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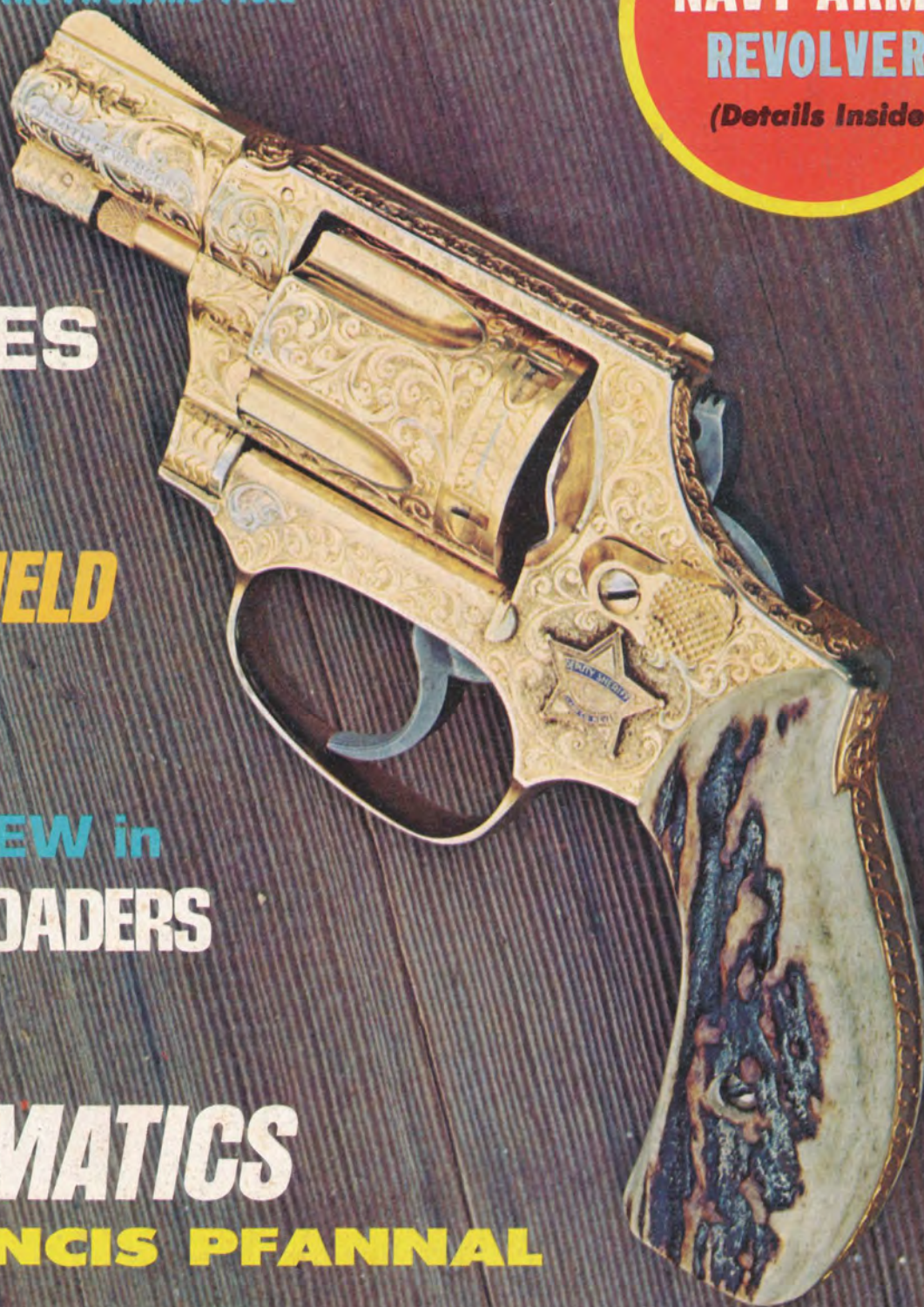
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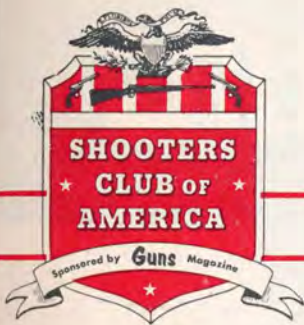
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News from the...

SHOOTERS CLUB OF AMERICA

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

With more rigid control of firearms by Federal law certain to be hotly debated in the next session of Congress, and with domestic unrest and the rising crime rate already slated to be political issues during the 1972 campaigns, it may be wise to examine the dismal failure of the Sullivan Law, enacted by the New York State Legislature in 1911. This law requires a permit for the possession of a pistol in the home or in a place of business.

Argument in favor of the Sullivan Law at the time it was enacted was that a person who found it difficult to obtain a gun, might change his mind, or have time to come to his senses about robbing a grocery store or shooting his landlord.

In New York City, the Sullivan Law is enforced by the Police Department. The number of pistol permits has been gradually reduced over the years, particularly the type granted to store owners. In 1930, 6,363 premises permits were issued; this number was cut to 282 by 1966.

But the New York City crime rate has steadily increased during these same years. Murders went up by 237% from 1940 to 1966, while Police Department expenditures rose by 232% and the city's population increased by only 4%. Pistol seizures more than tripled during the same period. In New York City today, in spite of the strictest pistol law in the country, a well-trained and surprisingly efficient police department, and a steady reduction in the number of legally owned pistols—the crime rate has gone up tremendously and, judged by the seizure record, there are now many more illegal pistols actually in circulation. Clearly, the causes of crime lie elsewhere than in the legal ownership of firearms by New York State citizens.

Despite these facts, or perhaps not knowing them, President Richard M. Nixon recently urged Congress to enact stronger laws with which to fight crime and asked for the prompt enactment of a Federal law "similar to the Sullivan Law of New York." Members of the Shooters Club of America must see to it that their congressmen become familiar with the failure of the Sullivan Law during the more than half a century it was been operative. Federal law in this field would pre-empt both State and City laws, and there is no reason to believe that Washington would have any more

success than city police departments, who are well aware of local conditions, in reducing crime through an ill-conceived national Sullivan Law operating in every state.

