet on its flight. And a second piston, at the tail end of the driving spring which is forced backward in an oil bath. It is of such a diameter as to not quite fill the cylinder in which it moves. It thus allows oil to flow around the rearward moving piston. This does a most efficient job of blanketing all the recoil.

Feinwerkbau had a different approach. Their rifle is built on a pair





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of hardened steel rails. These rails support the barreled action. They are fitted into the top of the stock. When the trigger is pressed it releases not only the driving spring but also trips a second sear which unlatches the barreled action. As the driving spring and its piston move forward, the barrel and action move backward for only a fractional part of an inch-and only for a fractional part of a second. This is sufficient to kill all the recoil.

Rifles like the Diana Model 60 and the Walther LG 55M utilize the double piston system—one piston forward and the other moving rearward—to mute the vibration. On these rifles as the forward piston reaches the end of its travel it is purposely timed so that some residual air pressure remains in the air cylinder. This acts as a cushion and brings the piston to a halt without damaging either the forward wall of the cylinder or the piston itself. The Model 333 Winchester air rifle utilizes this system to deaden the recoil, as well as to avoid harm to the mechanism.

The first of the really high precision air rifles was the Diana and the Walther. These arms were hinged at the breech end of the barrel and by breaking them at this juncture and swinging the tube downward the rifle was cocked. This works very well and continues to serve admirably. However, the very latest rifles have fixed barrels and cock with a sidelever. This lever lies alongside the forend and is swung outward on a hinge to cock the piece. It requires not more than ten pounds of force. The greatest advantage is that the barrell is rigidly screwed into the receiver. This unquestionably contributes somewhat to better accuracy. The Anschutz and

Feinwerkbau both utilize sidelevers.

Performance by these fine rifles is strongly dependent on good ammunition. The .177 pellet should be of match grade, wadcutter by type, weighing 8-grains, as sold by Savage, Air Rifle Hqs., HyScore Arms and others who import the H&N or RWS pellets. This ammo is packed in boxes of 100 pellets per carton and is packaged in such a way as to keep each slug separate from the others. Tests with common pellets indicate that groups can be spread as much as four times with inferior ammo.

After continued practice with the air rifle over the past three years I find it the easiest rifle to maintain in my cabinet. It requires hardly any maintenance at all. There are no points to oil, no barrel to clean, nothing to do except occasionally run over the metal surfaces with an oily rag. I do not clean the bore. The manufacturer does not recommend it. The pellets are pure lead and do not leave a deposit. There are no washers to be kept softened with an occasional squirt of lubricant. No piston that needs to be lubricated. As a matter of fact the entire mechanism is enclosed and there is no way to get at it. The trigger pull is light, 16 oz., but despite this easy let-off it has not tended to wear. I have never been forced to tinker with it. The rifle is a gem on the score of upkeep.

If you want to stay in shooting form from season to season it appears to me that these new air rifles are the best answer. Their size and weight, their marvelous accuracy, their excellent sights, and good trigger pull along with the cheapness of the practice and the fact that you can fire right at home, makes them the ideal practice arm.

WORST OF THE WILD BUNCH

(Continued from page 36)

plus the \$32,000 Winnemucca bank robbery in 1900. We try to think of outlaws as present before the 1900's, yet Harvey and the "Wild Bunch" spanned the turn of the century.

Matt Warner, who deserted the gang to later become the Marshall of Price, Utah and lived until 1937, said, "Harvey Logan was the real killer of the gang, even though Butch continually warned Harvey that, 'no need to fire a shot and bring the law, when you can break a man's nose with a .45 Colt barrel!"

Early in 1901, Logan and Butch parted, realizing the Wild West was about tamed. After the Great North-

ern robbery, Logan left a trail of forged signed notes, drinking and raising hell across five states. From testimonies of Logan's drinking, it is apparent he was not a social drinker, as he seldom spoke, just drank steadily and his black eyes echoing his hatred for society.

The Pinkertons caught up with Logan in Knoxville, he was sentenced to the Columbus, Ohio penitentiary. He escaped after a six-month stay. By this time Logan was 38 years old and seemed to be outwardly risking chances in an effort to end it all. Some say this was because he couldn't make contact with Butch who was in South

America. The "Kid" fled to Montana, then Colorado where he organized a small gang of outlaws in an effort to stage a comeback. On June 8, 1904, they tried to rob a train at Parachute,



Author and Butch Cassidy's sister.

Colorado, and were trailed to a canyon a few miles away. Here Harvey was trapped, wounded, and the record states he committed suicide with a Colt .45 by firing his last shot into his left temple. The body was brought to Glenwood Springs, Colorado.

Some said it was "Tap Duncan" and that was the identification given the corpse buried in the local graveyard. However, a wire had been sent to William Pinkerton saying it was Logan. This created an embarrassing problem. There seemed to be only one man in the West on the side of the law who could positively identify Logan, this was Lowell Spence, a prosecuting Ohio lawyer. He was sent for, and the body was exhumed and shown to him in the cemetery. Spence took one look and said, "That's Kid Curry Logan." Federal records show the case closed by virtue of suicide.

Charl Hanks of southern Utah who punched cattle on the "B" outfit until 1900 and knew Butch Cassidy, maintains that Logan was killed in South America with the Sundance Kid. Pinkertons say it was the Sundance Kid and Cassidy who met their end in Bolivia in 1909. Hanks, in the Salt Lake Tribune, November 8, 1959, stated that Butch died in Oregon at 73 and that Will Pace talked with Butch in Duchesne, Utah long after the South American incident. The Provo Daily Herald, July 4, 1958, intimated that some believed Logan died in Wyoming of blood poisoning.

Due to conflicting information regarding Logan's identification, it is difficult to really know where Harvey got his final rites.

SHOOTING THE FLINTERS

(Continued from page 47)

impressive. Most convenient of all is an adjustable charger flask. One item that should never be overlooked is a pair of the best shooting glasses you can afford-that flaring priming powder is mighty close to your eyes.

Clean all grease and oil out of the bore, vent, and pan. Swab the bore with solvent and patches, pumping solvent through the vent until no grease remains. An old toothbrush dipped in solvent is good for cleaning pan and frizzen.

Set the flint as shown. It must be cushioned by leather or sheet lead and clamped immovably between the jaws of the cock (hammer). Ear the hammer back, pull the frizzen down on the pan, and pull the trigger. You should be rewarded by a bright shower of sparks into the pan. The frizzen should fly up and forward smartly to uncover the pan. Repeat this a few times until you understand the functioning of the system.

If all goes well, the gun (rifle or pistol) is ready to load up and shoot.

Powder first. If no load recommendations came with your flintlock, select the charge according to caliber from the chart below.

These are moderate charges, but entirely adequate for normal use. Heavy hunting loads are another matter, covered farther on.