The experience of New York City shows that even strict enforcement of the Law cannot reduce crime, and is of no value whatever in denying criminals easy access to firearms. It is impossible to carry a rifle on the city streets without causing attention, and pistols have been used in 86% of the reported crimes. Criminals involved in a bank holdup will not be deterred by the fact that their firearms are carried without a permit from the Police, any more than they will be concerned with breaking a traffic law during their escape.

Homicide has been a crime going back before the days of recorded history, but it cannot be prevented by legislation of the Sullivan Law type. As the New York City Police Department itself has stated, "... homicides are most likely to be perpetrated by one's relations, friends, acquaintances or neighbors in a spur of the moment action, usually in a residence..." The use of firearms in homicides is not very great; knives and other sharp instruments, which can be purchased anywhere and are found in every kitchen, were used in more than 40% of the cases, and a blunt instrument or plain physical force were used in another 28% of all homicides, a total of 68%.

Since premeditated murders committed by criminals almost always involved pistols, the actual number of homicides done with permit-to-own pistols is infinitesimal. In fact, there is some validity to the viewpoint that the great reduction in premises permits may actually increase robberies and felony murders, because a holdup man can be fairly certain that retail establishments are unarmed. Of course, a trained police officer is more effective than a storekeeper with a pistol, but an officer may not be present at a crucial moment when the storekeeper's life is in danger.

Congressmen, who may be called to vote on legislation similar to New York's Sullivan Law must be made aware of these facts! Your best "collective voice" is the Shooters Club of America. If you are not already a member, use the handy postage-free envelope opposite this page now!

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ONE of the problems of an editor is that he has no control of what happens to a product or a manufacturer after he has published an article extolling its virtues.

Not too long after we ran the article on the Auto-Mag pistol, we began to get a feeling that all was not right in Pasadena. We still don't know exactly what happened, but it is not hard to guess that this may well be the sad story of someone who was a crackerjack at design but a dismal failure as a businessman. In spite of a strong demand for the pistols after the first few ads were run, the company went broke. It is our understanding that it is now in the hands of a court appointed receiver; that most, if not all of the machinery has been sold at auction; and that there is little chance that it will ever be revived. There are hopes that someone will pick up the pieces, but no real indications as yet that this will happen.

To the many readers who have written asking what they can do to get their Auto-Mag; I'm afraid that we just don't have an answer at this time.

* * *

The November issue of GUNS will feature a host of handgun articles for every interest. We'll have something for the collector in pieces on the Lignose and Berettas; a look at a brand new muzzle-loading target pistol; a test report on .22/45 conversions; a how-to-do-it piece on chopping the S&W Model 39, and some facts on selecting combat grips. All-in-all it should be on the must list of anyone interested in handguns. For the collectors, we have another double page full color print of a rare pair of Simeon North flintlock duelers; one of only two pair known to exist.

* * *

By the time you read this, our 1973 edition of GUNS ANNUAL will be on the newsstands; a lot of great reading at no increase in price. Still the best \$2.00 buy in the U.S. If you can't find it locally, order direct from: GUNS ANNUAL, 8142 N. Lawndale, Skokie, Ill. 60078. A \$2 bill prepaies it to you.

THE COVER

A Chief's Special handsomely engraved by Joe Condon of Las Vegas, Nevada. The work was originally done for Richard Gordon, but the gun is now owned by a gun shop in beautiful downtown Burbank. Photo by Walter Rickell.

OCTOBER, 1972

Vol. XVIII, No. 2-10

George E. von Rosen
Publisher

Guns

FINEST IN THE FIREARMS FIELD

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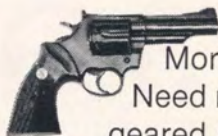
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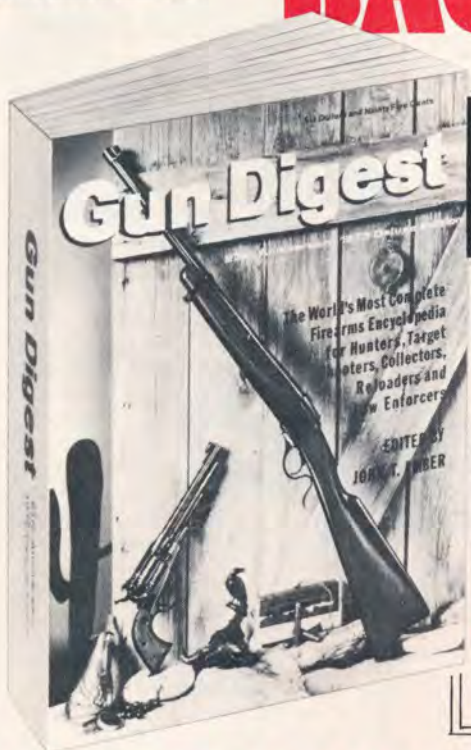
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NEW 1973 GUN DIGEST



JOHN T. AMBER—famed editor, renowned collector, hunter and noted arms

expert—comments on some of the stories and special articles that make GUN DIGEST 1973 an experience you won't want to miss.

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by *Larry S. Sterett*
Sterett uncovers numerous contributions made by James Paris Lee to modern firearms design. A fascinating history of one of the most brilliant and prolific firearms inventors. Must-reading for every collector.

MUSKETS, POWDER and PATRIOTS by *M. L. Brown*
An authority on firearms used in the American Revolution describes the mixed ancestry of the many types of weapons used in the victorious struggle. Though not always the best available, in the hands of determined men the muskets performed brilliantly.

PRESSURES and the REVOLVER by *Wm. M. Caldwell*
The author's new high-technology invention now permits monitoring revolvers in action for data on gas losses and pressures. This remarkable discovery will undoubtedly greatly improve insight on handgun ballistics and loading techniques.

THE KNIFE REVISITED

by *A.G. Russell*
The making of handmade knives—and the collecting of them—continues to grow at an amazing rate. Pictured are many fine creations, both plain & fancy, of the knifemaker's art.

J. M. SHOOTS TWICE

by *Lucian Cary*
That inimitable yarn-teller, Lucian Cary, takes us over the long years with John Pyne during which John had taken 22 deer with a single shot rifle... one shot for each of the 22! His last stalk was doubly successful.

RELOADING THE 9mm LUGER by *Bob Steindler*
Know-how, not great skill—makes reloading the 9mm Luger easy, even with cast bullets. Steindler tells how to avoid pitfalls for 100% reliable cartridges.

RIFLES and CARTRIDGES FOR MULEYS

by *Norman E. Nelson, Jr.*
Take it from an expert—more depends on how you use your guns than where you hunt. Here's an appraisal on your choices with good handload data for a sweetener.

HIGH STANDARD'S NEW SUPERMATIC AUTOLOADER

by *Wallace Labisky*
The new auto shotgun came through the author's various tests with a near 4.0 rating—though certain loads and shot sizes patterned almost 80%. That's not all bad—especially if you've some long-range shooting in mind.

COLLECTING AUTOMATIC PISTOLS

by *J. B. Wood*
Is it too late to begin collecting Automatic Pistols? Not according to Wood, who tells you how to begin collecting, what to guard against and provides a check list of 1972-1973 values.

GUNS OF JOHN BROWN

by *Louis W. Steinwedel*
Saint or sinner, "Osawatimie" Brown was certainly a fierce guerilla leader, one who fought to abolish slavery before the Civil War—and paid with his life. Here's an account of the firearms he used in "bleeding Kansas" and at Harpers Ferry.

THE BEAUTIFUL BLAZERS

by *Bob Bell*
Remember the 22 Swift, the 250 Savage, the 257 Roberts, the 7x57 and the 300 H&H? Perhaps obsolete but certainly suitable for virtually everything from prairie dogs to crows to chucks, to deer and antelope, sheep and elk, even the big brown bears.

ONE, TWO, THREE, FOUR

by *Roger Barlow*
Strange title for a shotgun article? No, not under the circumstances. That is exactly the number of barrels found in four of the guns the author uses for his birdshooting!

HIGH PERFORMANCE HANDGUN LOADS—HOW TO HANDLE 'EM

by *George C. Nonte, Jr.*
If you're going to duplicate today's light bullet, high velocity pistol and revolver cartridges, you'll have to forget some old rules. This is a new ball game!

LOCKED BREECH 380 AUTOS

by *Donald M. Simmons, Jr.*
Only a handful of recoil operated 380 pistols ever attained series production and some are rarely found today. Here they are—all eleven of them!

BRITISH SMALL BORE RIFLES

by *DeWitt Bailey II*
The British 451 rifle, the small-bore of its day, grew out of a desire to improve the big-bore military rifle of the mid-1850's. The small-bore rifle—first as a muzzleloader and later as a breechloader—reached its developmental zenith in the 1880s, a period that also saw its decline and near-disappearance. The muzzle-loading 451s are reviewed here in a wealth of detail.

HANDGUN HUNTING

by *Bill R. Davidson*
Today's sporting revolver shows an accuracy equal to—and often better than—what a saddle carbine gave 25 years ago. Let some legislators—and Presidential hopefuls—consider this before buying the fable that handguns are not precision, sporting instruments.

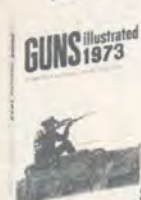
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CROSSFIRE

Check Colors Before Pulling

In the July '72 issue of *Guns* an omission was made which can cause some of your readers serious potential problems. C. George Charles' "Hand-loading Bench" covered the bases on the cleanup of pulled bullets except for a seemingly minor one, but that one omission is a potential source of real trouble.

In recent years, quantities of surplus military ammunition has shown up which have included Armor Piercing, Tracer and even incendiary bullets. Many of these bullets have been pulled to provide needed cartridge cases in .303 British, 30-06, 7.62 Russian and 8mm Mauser Calibers to name a few. Tracer and Incendiary bullets are obvious fire hazards and illegal even for target shooting in a number of states and counties. Armor Piercing ammunition makes good target ammunition but it too is sometimes forbidden, as in Los Angeles County.

Before cleaning up pulled bullets as Mr. Charles describes, carefully check for both colored bullet tips and stripes or bands at the bullet cannelure (or at the case mouth). Unusual bullet contours or bullet jackets may also indicate special purpose ammunition as will box labels or special cartridge markings.

Knowing that a bullet tip colored red means Tracer and blue or Aluminum means Incendiary identifies U.S. military bullets nicely, but this is still not enough. A red tipped Soviet bullet, rare as it might be, is an explosive observation round complete with a firing pin. In one case I know of, it was set off in an inertia bullet puller. No injuries occurred in this case but a new bullet puller was needed. Yellow on a Soviet round means heavy ball but on a British cartridge we have a tracer. Confusing—Yes it is!

If you don't know—ask—but ask someone who really knows, a competent Gunsmith—an experienced military cartridge collector,—or write

Guns Magazine; but above all, unless you are sure, don't use them. I would be happy to answer any inquiries.

Martin Corney
246 Rodeo Road
Glendora, Calif. 91740

In Defense of the SIG-210

Jan Stevenson maligns the SIG-210 safety placement in Part V Autopistol Controls (*Guns*, July '72), and appends a photograph with an accusing white arrow pointing to the slide release. This was probably just an error in magazine graphics, but the author's complaint about the SIG is apparently a longstanding one which he has mentioned before. My 210, acquired at an effort second only to obtaining Swiss citizenship, did have a stiff safety when new, but after flipping it on and off a few times it smoothed out; and it is easily operated one-handed with a stroke of the thumb.

The gist of the Handgunning articles seems to be that if the perfect safety, clip release, etc. were to be assembled into one pistol, it would turn out to be everybody's Wunderkind, the Mod. 1911. I question this logic in that the Mod. 1911 invariably needs a fortune in "accurizing" to make it hit the target, whereas the SIG, and Mod. 39 S&W seem to achieve this before they leave their factories.