Set the hammer at half-cock and lower the frizzen. Butt on ground, (Continued on page 62)

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gauge target loads to its line. The paper 20 gauge target load will be retained and both come with % ounces of sizes 7½ and 8 shot. In 28 gauge, a plastic target shell replaces the former paper loading and this load has ¾ ounces of No. 9 shot. Size 8 shot has been added to the existing Nos. 6 and 7½ in the 28 gauge game load shell. The % ounce charge remains in a paper case. In 12, 16 and 20 gauge



loads, Federal continues to offer plastic shells only in its Hi-Power (high brass) line and both plastic and paper shells in its Field Load (low brass) line. All shells are color coded for your safety. Watch for these changes and additions next time you shop for shells.

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28-gauge steel container convertible to a camp stove and cooking utensils. All rations carry Coast Guard approval and are high energy, non-thirst producing foods. Weighs, 18 lbs. Price, \$139.50 from Life Support, Inc., Dept. G-5, P.O. Box 916, San Bernardino, Calif.

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\$129.95 binocular also has retractable eye cups, a battery charge indicator, and a deluxe carrying case. For further information contact Tasco Sales, Inc., 1075 N.W. 71st Street, Miami, Florida 33138.

A NEW BRAND NAME and a handy new package for center fire hunting ammo is being introduced by Canadian Industries Ltd. The popular sporting calibers are now available under the "Imperial" name, and other C-I-L sold ammo now under the "Dominion" brand name will gradually be replaced by the Imperial name. The

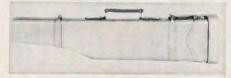


container is being changed along with the name and is smaller than previous packages for similar calibers. Each package contains two cardboard inserts which the company refers to as "clips."

JET-AERS NEW brand G-66 Silicone Gun and Reel Cloth cleans, polishes and protects—and is economically priced at just 79¢. Of extraheavy duty flannel, the Gun and Reel cloth is triple treated with G-66 Gun Treatment. This long lasting cloth comes in a protective double package



—aluminum foil on the inside and a reclosable, poly bag outer package. Get the cloth that's essential to good gun care from your guns dealer. SILE DISTRIBUTORS is now offering a complete line of custom leather goods to the American shooter. For the first time since WWII you can again purchase a moderately priced genuine leather "leg-of-mutton" shotgun case. The Sile case has been designed to accommodate O/U as well as side-by-side shotguns. The case is prewar quality throughout and of leather selected from the finest of hides. A generous amount of heavy

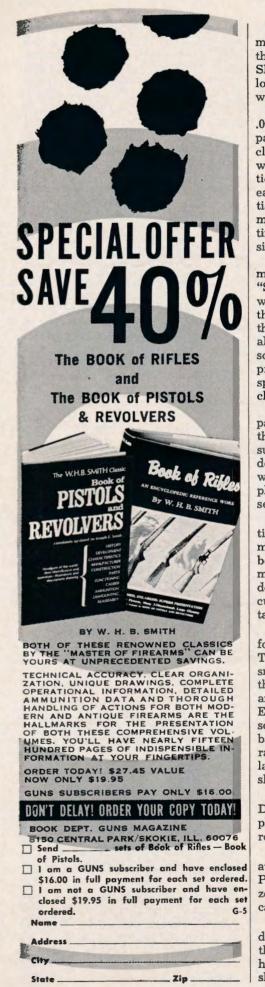


stitching on all straps and seams combines with quality oil-finished leather to give a lifetime of dependable service. The interior is lined with pool cloth and a padded divider provides more than adequae protection between the barrels and the butt stock. The leg-of-mutton type case creates an air of nostalgia and quality not quite found in many other types of cases. For information write: Sile Distributors, Dept. G-5, 7 Centre Market Pl., N.Y., N.Y. 10013.

THE QUICK AND EASY-HAN-DLING Winchester Model 88 carbine, lever-action brother to the short Model 100 autoloader introduced last year, rounds out the company's line of carbines in the three most popular actions; lever, bolt and autoloading. The new center-fire shorty has a 19-inch barrel of proof steel bedded in one-piece fine-grained walnut stocking with steel capped pistol grip and fluted comb. Hooded bead front sight,



sling swivels, and traditional carbine barrel band are standard features, as are the firearm's detachable box magazine which securely double latches into the well. The receiver-tapped to accept most common mounts and receiver type sights—encloses a rotary, triple-lug, headlocking bolt that maintains optimum durability and functional reliability. The 39½ inch overall length suits the new Model 88 to use as a saddle or pick-up truck rack gun in the buyer's choice of three calibers: .243 Win., .284 Win., and .308.



(Continued from page 59) muzzle leaning away from you, pour the powder charge down the bore. Slap the side of the stock behind the lock to jar powder into the vent. This will insure quick, sure ignition.

Having selected balls slightly (.002"-.005") under bore diameter, lay your patch material over the muzzle. Any closely woven cloth about .010" thick will do nicely to start. Striped pillow ticking works well and is cheap and easy to find. The old timers were partial to good linen. Whatever is used must be washed twice, or as many times as necessary to remove all the sizing.

The patch should be thoroughly moistened with saliva—the traditional "Spit-Patch." Don't make it dripping wet, just well-moistened through and through. The wet patch lubricates the ball's passage down the bore and also serves to keep powder fouling soft, making reloading easier and improving accuracy. Hard, caked fouling spoils accuracy and makes loading a chore.

Center the ball, sprue-up, on the patch over the muzzle. Press it into the bore until it is slightly below the surface of the muzzle. This can be done with the thumb, but it's hard work. A two-legged ball starter simplifies the job, use the short leg to seat the ball below the muzzle.

Gather the excess patch material up tight, then slice it off even with the muzzle. A patch knife with the blade beveled on only one side is favored by many, but any thin, sharp blade will do. Slide the blade across the muzzle, cutting the cloth cleanly. Any ragged tails left dangling won't help accuracy.

Use the long leg of the starter to force the ball deeper into the bore. Take the ramrod and with a single, smooth stroke, seat the ball solidly on the powder. Don't crush the powder, and don't pound the ball with the rod. Either will reduce accuracy. You'll soon develop a "feel" for seating the ball solidly and uniformly. Replace the ramrod in its channel. Don't forget the latter—you wouldn't be the first to shoot a ramrod out of the barrel!

Raise the frizzen and prime the pan. Don't fill it full of powder—1/3 or 1/2 is plenty, but, in any event, enough to reach the vent.

Lower the frizzen and blow or brush away any spilled powder granules. Powder caught between pan and frizzen can hold the latter up enough to cause loss of priming or a misfire.

Now, she's ready to shoot—just draw the hammer to full cock, line up the sights, and let fly. Don't ear that hammer back until you are ready to shoot, and don't ever let your finger

touch the trigger while cocking. To do so can result in only partial engagement of the sear—a condition known as "false cock"—and a very slight jar can cause the piece to fire.

When the trigger is pressed, a combination of a good gun, good flint, and proper loading and priming will produce no readily perceptible delay between fall of hammer and report. Let the flint be poor, powder damp in pan, oil in the vent, insufficient or too coarse priming powder, and you'll get anything from a noticeable delay to a typical "flash in the pan" misfire. To keep such problems to a minimum, make certain the vent is clear. Use a springwire prick to remove fouling. Make sure powder from the charge runs into the vent-that slap on the stock becomes important. Keep the pan and face of the frizzen clean and dry. Don't try to use a worn flint; always have plenty of spares on hand. A good natural flint will last for 50 rounds or so, but one that looks good can shatter on the first shot. If you want the best, saw-cut agate flints will last for hundreds of shots and can be resharpened several times. At a little over one dollar each, they are a good bargain.

What to do if you do get a misfire? First, swear-it will ease your mind so you can pay attention to corrective action. Then check the flint and replace or reset it if necessary to produce plenty of hot sparks. Clean out the pan. Probe through the vent with the wire prick. Go deep into the powder charge, loosening it so granules will flow into the vent. Don't stop until you've gotten the vent full of powder from the main charge. Then, reprime with very fine powder, making certain priming contacts powder in the vent. Lower the frizzen and shoot. Repeat the attempt if necessary.

If this doesn't work, you'll have to put the worm on the end of the ram-rod, draw out the ball, dump the powder, clean the gun thoroughly, and start all over. Anyone who shoots flintlocks will eventually have misfires, but attention to detail will keep them to the bare minimum.

But, you've loaded and shot and, we hope, hit the target. Try four more to make a five-shot group. Make all operations as uniform as possible, and hold and squeeze as best as you can. Check the group. If it's satisfactory, you're in luck. However, it will be susceptible to improvement.

Search out front of the firing point for the fired patches. They'll be laying in a fan-shape area extending about 10 yards from the muzzle. Examine them closely. It badly scorched all around, the patched ball isn't sealing the bore properly. Increase ball

diameter and/or patch thickness. If patches show radial slits or tears, the patched ball is too tight in the bore and reduction in ball diameter and/or patch thickness is necessary. When ball and patch are right, recovered patches will have no cuts or burns, and best accuracy may be expected.

One defect may be found in recovered patches, regardless of how they look otherwise. This is one or more crescent-shaped cuts or tears around the ball. This is caused by the muzzle edge being too sharp and cutting into the patch as the ball is seated. This is most likely to happen if patch and ball are too tight. This, too, can ruin accuracy, but is easily corrected by lightly chamfering or beveling the muzzle.

Work with patch and ball dimensions until recovered patches look right and maximum accuracy is produced with the basic powder charge. Then, you can proceed to increase the charge in small increments (2.0 gr. in small calibers, 5.0 gr. in the big ones) until the most accurate load is found. Balls traveling too fast or too slow will not group as well at any range as those just right for your particular gun. Sometimes better results will be gotten from small calibers with FFFG powder; with FFG or even FG in the big bores. Experiment to find what your gun prefers.

If you're thinking of using your flinter for hunting, a different load may be required. First, you'll switch

to a greased patch.

Lots of different greases are used, but a soft mixture of beeswax and vaseline works well. Dip precut patches (round, about three times ball diameter) in the melted mixture and let them drain on a piece of wire screen. They are used in the usual manner but don't require trimming. Store them in a tightly covered box so they won't dry out. With a greased patch, the gun may be left loaded without harm. A spit-patch can cause serious rusting in a day or two, so isn't suitable for hunting.

For small game, your regular target charge will be fine. Big game requires more oomph. Work up from the target load until you get the power and flatness of trajectory you need. But, don't exceed the charges in this table unless you work up slowly and carefully.

.36 caliber

60 grains powder

.44 caliber .60 caliber

90 grains powder - 150 grains powder

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ments to suit the game. Any good flintlock of .38, .40, or greater caliber has plenty of both for good deer kills at average hunting ranges.

Your flintlock needs plenty of cleaning—no later than the evening of the day on which it was fired. Use hot, soapy water and patches to scrub the bore until it's spotless. Pump plenty through the vent, taking care the stock doesn't get soaked. A wet toothbrush is good for getting all fouling off the pan, frizzen, hammer, etc. Any black powder residue left behind will surely cause rust in short order. Finish by wiping the stock and all metal clean

and dry. A light coat of good gun oil will protect the metal. A drop or two of linseed oil rubbed into the stock where the finish is marred by burning powder will greatly increase its life.

All the work involved in proper loading, care, and cleaning of a flint-lock pistol or rifle is easily justified by the fun that can be gotten out of the shooting. After all, shooting pleasure isn't determined by the number of rounds fired, but by the skills developed and goals accomplished. We think that if you try it, you'll like it—even if you do get off only 20 shots on a bright Sunday afternoon.

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FROM CLUNKER TO COMBAT

(Continued from page 28)

Western offer ample strength. Both cases had not only enough room for the powder, but room for nearly any heavy bullet that was practical. Seating a 250, 260, or even a 300 grain bullet within the limits of the chamber was no problem.

Cost, convenience, and suitability in mind, we selected a .45 Colt, World War I vintage, New Service 1917 revolver, complete with the normal fixed sights, grip lanyard loop, and in this case, well used appearance. The gun was apparently in firing condition, but without range testing, we had it blued and a used Magnum S&W rear sight was attached to the rear end. We found later the gun shot poorly at 25 yards, tending to throw bullets to the upper left of target, and no amount of sight correction undid this fault. Close examination turned up not one but two bulges in the barrel-the nearest one three inches from the frame.

It was a shock, but with our end product in mind, not a serious problem. Guns of this size and vintage are often fired with old ammunition somewhere along their lifetimes. Perhaps a cylinder load of old black powder loads were run through it, and because of dampness or other reasons, failed to fire perfectly, lodging a bullet in the bore ready to be struck by another in fast shooting. A primer will often push a bullet well out into the barrel never using powder energy. The gun needed an operation and the gunsmith, a man who has committed himself to a career of tuning autopistols, whacked off the barrel just aft of the near bulge, making it at once a two-inch revolver.

The barrel was crowned, and another roughly used front sight ramp was found in the gunsmith's junk box and brazed squarely onto the muzzle end. The sight blade was left high, but later required filing down to adjust to the new short bullet-in-barrel recoil time.

Although the Super Whomper was conceived as a gun that would be brought into play in a split second, and seldom if ever be fired with careful aiming, adjustable sights were added for handload testing, and for that once-in-a-thousand time when a policeman is expected to return aimed fire. The rear sight was subsequently

rounded to allow fast handling, i.e., no hangup on coat lining, pocket, or holster retainer. The front sight was a tenth of an inch blade. The rear patridge sight was opened up with a fine file to give plenty of air around the blade for fast line-up when aimed fire was needed. This was not going to be a 2600 club target gun, but one that would put them all in the police target double action style.