Jim Daniels
Houston, Texas

Author Needs Help

I am doing research on the U.S. Carbine Calibers .30 M1, M1A1, M2, M3 and T3.

I am trying to locate original government issue military carbines to purchase for use in my book. Also needed are unusual, proto-type or "tool room" models. I feel some of your readers will be able to help me.

Phillip A. Pilgram
1318 E. Mountain St.
Glendale, Calif. 91207

"Core-Lokt"... a bullet for all seasons and all types of game.

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After the first rifle report on opening day of the season, big game gets even more elusive. So if and when you're lucky enough to get a glimpse of a white-tailed buck at the top of a ridge or a big-horn clambering up a shale slide, you've got to be prepared. You're not going to get too many second chances. Most successful big-game hunters prepare by using Remington-Peters center fire cartridges with "Core-Lokt" bullets; one good chance is all the "Core-Lokt" bullet needs.

"Core-Lokt" is the trademark for our exclusive bullet design. It means just what it says. The metal jacket and solid lead core of every "Core-Lokt" bullet are locked together in the bullet's heavy midsection. This combination of heavy midsection and metal jacket assures uniform expansion at all ranges. That's why we call the "Core-Lokt" bullet the No. 1 mushroom. Their proven success has enabled us to offer "Core-Lokt" bullets in 26 big-game calibers.

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This "Core-Lokt" bullet still retained 62% of its original weight when recovered from a Kodiak bear.

"Core-Lokt" bullet for 30-06 and 308.)

Pointed Soft-Point "Core-Lokt" bullets were designed for bringing down game at long range. If the terrain you're hunting in requires you to sight your rifle in at 200 yards or more, then this version of the Remington-Peters "Core-Lokt" bullet is the best choice you can make. Because of its pointed profile, it has a flatter trajectory. This means less air resistance, so the bullet retains maximum velocity and striking energy down range where it really counts. (The bullet shown is the 180 grain Pointed Soft-Point "Core-Lokt" bullet for 30-06 and 308.)

We also offer other bullet types to meet any game or situation a hunter might encounter. Here are some of the more popular: Hol-

low Point "Core-Lokt" bullets for the 30-30 owner, Bronze Point Expanding for extra long-range accuracy and Hollow Point "Power-Lokt" bullets, the choice of varmint hunters and target shooters.

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The results: Federal finished first for 20 out of the 25 cartridges. And in second place the other 5 times. 18 of our target groups measured 2 inches or less across at 200 yards! And all of the rest, but one, were under 3 inches.

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HANDLOADING BENCH

BY C. GEORGE CHARLES

NEARLY ALL current domestic-ly-produced shotshells take the same size battery cup primer these days. There was a time not so very long ago when there were not only two or more sizes, but slightly different shapes as well. Some used cylindrical cups, some tapered cups, and some were longer or shorter than others.

In those days, when a primer pocket loosened after several loadings—assuming the case body tube lasted that long—you could get a couple more loadings by switching to a larger or longer primer which would be tighter in the hole. Or, you could—as many did—use the CCI 209-size primer whose cup was tapered enough to go into the smaller pocket, while still tight in the larger. This primer was intended to be useable in the smaller pockets, even if they weren't enlarged. The tapered cup just enlarged the pocket to fit as it was seated.

Expanded (oversize) primer pockets never seem to occur in modern one-piece CF-type plastic cases, but do crop up occasionally in built-up plastic cases. They are common in traditional paper cases with fiber or paper base wads. Wherever they occur, expanded primer pockets can be reduced enough in diameter to hold new primers securely for at least a couple more loadings.

Williams Gun Sight Company (7300 Lapeer Rd., Davison, Mich. 48423) makes a simple little gadget called a "Primer Pocket Peener" which does this very well. It is a punch and base set in which a couple hammer blows causes a hollow punch to upset the primer pocket, squeezing it in a bit. I've salvaged lots of cases with this little tool set.

Many of today's shotshell cases are fitted with heads drawn of thin steel rather than the traditional brass. Steel is not only cheaper (as a mate-

rial), but much stronger. It has two disadvantages—it costs more to form (offset by lower material cost); and it rusts easily. The latter is corrected by plating thinly with copper or other corrosion-resisting metal.

Steel heads do take a bit more resizing effort, but not so much that it is easily felt during tool operation. In fact, since it expands less on firing, it requires less resizing, so that balances out any additional effort. Plated steel heads will become chipped and scratched in passing through dies (and in chambering and firing) and this exposes naked steel. It will rust quickly in damp climates. This can be avoided by giving scratched heads a quick shot of aerosol clear lacquer after loading. And, if the primer area and crimp are given a shot at the same time, your handloads will be a lot more water-resistant at both ends.

Ever wind up with a batch of really dirty fired shotshells? If they are one-piece like the Winchester AA, just wash 'em. Dump them into mama's automatic washer with any good detergent, set water temperature to cold or warm (if the latter, check first to make sure it doesn't get hot enough to soften or warp cases), set for the shortest cycle available, and switch it on. It's a good idea to place these in an old pillow case to make sure the inside of the washer drum doesn't get chipped, and also makes it handy to remove them. Cases will come out clean as a whistle, though the inked-on marking will probably be all removed.

To dry quickly, use mama's dryer, with heat turned off or at least as low as possible. The dryer will also serve to dry out paper or built-up plastic cases you might pick upon on the range after a shower or heavy dew. Just make sure you don't run it too hot. The "nylon" setting will
(Continued on page 14)



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(Continued from page 12)
usually work fine.

• • •
If you're having trouble with hard shotshell resizing, first check the die. It likely has some annular reamer marks or other roughness (maybe from rust you allowed to accumulate) causing most of the trouble. If polishing the die doesn't cure the problem, try a little wax to lubricate both die and cases. A trace of beeswax rubbed on a few cases now and then may do the job. If not, give all cases a shot of aerosol wax. Make sure this is a hard wax, not just an oily furniture polish. In a few minutes the volatile spray vehicle will evaporate, leaving just enough wax on the cases so they'll run smoothly through the die.

• • •
If you build your own hunting loads, you know how easily shot sizes get mixed up. Surely two or three sizes are all you'll use, so settle on a color code—like red for 4's green for 6's, and blue for 7½'s. Then, when you've loaded a batch, stand cases mouth-down close together and spray the heads lightly with the appropriate color. A little overspray might get on the case bodies, but it won't stick well and can be wiped-off. If you're real fastidious, drill a row of body-size holes in a piece of plywood or hard-

board and drop cases into it, to rest on their rims. Impossible then for overspray to reach the case bodies.

Incidentally, if you see some low-brass, low-base (not a common combination) fired cases with white-painted case heads, don't be puzzled. They are from *black-powder blank* loads sold for launching various tear gas grenades and the like from 12-bore riot guns.

• • •
Now and again you'll see *reclaimed* shot offered for sale in some shooting publications. This is simply the shot mined or screened or otherwise recovered from heavily-shot ranges. Generally, it will consist mainly of No. 9 shot with a small percentage of other sizes mixed in. In addition, individual pellets will show some deformation from the first firing and impact with the earth.

For casual shooting, reclaimed shot performs surprisingly well, and is substantially cheaper than the fresh, new product. If you do a lot of shooting, you might give it a try to see if it meets your standards. If so, you can save a few bucks.

• • •
If you find yourself without something to ream out military primer crimp, try this: pick up a low-cost 45-60-degree countersink at the hard-

ware store; then grind its point back until it will enter the primer pocket deeply enough to cut away the crimp. Used by hand it will do a good job, cutting away the crimp to leave a clean bevel at the pocket mouth to facilitate entry of a new primer.

It can also be used under power (as can a Lyman or other primer pocket reamer) in a variable-speed drill press or electric hand drill. Trim off the countersink point so it contacts the bottom of the primer pocket as it enters deep enough to cut away the crimp. The end then acts as a stop to prevent cutting too deep. Run at the lowest speed and press cases over the cutter by hand. You might find this handier than other methods.

• • •
As we mentioned in these pages some time back, Hercules has developed a new shotshell powder identified as Blue Dot—and it does have blue kernels in it for identification, just like Red Dot. This powder is packed in cylindrical one-pound cans, a departure from traditional packaging practice, and loading data is printed on the label. Loading data sheets are also available direct from Hercules, and there is a circular load data calculator available for merely one dollar.

Most pleasing is the fact that as this



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is written, early June, Hercules is shipping Blue Dot, just as they promised back around the first of the year. As you read this your favorite hand-loading gear dealer should have Blue Dot on his shelves, just waiting for you to stock up. It's refreshing to see a manufacturer live up to his original delivery announcements. Too often it doesn't happen that way.

Blue Dot is intended for magnum and heavy field loads in 10 through 20 gauge and delivers excellent pressure/velocity ratios in that range. It also has a burning rate that seems good for some heavy handgun loads, but we haven't explored this area yet.

I ran into an interesting combination not too long ago. A fellow wanted to shoot .45 ACP for practice in his .38 Super Colt Commander because of plenty of low-cost brass on hand. He bought a cheap surplus .45 barrel and magazine, and carefully shortened and fitted the former to his Commander. Then, to avoid altering or replacing the slide, he used his Unimat Miniature Lathe to cut .45 ACP case rims down to .38 Super size. It works, and the slight weakening of the .45 case head isn't critical since only light loads are used. It sure beats the retail price of new .38 Super cases.

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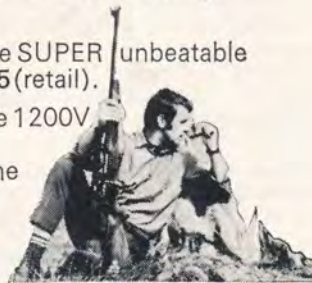
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The new Model 70.

Once you make a rifle as good as the Model 70 Winchester we turned out before 1964, it's tough to come up with an encore. But because we listened to your requirements very carefully, we're now making a new Model 70 that'll take the measure of any center fire rifle made today in the U.S.A. Take a look at these facts:

Machined steel receiver: The receiver on the 1972 Model 70 is precision forged from a single piece of chrome molybdenum steel specially formulated to Winchester specifications. Forging gives a better grain structure for added strength and safety. The receiver is heat-treated for durability, and machined to close tolerances for smooth bolt operation. Integral recoil lugs give better security, and flat receiver bottom beds better in the stock for accuracy. The receiver is drilled and tapped for scope mount and micrometer rear sight. Receiver and barrel are assembled, then hand polished together. The result is exactly what you expect from Winchester.

Engine turned bolt: Machined from select chrome molybdenum steel, the 1972 Model 70 bolt features two oversize locking lugs for great strength. The Model 70 bolt has a fully recessed bolt face for 50% better head support. An exclusive, slotted anti-bind bolt device below one of the locking lugs ensures flawless loading and ejection. Gas vent and steel gas cap are standard for safety. The



bolt body is engine turned for a sparkling appearance. The 1972 Model 70 bolt is stronger, smoother, better looking, and simpler than the one we made before 1964 . . . on a 1972 Model 70 that's more accurate.

Redesigned stock contour and real cut checkering:

The 1972 Model 70 is a rifle that means business to the practiced eye and hand. The forend is slimmer, with a flatter bottom that fits the hand exactly. The pistol grip is elongated, and slimmed down. From black forend tip to Monte Carlo cheekpiece, you get a lean, clean look. The dark wood tones of solid American walnut tell a story of pure quality. As a final touch, there's real, cut checkering on forend and pistol grip. Get your hands on the new Model 70. It's for real.