A combat situation requires double action shooting, and we decided to make it hard to shoot the Whomper any other way. The hammer spur was hacked off after a range test indicated the two inch barrel was inherently accurate with 255 grain factory loads. The hammer was polished smooth so no bad single action habits could creep

Although the Smith and Wesson Model 1917 revolvers in .45 Colt, .45 ACP and .45 AR calibers had a better reputation for smooth actions (the Colt and S&W both have what is known as long actions), the Colt New Service lends itself well enough to fast double action work. The trigger, strut, and hammer bearing surfaces were given a brief polish job. This should not be attempted unless one knows what he is doing. The revolver's heavy cylinder (not as heavy as the .357 or the .41 Magnum, though) was an asset in making double action shooting easy. The cylinder momentum, plus the subtle feel of the Colt lockwork just before the hammer fell, allowed us to shoot both fast double action and almost perfectly aimed slow double action with ease. It became easy to hit fair-sized targets with double action hip shots.

A simple but effective way of smoothing up a trigger pull without smoothing up the trigger pull at all, is to attach a trigger shoe. Trigger shoes with non-slip ridges are fine for taret work, but poison for fast double action combat shooting. A rat-tail file applied to the Flaig Ace aluminum alloy shoe made for the Colt trigger took out the ridges. This was followed by crocus cloth polishing, which made a smooth surface for the fast finger.

The shoe can be blued or dyed after polishing. Loctite sealant should be used in the set screw holes, threads, and on bearings surfaces to insure the shoe will not loosen during firing. The smooth shoe improves the trigger pull tremendously. Reducing the firing spring tension is not advised for any combat arm, as positive primer ignition is far more important than any slight reduction of cocking effort.

The standard Colt and S&W Model 1917 grips were always a problem to serious shooters using these guns.

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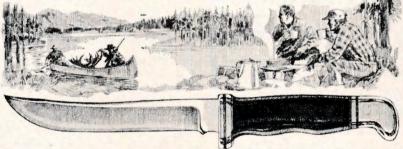
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Rather than fool with grip adapters or other half-measures, the factory grips were dumped and hard cash well spent for a set of Herrett's custommade smooth walnut grips in the Jordan style. Both of us have big hands, and the well-contoured Jordan grips fitted the heavy frame to our hands easily and almost perfectly everytime the gun was drawn or fired repeatedly.

Looking at the uncovered frame of the .45 Colt New Service handle gives one the feeling that here was a prime prospect for a custom birdsheadingrounding off the sharp base of the frame for a more comfortable and concealable stock. We considered it before getting the Herrett's grips, but discovered the job, even with the cooperation of a friendly gunsmith, would run the cost of the finished gun up beyond our ceiling figure of \$100. The problem of grips then would involve carving a set or having a set custom-made for that handle alone, another added expense. The Herrett's Jordan grips rounded the profile enough and a high and tight-to-thebody holster would keep gun bulge down to a minimum.

We had the gun down to its final outline when the thought of suitable leather for it came up. There were no stock handguns of the size the sawedoff New Service had assumed. A letter to fast gun man and deluxe holster maker Chic Gaylord brought no response-he was apparently off on another expedition. A letter to West Coast holster maker par excellence John Bianchi brought the reply that he would be glad to make up a special FBI style holster for the gun if we sent the gun to him. We would do so after range testing.

In the meantime, we took an old Bianchi holster and found that it fit well except for barrel length. The holster was altered (Bianchi would be unhappy to see how and what we did) -basically, removal of several inches of holster bottom, removal of the wide and heavy leather backing the scabbard was buckled to, and remaking the belt loop using epoxy cement. The hammer spur thong used to hold in a gunfighter's long barreled six shooter was necessary to keep our shortened gun in the leather during normal activities. Instead of the hammer spur, the thong rolled on and off the rounded S&W rear sight mechanism easily, and could be flicked off with no delay by slight thumb pressure. The new Bianchi rig would hold the gun high, in an FBI forward cant position, and the handle tight against the curve of the body.

Factory loads are available in both

Winchester-Western and Remington-Peters. The W-W load has an inside lubricated, 255 grain bullet. The Remington-Peters bullet is five grains lighter, and almost the same design. Both are loaded to power compatible with the wide variety of handguns they could be fired in, starting with the Colt's single action Army revolver of 1873, through the Smith & Wesson 1950 target model which was the last double action factory arm chambered for this caliber. It was not a powerful cartridge for this reason, but it had always proven ample to law enforcement needs. The big, heavy bullet did the job.

Many state and federal enforcement officers carried the Colt .45 New Service revolver earlier in the century, some not giving it up until World War II. The cartridge, developed in 1871 for black powder, is nearly a century old. Forty grains of FFG black powder will still push the 255 grain lead bullet at man-stopping velocities—a bit over 800 feet per second at the muzzle. Classic .45 revolver bullets can be duplicated by using Lyman mold 454190 with a one-to-ten or oneto-fifteen tin to lead mix.

The .45 Colt is a true .45, measuring .454 before sizing from most molds. whereas the .44 is a .429 and about .025 smaller in diameter. Our Colt barrel slugged out a nice tight .451, which is typical.

To get increased performance from the Super Whomper, one must handload. A better bullet than the Lyman Classic is the Keith designed Lyman 454424. Most store-bought cast bullets are of this or a similar design and weigh from 245 to 260 grains. We tested every commercially cast and swaged bullet available locally, and bought the Lyman 454424 mold. The commercially cast bullets were a variety of true diameters (most oversized for the Colt) and showed this on the 10 and 25 vard targets fired from rest. The Keith designed, flat nosed, clean cutting bullet had to be custom cast. Not having a .451 sizer, the mold was sent to master bullet caster Jack Mc-Phee in Coeur d'Alene, Idaho. He stocks such items, having tried out nearly every cast bullet ever made in the past fifty years. He turned out 500 jewel-like Keith bullets, cast one-toten, sized through two sets of dies to get them down perfectly to .451.

Although we had on hand a box each of Remington and W.R.A. oncefired cases, we bought two hundred new W.R.A. cases and primed them with Cascade large pistol primers. CCI magnum primers were tried with our final load and we discovered in this case, and with our gun, both types

of primers could be used safely.

Contrary to most loading tables which list a large number of powders for the .45 Colt, the only powder to consider at this time is Unique. A better powder may come along, but Unique gives the most dependable results, the most power from the short barrel, the least muzzle flash, and left the least residue.