Winchester Proof Steel barrel:

This is the Model 70 story all by itself. Winchester pioneered the manufacture of rifle barrels through an automatic cold-forging process in order to make the most durable, accurate barrels available. Model 70 barrels are forged on superbly precise machines that hammer cold chrome molybdenum steel blanks under 200 tons of pressure into superbly uniform rifle barrels. Rifling, bore, and chamber are forged into shape, not cut or machined. The result is extreme barrel strength, exactly concentric bores, and finished Model 70s that shoot groups as tight as you can hold.

Three position safety: This feature is another Model 70 exclusive. Position #1, fully to the rear, and both bolt and trigger are locked. Position #2, with safety lever centered, and the trigger is inoperable, while the bolt may be opened to check the chamber, to reload, or to empty the magazine. Position #3, lever fully forward, and you're ready to fire. An extra safety feature is a red cocking indicator under the bolt cap which tells at a glance whether or not your Model 70 is ready to fire.

Knurled bolt handle: The polished, steel bolt handle on the Model 70 offers an extra bit of sure, confident operation in 1972. We've added knurling all around the bolt knob. Put yourself in the middle of some typical fall or winter weather when fast reloading for repeat shots could mean the ballgame, and you'll appreciate this small touch. And when it comes to precise touch, don't overlook the Model 70 trigger. It's wide, serrated, and has a clean release that means accuracy. Adjustable for over-travel and tension.

Detachable sling swivels: Most men who use a rifle rely on a sling or carrying strap to carry their rifle in and out of game country, or to steady their aim. Blued steel sling swivels are standard on the 1972 Model 70, as you'd expect from Winchester. These swivels also are quick-detachable. We don't call the Model 70 "The Rifleman's Rifle" for nothing.

Stainless steel magazine follower: The magazine follower in any rifle has little to do . . . except follow the ammunition, pressing it upward into contact with the bolt for feeding. Consequently, it's possible to make the follower out of many materials. If you buy a Winchester Model 70, we figure you're entitled to a rifle that's made right all the way so you get a stainless steel follower on every 70 we make.

New Super Grade Model 70: We also make a top-of-the-line model for the man who will accept only the finest. Check the superlative quality features on our top-of-the-line Model 70 Super Grade: Fancy American walnut stock, with distinctive cut checkering, Monte Carlo, fluted comb, and cheek piece. Ebony pistol grip cap and forend tip, with white spacers. Non-slip rubber butt pad with white spacer. Steel hinged floor plate marked "Super Grade." Special matted finish on receiver bridge. Plus all the standard Model 70 features, including chrome molybdenum steel barrel and receiver.

Hinged steel floor plate: There are times when a hunter wants to empty or reload his magazine in a hurry. With the Model 70, simply press the button in front of the trigger guard. The hinged, magazine floor plate swings free, and your unused ammunition drops right into your hand. Incidentally, the floor plate is steel.

New Model 70A: This one has the heart of the Model 70, with some trimmings left off. American walnut stock with real, cut checkering. Chrome molybdenum steel barrel and receiver. Sling swivels. Three position safety. Virtually every feature of the Model 70 . . . including performance . . . except the hinged floor plate and some other non-functional detailing. Many hunters actually will prefer the Model 70A's reserved, no-nonsense appearance . . . especially at its attractive price.

Model 70, Model 70 Super Grade, and Model 70A are available in popular calibers, including magnum models. All made in New Haven, Connecticut, U.S.A. See them now at your Winchester Dealer. **WINCHESTER** 275 Winchester Avenue, New Haven, Connecticut 06504.



Wimbledon Cup accuracy: There's only one rifle that wins as often in target matches as it does in the field: The Winchester Model 70. Here are just a few excerpts from its trophy-proven record of accuracy: Won Wimbledon Cup 1000 Yard event more than all other rifles combined; 1968 Palma Matches; American team perfect from 800 yards, all with Model 70s; 1970 Phoenix World Shooting Championships: high individual, and 2 of top 3 teams used Model 70s; 1971 CISM Matches: 1-2-3 place winners all used Model 70s.



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By **DICK MILLER**

WIND SCARES a lot of trapshooters. Wind also lowers scores. But, whether the wind blows or it is a perfectly quiet day, winners will be returned from every event on the program.

Those winners can include you if you will master wind-tossed targets. Not only can you be a winner, but the rewards are great. On a very windy day, optionals can pay extremely well, because the pots don't have to be divided as much as on a calm day. The perils associated with shooting good scores on a windy day are partially real, and partially imagined. I have never studied the relative percentages, but I suspect they are on the order of twenty-five percent real and seventy-five percent imagined.

Naturally, wind conditions affect handicap and doubles gunners more than the sixteen yard contingent, and they affect long yardage shooters more than they do the shorter yardages. But, the problems are not hopeless, even for the long yardage contestant. Targets can do a lot of things on a windy day. What they are doing dictates how you will approach breaking more of them. Wind can cause targets to be either higher or lower than normal.

There is an old trap saying to the effect that if the wind is behind you, targets will be lower, or drop away from you, and that if the wind is in your face, targets will be higher and jump upward. Like many old sayings, this is not entirely true. Wind from behind you can have just the opposite effect, and cause targets to dive. Incoming wind under some conditions can cause targets to dive or to slow up and dance.

A little time spent observing exactly what targets are doing before you are due on the line can pay big dividends, because you can adjust to what the targets are really doing. Obviously, the more quickly you can

shoot at targets on a windy day, the better chance you have for breaking them. As long as the target is under the influence of the trap arm, it is not affected too much by the wind. When the energy from the trap arm begins to die, the wind takes over. This is not, however, a license to shoot too quickly, just because the wind is blowing, which I have seen many shooters doing. What is really needed, especially for the more deliberate shooter, is just a little faster timing on target breaks, but still being alert for unexpected moves on the part of the target.

So far, I have touched only on wind from either behind you or in front of you. Winds don't always blow from those directions, unfortunately. Crossing winds, from either the right or left, can be a problem too. Crossing winds can set up a situation not unlike the baseball player who is tough on fast balls, but a sucker for the curve. It could be said that the curve ball hitter has a good chance to clean up on trap trophies when the wind starts buffeting clay birds. When winds are exactly right in a crossing pattern, the angles get tougher either to the right or the left, depending naturally on which way the wind sock is blowing.