In attempting to reach magnum loading for the short-tubed gun, both 2400 and H240 were tried in beginning medium-powered loads of 13 grains, with erratic results. Heavier loading produced excessive muzzle flash with little evident increase in power. Unique, a Hercules double based 40% nitroglycerine flake powder, has been a standard favorite for .45 Colt reloaders since 1898.

Elmer Keith, in his monumental work on handguns, Sixguns, rates Unique as the best for loading the .45 Colt at less than magnum velocities. He says it balances out at about 13,000 pounds pressure, and has a working range of 4,000 pounds, which makes it perfect for the short, beefy gun. Working up from 7 grains of Unique with the 258 grain McPhee-cast Keith bullets, accuracy seemed to hold up through 9.5 grains. At 10 grains, recoil was a definite problem, as was muzzle

blast. Topping out at 10.3 grains, we found cratered primers, difficult extraction from the cylinder, and general loss of accuracy.

At the ranges the Whomper was expected to perform, accuracy was not a fine-edged thing. Shooting comfort with an effective combat load was. Shooting through a borrowed chronograph showed an average muzzle velocity of just over 900 feet per second with 9.5 grains; with 9.0 grains it was just under, and we felt the group tightened up just a bit when slow firing at the 25 yard target from rest with the 9 grain load.

This load made it easy for fast twohanded double action shooting at the 100 yard small bore target. We set it up at 50 feet and later 25 yards, putting six shot groups regularly into the six-inch black center. Factory loads grouped about as well, but cut ragged holes. On the seven yard PPC course, we could draw and fire six rounds into the kill area of the combat target with both one and two-handed holds easily.

The Super Whomper seemed to be the handgun we had in mind when we started. The muzzle energy (and near the muzzle is where most of a detective's targets are) is about 470 foot pounds—nothing shy about this \$100 combat gun!

GUN COLLECTING IN BRAZIL

(Continued from page 45)

a Lefaucheux pin-fire, exquisitely engraved, though much used. One piece is merely a functional toy I traded from a youngster on the street. Its grip is carved from a branch, the barrel made from an old umbrella tube. A wire trigger releases a rubberbanded wooden hammer onto a matchhead which fires the muzzle-loaded charge.

Many tip-up pistols are currently made by such Brazilian firms as Rossi and Lerap, for sale at \$4.00 to \$12.00. Brand new, Brazilian-made muzzleloading shotguns can be bought in any interior hardware store for about \$6.00. They are light and flimsy, but serviceable-for a while. Intermediate length, hand gripped shotguns are also made.

The possession of rifles is illegal, except by the national militia. Of course, being Latin America, almost every farmhouse has a Winchester, usually a model 1892.

My accumulated shoulder weapons include both single and double barreled muzzle-loaders. Invariably shot was the projectile used. One heavy gun from Leige, Belgium, had a 10

gauge barrel and a single, 31/2 inch hammer. I got it from a farmer who said. "Use it ta' keep the fox outa' ma' chickens. Ye jest pour in a bit of pea gravel, or a handful of old nuts and bolts or what have ye. But watch the bolts be not too long. They's a mite stiff to unloose when they lodge a comin' outa' the barrel."

Even as my arsenal of guns grew, I still didn't consider myself an antique gun collector because I had almost no technical idea of what all those firearms really were. I had purchased most of them on the basis of what the particular gun was worth to me personally as a conversation piece and I hadn't the vaguest idea of their value as antique arms. Costs were low, especially after I overcame my estrangeiro status and became integrated into the Brazilian system. Handguns were \$4.00 to \$15.00. Shoulder arms ran somewhat higher. I never paid more than \$40.00 for an antique gun.

Of course, the weapons' condition is not the best. To Brazilians, these are guns for daily use, not antiques. And they are well used. On the other hand their willingness to part with



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such weapons is a great advantage, again because such guns are not considered as antiques there.

What about getting them out of the country? This is no problem. For import, U.S. Customs allows unrestricted import of arms manufactured prior to 1898 on presentation of evidence of age, and allows free import of three non-automatic modern firearms for personal use. For additional arms a permit can be obtained from the firearms division of the U.S. Treasury.

Could others do what I did on a more systematic basis? Yes, especially by getting into the "interior." But an understanding of the Brazilian system and a command of Portuguese make the task many times easier. For example, Brazilian law requires registration of all firearms. However, when I went to register my gun accumulation with the local deputado he read down the list until coming to the Winchesters then looked at me in curious amazement, saying in Portuguese, "I'm sorry, but you don't own any Winchesters. Rifles are illegal, you know." After a moment's further hesitation, he pushed all the listings back across the desk to me. With a dismissing gesture of the hand he indicated, "On second thought, you don't own any guns, Senhor. It would take all day to register these. And besides, someone would think you were going to start a war. Te logo."

The gun from Brazil which I treasure most is an old muzzle-loading shotgun that now stands behind my closet door, held together loosely with soiled string and bailing wire as it was when given to me by Joa Inacio, a mule train packer in the wilds of the state of Goias, 150 miles from the nearest jeep road. As usual, I was asking the brasileiros about their guns and had showed special interest in this particular relic of Joao's, obviously a veteran of many an episode. Joao was proud of an Americano's interest in his arm and insisted on presenting it to me as a gift. Though not much of a gun, it represents a special gesture of friendship from a special people I lived and worked among-a people who almost by accident started me on the gun collector's path.

FEDERAL LAW & THE GUN COLLECTOR

(Continued from page 19)

before 1898; and (b) any replica of any firearm described in paragraph (a) of this definition if such replica (1) is not designed or redesigned for using rimfire or conventional centerfire ammunition, or (2) uses rimfire or conventional centerfire fixed ammunition which is no longer manufactured in the United States and which is not readily available in the ordinary channels of commercial trade."

This definition firmly exempts firearms manufactured in or before 1898, that date having been generally accepted as the break between black powder and smokeless powder weapons. Exempted specifically from the Act are: "The transportation, shipment, receipt or importation of any antique firearm." It should be noted that a "curio or relic" (post-1898) is in a different category.

Of great interest, however, to the collector are the Treasury Department's regulations concerning "Curios and Relics." These regulations are quite extensive so I shall not quote them fully here, but in effect they would permit a "Licensed Collector" to possess certain kinds of weapons made after 1898 but not associated with modern offensive or defensive use. In some cases detailed information or even the arms in question might have to be submitted to the

Assistant Regional Commissioner or his designates for examination and evaluation.

Complex problems are presented in determining what is or what is not a "curio or relic" and, in cases where a firearm model was made both before and after 1898, it will be questionable as to what specific firearms of the same kind are exempt.

An attempt has been made to work out some formula with the Treasury Department to determine the status of specific weapons in these borderline areas. One suggestion has been that certain sections of the book A Collector's Handbook of Values be used to classify antique firearms and also older firearms which are or are not permissable for a collector to own, buy, sell, and transport. The post-1898 area is complicated for anyone but a dealer whose license permits him to deal in all kinds of legal weapons, subject to regulations and recordkeeping now written into the law.

The term "dealer" means, "(a) any person engaged in the business of selling firearms or ammunition at wholesale or retail, (b) any person engaged in the business of repairing firearms or of making or fitting special barrels, stocks or trigger mechanisms to firearms, or (c) any person who is a pawnbroker.

In the past many collectors have obtained dealer licenses, which were issued at a \$1 annual fee. In addition to the increase in the annual fee to \$10, it is now stated that dealer licenses will be granted only to those who have a place of business open to the public. This may, of course, impose a considerable hardship on some collectors, especially those of moderate means whose ability to increase or upgrade their collection is dependent on active buying, selling and trading.

The Treasury Department's Application for License (Form 7) contains 15 sections, with numerous sub-sections, and calls for answers to pertinent questions including the hours of each day in the week your gunroom would be open to the public, what kind of guns you intend to handle, etc. This form, however, is relatively simple compared to Form 4473, the Firearms Transaction Record, which has 17 sections, plus sub-sections and much fine print; it must be filled in by both seller and purchaser.

It is not the intention here to convey the thought that there is anything wrong with the maintenance of detailed dealer records open to the scrutiny of qualified law-enforcement people. These dealer records are very necessary and are one of the best arguments against the imposition of overall licensing and registration. I have personally maintained careful records for many years and in that time have experienced no harassment or unpleasantness from government agencies.

The new controls and regulations, however, have thrown up new fences around firearms activities. This is noticeable now especially at gun shows. Dealers must conduct their selling only at the address for which their license is granted.

Even though more restricted than ever before, the dealer license offers the greatest area in which the collector may proceed to build his collection, especially if his collecting tastes may run to some of the firearms makers whose products spill over beyond the 1898 date. If he can qualify, and is willing to accept close government scrutiny for these added privileges, the dealer license is his best choice.

What, then, about the new "Collectors License?" At first glance this seems like a special consideration granted to arms collectors, but it has a catch to it. Whatever advantage may be gained by a collector's license under the present regulations is considered to be so small as against the disadvantages that a number of collectors associations are counselling members not to obtain this license.

Upon the application for an issuance of a "Collectors License" the collector in some respects gives up the privacy which he enjoys as an unlicensed collector. First, he must keep detailed records. These records must be available for inspection by any qualified internal revenue officer at any reasonable time. In other words, the collector's private collection is thrown open for inspection and, in effect, can be recorded by a government agent. He must keep practically the same records as a dealer, pay the same license fee, and yet be far more limited in his firearms activities.

The average collector has nothing illegal to hide from the government or anyone else. He does have deep concern that the scope and value of his private property shall become common knowledge and constitute an invitation to robbery. This is not an imaginary fear as has been shown by costly robberies and vicious assaults in the past.

It all boils down to the fact that a non-licensed collector, whose activities involve only those weapons of which manufacture is easily proven to be prior to 1898, is in the best position.

Collectors whose interests are in weapons made subsequent to 1898 have two choices. If they can qualify for a dealer's license, that gives them the greater latitude and at the same license fee as the more restrictive collector's license. As the regulations are now written, the collectors license (designed primarily to cover post-1898 transactions in curios and relics) is so limited ,and the definitions so vague and uncertain, that the usefulness and desirability of that license must become a subject of individual decision after studying the law and determining how it affects one's personal interests.

It is hoped that further study and consultations with Treasury Department officials, along with some amendments to the law, may relieve the legitimate collector from the red tape and nebulous generalities which can only lead to a great many problems for both the government and the collector.

Perhaps we should not expect too much perfection at the outset of laws that were passed under the pressures and emotions which pushed the gun control acts of 1968 through the Congress. Just what direction the implementation of these laws will take, and what amendments may follow, are now of vital interest to every gun owner, whether he may be a hunter, target shooter, collector, store owner or home owner.

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tain copies of Public Law 90-351, Public Law 90-618, Publication 603 (12-68), and a copy of the Federal Register of December 14, 1968 (rules and regulations). The first two can doubtless be obtained through your congressman, Publication No. 603 (\$1.25) and the Federal Register for December 14 (pages 18555 through 18573cost about 25¢) may be obtained through the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Specific information may be obtained by addressing an inquiry to the Assistant Regional Commissioner of Alcohol, Tobacco and Firearms Taxes in the district wherein you reside.

It is now a time for serious, cooperative effort to establish the kind of firearms control in this nation which

will strike sure and hard against the criminals and the irresponsible. In the process of our war on crime there must be no short-sighted policy by attempting to cure the ills of the few by quarantining the whole nation. Unfortunately, some leaders of the past national administration have appeared contemptuous of the legitimate firearms rights of a large segment of our people. A few congressmen, primarily from states clustered in the urban areas of which New York City is the center, have attempted to impose their will on the nation as a whole.

We have confidence that there will be new direction now in the national approach to crime—a more promising approach. It is everyone's problem, and all must give to it sound, openminded judgment and tackle it with firm purpose.

SHOOTING FROM A BENCH

(Continued from page 33)

into the brush after some excitable sport has put a bullet through the bruin's gut. He likes to see his hunter hit clean.

Benchrests come in a variety of styles, sizes and shapes. There are no established standards, and for this reason when you see one it won't look like the next. Mostly the benchrest is a stationary affair, but there are portable ones, too. These latter, for the most part, aren't worth much. For a table to be worth its salt it ought to weigh a couple of hundred pounds, and if it goes as heavy as one-quarter ton that's even better. I like the legs set in concrete and the table top constructed of planking that runs 12 inches in width by 2 inches in thickness.

The benchrest should be from 41/2 to 5½ feet in length. It needs either three or four legs under it, however, most are constructed with three legs. It may be built in the shape of a triangle with the broad end toward the target; or it may be square, or nearly so. The triangular shape is the most popular. On the left side of the bench there may be a cut out portion to permit the shooter to belly up to the rest.

The legs are important. If these are of wood they should be six-by-sixes. If of well casing, this pipe should not be less than 4-inches, in diameter, and 6-inches is even better if poured of concrete.

The ends should be set in concrete.

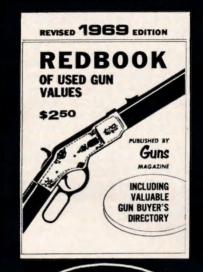
At the top there must be a fishplate, welded or bolted to the post and then bolted to the table planking.

I have shot from benchrests made entirely of concrete, also one made entirely of boiler plate. Neither was satisfactory. Both possessed the necessary weight and stability, but the concrete was far too abrasive. It scratched the rifle and was hard on the gunner's hands. The iron table top was too cold in winter and too hot in summer. There was a tendency to throw a blanket or a tarp over the metal and then you had a surface that would crawl. This is fatal to good work. Wooden planking is best. It is not slippery, does not peel the hide off your fists, does no harm to the rifle, and is just as solid and as substantial as either concrete or steel.