One way to take picks on the faster angle targets is to set your "pointing" foot a little more in the direction of the most difficult angles. The more your pointing foot (left foot for right-handers, and right foot for southpaws) points in the direction of an extreme angle, the easier it is to break the target.

For example, if on post five, you are right-handed, and point your left foot at the traphouse, when you get a sharp left angle, you will have to shove the gun at the target. Rule one says that you can't shove a gun barrel as fast as you can swing it. Not only that, but when you try to shove the

barrel rather than swing it, you almost invariably dip the muzzle at the end of the shoving arc, which more often than not results in a big fat zero on the score sheet. There is no reason to dip the muzzle if you are swinging evenly as a result of good foot position. This means that your pointing foot should be aimed at about the spot where you expect to break the most difficult target from a given post. On an extremely windy day, with crossing wind, you could pick up enough extra targets to win by moving that foot perhaps another inch in the direction of the difficult angle. Of course, crossing winds don't always cooperate by simply moving targets to one side or the other. Certain crossing winds can have as much down and up effect on targets as tail winds or head winds.

When you study your targets to determine what they are doing, this is another factor to check. If crossing winds are depressing targets, you can set your hold a little lower. If the clay birds are climbing, you can gain a foot or so and valuable time from a higher hold. Where you hold on the target is perhaps the most important overall factor on a windy day. If you always use a six o'clock hold, that is, sit the target on top of your front sight, you have time to correct and pick up a valuable hit when the bird jumps or dives.

If you are using a field gun, and have to cover or black-out the target, you are in trouble when the breezes blow, because the bird will do its little dance, darting up or down, behind the muzzle and therefore shielded from your vision. Even if you use the more straight stocking of a trap gun, you can fall into the habit of shooting right at the bird, instead of sitting it on top your muzzle where you can watch the little rascals at all times, and under all conditions. Trophies on a breezy day may come more easily for you if you will remember to make sure that you come up to the bird and touch off your shot instead of blasting it midship. From a very practical standpoint, if wind-blown targets bug you, you might give some thought to when you are squadded. Obviously, this is not always possible, so it's better if you will learn to shoot in the wind. But, you can study the club for wind conditions where that is possible. At some clubs, there is always a morning breeze, which dies by late afternoon. At other clubs the reverse is true. You can shoot better scores if you will change from AM to PM for starting times, or vice versa.

So far I have dealt with shooting techniques designed to help with the

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twenty-five percent factor in shooting good scores on a windy day. Giving advice to help with the seventy-five percent factor is a little more difficult.

Perhaps I should start by observing that physically and aerodynamically, there is no real reason why you can't shoot just as well on a breezy day as you can on a calm day. If you hold correctly and touch off your shot correctly, there is no reason why you can't break as many targets in a gale as on a calm day. You can do it, but it's a little harder and requires more work, planning, and concentration.

For proof that wind is more of an imagined handicap than a real one, I have seen too many new shooters shoot their best scores on a windy day, and in competition with shooters who hold much higher averages but also know that wind is supposed to affect their performance. The new shooters simply concentrated on breaking targets as best they could, and in the manner to which they were accustomed. The results were conclusive.

There is one very small group of trapshooters who will shoot only on good days, presumably to protect high averages. This is of course their privilege, but I can't help questioning the wisdom of such a policy. One thing I do know is that you only learn to shoot good scores in the wind by shooting in the wind, which calls for some adjustments in technique. The shooter who takes a powder when conditions are less than ideal can't control the weather, which may be miserable on the day of the big shoot he wants most to win, such as in the Grand, where the breezes have been known to be rated a little more than balmy on a given day. As I said in the beginning, the rewards for taking the extra time and effort to master wind-tossed clay birds are considerable, and well worth the effort. You alone are the best judge as to whether your problems with wind are in the twenty-five percent or the seventy-five percent bracket. Now is the time to work on your problem, in time for the next Grand.

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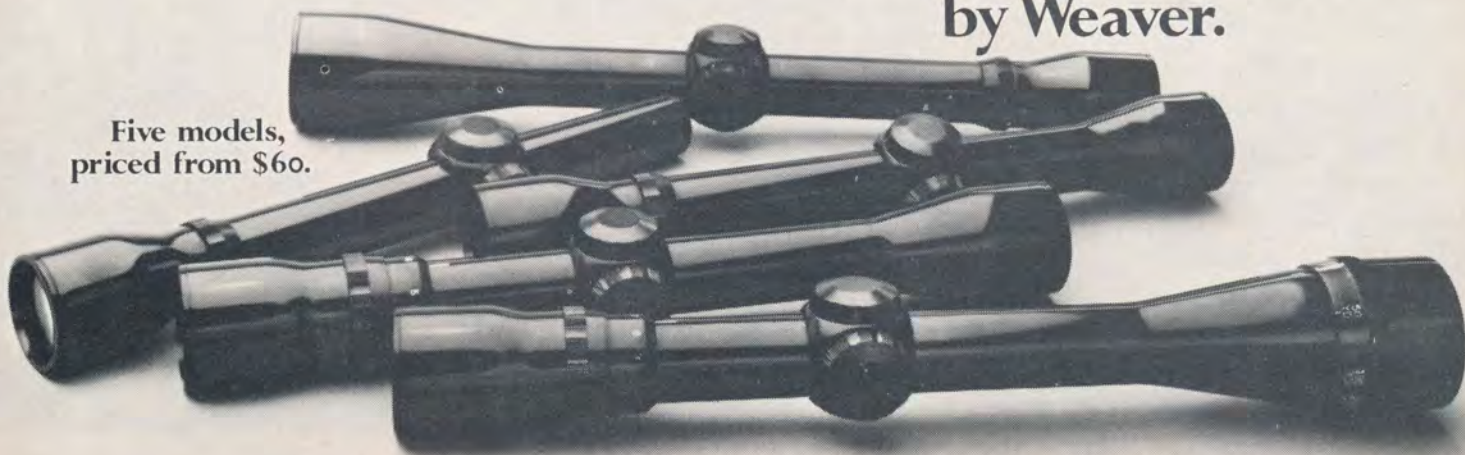
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SUBCALIBER

By HARRY O. DEAN

THE RIFLE I was testing was performing in a fantastic manner. It was shooting so well that it gave me a very strange feeling which I find difficult to explain. To be honest and candid, I wasn't sure whether I liked it or not. The rifle that gave me this oddly uncomfortable feeling was the new Remington .17 caliber. The report was not excessively loud, but its sharpness spoke of unusual speed. The recoil was nearly nonexistent. The accuracy was uncanny. It punctured the target with tight, tiny eyestraining prickmarks that were too hard to find. I didn't know whether to cuss or cheer. It seemed so doggoned different that it took some time to get used to. Did I like it or didn't I? I liked it and I think you will like it.