Whether the rest is the more familiar three-legged kind or is made with four or more legs, there must be a cutaway in the table to permit the gunner to press up against the edge of the rest. This contact with the table is made with the lower chest. The pressure has to be quite firm.

A benchrest is sort of like a suit of clothes, or a pair of shoes. It will not fit everybody. Rests should be made from about 28 inches to 34 inches in height. The difference depends on the shooter, and not all can fire comfortably from the same bench. A measure of its fit is to see if the marksman, when in firing position, can press up

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against the edges of the table with his lower chest and at the same time rest both arms on the table top, while both feet are flat on the ground and the body is slouched comfortably forward.

I shoot at a public range where all the benchrests are the same. These are a compromise of sorts, being 30 inches in height. It is painful at times to see the tall guys trying to scrunch down and make do with the bench, and at the same time the halfpints dangle their feet.

Frequently the stool or chair to accompany the rest is badly neglected. The feeling seems to be that any old nail keg will do. Actually the seating arrangement has got to be solid, secure, and comfortable. It must be the right height and it must be movable. If there is any body movement due to rickety seating this movement will be transmitted to the rifle as sure as hell. At my range a steel folding chair is provided. This is pretty good, but it has some sway in it. Probably the worst arrangement is to tack two extensions to the left side of the rest and affix a 1" x 12" planking to them. This may be okay for the skinny members but it will crowd the fat boys. It will be too high for the shorties and too low for the tall ones. It is a poor solution.

I like a husky bench, about 24 inches in length with four legs under it. Completely built of 2-inch planking with four-by-fours for legs. Such a bench is separate of the benchrest itself. It is about 18 inches in height, but if used on a public range there should be three heights; one of 14 inches, a second of 18 inches and a third of 20 inches.

The top of the benchrest is clean of all supports. There is no built-up portion in front to support the gun muzzle, nor any behind to take the buttstock. The rifle is laid over a sandbag or a series of bags. In front and behind a single bag cushions the toe of the stock. These additions provide all the rest the gun needs as it is aimed and fired. Al Freeland, who is a specialist in such things, makes a mechanical rest for the front end of the gun that is a big help. It consists of a metal cradle which accepts the forearm and this cradle is in turn supported on three legs with an adjustable shaft running up thru the middle, which can be raised or lowered to align the sights on the rifle with the target. There are leveling screws in each leg of the rest. These screws are sharpened and dig into the table top and are thus firmly anchored. The rifle may be laid in the cradle but this soon scars the forend because of the wood to metal contact. It is better to



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HOUSE OF SWORDS 2804 Hawthorne Independence, Mo. 64052 1-816-CL 4-8744 first lay a single bag of sand in the cradle and beat it out and round it up until the forestock cuddles in the depression.

At the toe of the stock one or two bags of sand are shaped to fit the stock, and the rifle is rested in this hollow. Without moving the position of the rifle the gunner now moves into firing position. He may do as a good many benchresters do and barely make contact with the butt and the comb of the piece. There is a well established theory that the rifle shoots better if the man-to-gun contact is a very light one. This works okay, I find, with the light calibers, but it is for the birds when you have to wring out a hard-kicking magnum. It must be pressed into the shoulder so that the bond between shooter and rifle is a good substantial one.

My favorite sandbag is the kind the banks use for money. These are very tightly woven of canvas and once filled with sand can be sewed shut so that they do not spill sand over the top of the benchrest. A single money bag will hold 8½ pounds of dry sand. It requires several, two or three in front and a couple under the toe of the stock. Bob Wallack, an old benchrest hand, recommends bird gravel, the kind you buy at the pet shop for filling the bags. I have seen beans, wheat and #71/2 bird shot also tried. All are good but washed sand, thoroughly dried, is as good as anything I've found.

In an effort to economize on sandbags, you will see some shooters tack together a number of blocks of wood, capped off with a single sandbag for the front end of the rifle. I do not like this. These blocks tend to teeter and this ruins accuracy. It is better to begin on the table top and build up the front support with several sandbags. These have no tendency to move, turn, tremble or vibrate. The very top bag on which the forestock rests should be pounded and beaten into shape so that it accepts the forend in a sort of cradle.

The sandbags at the toe of the stock must be piled up, beaten and grooved and finally arranged so that the rifle, when you look through the sights, lies dead on the target. It is by the careful use of these bags that you control the elevation of the gun. There should not be any attempt to raise or lower the rifle by shifts of the shoulder or use of the hands.

You sometimes see a benchrest shooter who will lay the rifle barrel on the sandbag. I have even seen those who would notch a two-by-four, tack it to the bench and use it for the forward rest—the barrel boun-

cing off the notch with every shot. How you can get a rifle to group with these dodges I will never understand. I rest the rifle on the sandbag about ten inches ahead of the trigger guard. This point of support is well behind the forend tip. It ought to be. I put a flash of white tape on the bottom side of the forestock to mark the exact spot where the rifle lies on the sandbag. I am quite persnickity to see that tape drops smack on the sandbag cradle for each shot.

It is alright to move the forward sandbag even closer to the balance point of the gun. The thing to avoid, I have found, is not to rest the rifle too far forward. Some rifles are free floating through most of the forestock, others are bedded full length, still a third bedding seeing a point of contact at the tip. I don't want the bag close to the forend tip and certainly would never consider resting the barrel itself on the bags. Maybe this is okay for some shooters but not for me!

Some benchrests are so constructed as to have the gunner sit so that he faces east but must turn his head to fire north. I don't like this system. I would rather use a bench that permits me to face north and shoot in that direction. Also, I do not want to lean forward but prefer to sit upright. The head should not be abruptly inclined either forward or sideways. The semicircular canals in the inner ear control our sense of balance, this balance mechanism depends on the head being kept upright. When you're leaning forward or to one side the fluid in the semicircular canals starts to bring you to an upright position again. Small though this may be, it disturbs the equilibrium and does some harm to the shooter's effort. So that I can sit straight, with my head upright, I built up the forward and rear sandbags until my position is a comfortable one.

In taking up a firing position at the bench the gunner pulls the seat up close to the bench and sits down so that his lower chest comes in contact with the edges of the table. Both feet are flat on the ground with the knees sharply bent. The body is erect from the waist up, the arms are on the table and it should be at such a height as to permit the elbows to rest on the table comfortably. The rifle butt is snuggled into the natural curvature of the shoulder. While some benchresters do not believe in anything but the lightest contact with the butt, I am not of this school. I press the stock back into the shoulder with a good, firm contact. I believe this has been developed from shooting too many hard-kicking magnum rifles. At any rate this is my style.

The trigger hand makes contact with

the trigger and is wrapped around the small of the stock. This grasp is a firm one. The left hand is shoved back under the belly of the stock and a fork is made between the fingers and the thumb and this fork makes contact with the toe of the stock where it rests on the sandbags. The rifle, if it is a light caliber with little or no recoil, is fired with this sort of grasp. If, however, it is a kicker, then I extend the left hand and drape one or two fingers over the barrel just ahead of the receiver ring. This prevents the muzzle climbing under recoil and dampens the blow which the shooter will get in the chops as the barrel rises.

If there can be said to be any secrets about successful benchrest shooting it can probably be summed up by saying that you want to do everything exactly the same way from shot to shot. If you barely touch the buttstock with your shoulder, only glance through the sights but do not lay your face on the comb, don't wrap your hand around the small of the grip, but simply touch the trigger—then do that with each shot.

If, however, you are like me and make firm contact with the rifle then be sure that pressure on the butt, the bond between cheek and cheekpiece and the hand pressure on the pistol grip are exactly the same throughout the shot string. Watch the front sandbags as you fire. These tend to slip and the notch in the top bag tends to get a high side. Too, the sandbag under the toe of the stock will move under the force of recoil. Keep this in place. It is surprisingly easy to cant the rifle when shooting off the bench. Check the crosshairs in the scope with considerable care before each shot, the slightest tilt will utterly spoil the group.

The more you use a benchrest the better you will perform. It is just that simple. And the more you fire off the table the more you will learn the technique. No two shooters fire exactly alike. You will find after you have used the bench for a year or two that your style is peculiarly your own. Maybe a better shooting form than the next fellow's, maybe poorer. But all yours. The really dedicated rifleman needs a benchrest to give full play to his interest. If you have your own that's great! If not, then use the rest at the club or public grounds, it is invaluable in the test of rifle and load.

BANTAMWEIGHT BIG BORES

(Continued from page 22)

tremely versatile 12 gauge that I have used is the Savage model 30. At 65% pounds, this pump makes a nice-handling "bird gun," and as an added bonus, it is chambered for the mighty three inch magnums. This means that, in a single gun, you can shoot anything from one ounce field loads on

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offered by the big three inch shells and you don't want to go to the expense of buying a specialized autoloader that will digest only magnum fodder, this is one way to go. For the one-gun hunter, a lightweight gun capable of handling heavy loads is a much more sensible choice than a ponderously heavy magnum that is out of place anywhere but on a pass-shooting line.

That there is a growing trend toward lighter shotguns is evident by the increasing number of 6½-pound and lighter guns being offered by U.S. and foreign manufacturers. Browning has for several years made a twoshot 12-gauge autoloader called the "Double Automatic" that weighs in at an even 6 pounds. And their newest offering is a special "Superlight" version of their famous Superposed shotgun; this gun averages 6¾ pounds in weight and is in such demand that the factory is behind in filling orders for this fast-handling double.

The Armalite shotgun I mentioned earlier is the lightest 12 gauge being manufactured in the United States. This gun comes with three interchangeable choke devices for real versatility (and if you want a straight cylinder pattern, just leave all the tubes off—I tried this with deadly results on quail last fall). This gun holds only two shots, but, like Browning's "Double Automatic," can be reloaded very rapidly.

Remington, Winchester and Ithaca all make 12-gauge slide-actions that tip the scales at 6½ pounds or less, and Colt advertises a pumpgun that weighs about six pounds (weights will vary somewhat between guns of the same make and model in any type because of differences in wood density. Guns stocked with plastic or other artificial materials will not display this variance).

Bretton of France produces a Dural and steel 12-gauge double that weighs a scant 4½ pounds. This unique overand-under is probably the lightest 12-gauge double-barreled shotgun on the market today. Some day, I hope to have a chance to try this bantamweight on those ridge-running chukars.

Ken Turner, a good friend of mine owns a French-made side-by-side double that weighs just 6 pounds. Its original 28-inch full-choked barrels have been cut back to 25 inches and refinished, and the gun now throws even, 40 percent patterns. With 1¼ ounces of 6's, it is extremely effective on pheasants and other tight-holding game.

Because of the growing popularity of lighter, faster-handling shotguns, the 20-gauge magnum has recently made a real mark among members of the shooting fraternity. Chambered for three inch shells, these guns are capable of throwing as much shot as 12-gauge non-magnum loads—and they are lighter and faster-handling than the same models in 12 gauge. But very few of these much-touted midget magnums weigh less than the 12-gauge guns I've mentioned here—and many of them weigh more. Try finding a 20-gauge magnum autoloader that's as light as the 5½-pound AR-17!

And if you want to use magnums in your upland gun, the 2¾-inch 12-gauge "short" magnum throws 20 percent more shot than the heaviest three inch 20 gauge commercial load available.

I'm not trying to belittle the 20 gauge—magnum or otherwise. One of my favorite guns is a 20-gauge overand-under, and it happens to have three inch chambers. What I am trying to do is show that an upland game addict doesn't have to abandon the time-proven 12 gauge to get lightweight portability and fast handling in a shotgun.

It's a fact that the standard 12 gauge has some real advantages over 20 (and 16) gauge magnums. In addition to the fact that magnums are available for the 12 gauge that will give considerably better pattern density—and therefore range—than either of the two smaller gauges, shells are more universally available in the heavy (1¼-ounce) 12-gauge loading than its equivalent 16- or 20-gauge counterpart. Just try to buy a box of three inch 20 gauges in a remote country store after you've used up the supply you brought with you!

Some experts claim that the wider bore of the 12 gauge will throw better patterns with the same load than the smaller-bore 20 will. This is attributed to the shorter shot column in the 12-gauge gun, which causes fewer pellets to be deformed by contact with the barrel as the shot passes through it. Theoretically, this argument might stand up, but frankly, the test patterns I have compared fails to show any real difference between 12- and 20-gauge efficiency.

Even so, the 12 gauge is the most popular gauge being sold in America—and deservedly so. When all is said and done, its undeniable versatility continues to make it the best choice for the one-gun hunter of feathered game. And the bantamweight 12 bore offers everything the upland hunter could possible desire in a gun—light weight, extremely fast handling, and the widest range of loads on the market today.

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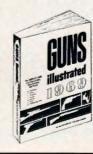
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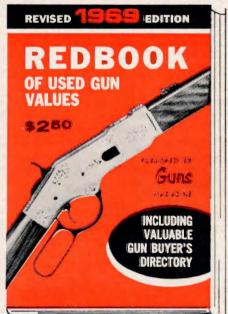
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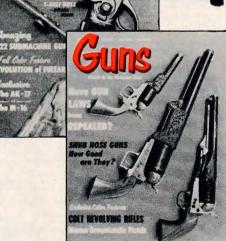
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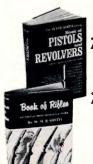
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