"Subcaliber" is a word that is rather loosely used and one of its several utilizations refers to any bore diameter that is smaller than that of the familiar

.22. Last year I reported on the birth pains of the 5mm Remington which is only .20 caliber. Since then, the Bridgeport-Ilion crowd has hammered the bore hole down to the diameter of a B-B. I'll talk about both of these subcaliber rifles as we continue. This B-B bore is the newest, so I will start with the .17 caliber. Did I say "new?" As most of you know, the .17 caliber has been stumbling around for several years. I can say "stumbling" because it has teased and tormented its fans with terrifically tight targets but, within far too few rounds it has faced them with frustration by fouling both its bore and their language simultaneously! Why the big problem? Let's look back. I remember discussing the .17 bore with Parker O. Ackley a few years ago. Ackley was one of the pioneers in the fine art of boring and rifling a .17 caliber hole. In fact the only B-B bore rifle I have ever fired prior to the .17 Remington was the miniscule .17 Ackley Bee. A

Ironically, the smaller the bullet, the bigger the case, as graphically illustrated in this photograph of the .22 Long Rifle (left), the 5 mm Rimfire Magnum and the .17 Remington. Will the needle be next?

The new .17 caliber Remington is available in the Model 700B Deluxe with sling included. The author's rifle is very handsome and was found to be exceedingly accurate. Note the convolution of color on the buttstock board.



SHOOTING FUN

friend who owned this B-B was testing some 25 grain bullets and I was impressed with the accuracy in the three five shot groups that I fired. However, I was not impressed by the constant trouble encountered by owners of the later, more powerful versions of the .17 which were plagued by fouling. According to Ackley, early versions of the .17 caliber were handicapped by poor bullets. Some of the more recent fouling problems were actually caused by the shooters themselves. The temptation to overspeed a darned needle diameter bullet is difficult to resist. Furthermore, a good deal of experimentation was necessary to determine the correct rifling twist for proper stabilization of this new bullet diameter.

Fortunately, the recent Remington round offers the varmint hunter a proven cartridge with all of the benefits of laboratory controlled research in the many facets of design and production. Velocity-wise, you might look upon the .17 Remington as a sort of



The "new" .17 caliber Remington round is a varmint's delight.

.17 caliber Swift. Like the .220 Swift, the .17 boasts a muzzle velocity of over 4000 feet per second (factory figures). Also, like the Swift, the chronographed

loads from a standard rifle fall somewhat below the listed figures. In the Swift, the 4140 F.P.S. claimed by Winchester proved out at around 3975 in actual rifle tests. Remingtons 4020 F.P.S. claim works out closer to 3960 in rifle firings. Is this important? Not really, but it could be termed academic because the factory test barrel might vary somewhat in length or chamber and bore dimensions. The original propellant batch may have been altered. There are numerous changes that take place between the design prototype and the final production item. Be that as it may, the velocity discrepancies we have noted are in no way detrimental to the performance of the streaking .17 caliber missile.

For the addicts of pure speed, the .17 caliber and the Swift are cases in point. "Like throwing a feather into the wind" is an apt term. When you use a light bullet to attain the "magic" 4000 foot per second figure, you may find that the bullet lacks the weight and form to retain respectable speeds at the intended hunting ranges. This, plus the proportionate increase in wind sensitivity for the 25 grain mini-missile combine to limit the effective range of the .17 (Continued on page 50)

BOX SCORE .17 REMINGTON

Sighting data: If Col. Whelen were alive today, I am certain he would like the .17 Remington and recommend his pet varmint method of sighting the rifle to strike 1" high at 100 yards. It would then strike just below aim at 200 and about 6½ inches low at 300 yards. Factory ballistics are encapsulated below with the 50 yard figures omitted because one tenth of an inch is smaller than the head of a housefly and only 7 hundredths smaller than the .17's bullet diameter! Note how the magic disappears a 300 yards where the bullet starts a dramatic dive.

Range (Yards)	Velocity F.P.S.	Energy Ft. Lbs.	Trajectories	
Muzzle	4020	900	-	-
100	3290	600	Zero	+1.2
200	2630	380	-2.4	Zero
300	2060	230	-9.9	-6.3
400	1590	140	?	-21.2!
500	1240	90	?	-50.4!

THE REVOLVER-RIFLES



PART 2

One of the ultra-rare revolver-rifle models is this gun produced by E. Savage on the same 1856 patent as used for his scarce "Figure 8" pistols. E. Brown collection.

By JAMES E. SERVEN



THE FIRST part of this revolver-rifle story has told of ineffective efforts from the earliest times in gun-making to produce a practical multi-shot rifle. Guns with matchlock and flintlock ignition systems having a rotating multi-chambered breech (cylinder) came from gun shops in Europe, the British Isles and Asia. The Collier flintlock rifle made in England was the most successful of all these, but its performance left a lot to be desired.

It was not until after introduction of the percussion cap that there was some bright hope for a truly effective revolver-rifle. Even then, the revolver-rifle continued to have a major fault.

Top, a Belgian-made pinfire rifle made for European boar hunters. Center, an English caplock revolver-rifle having two reversible eight shot cylinders. The bottom rifle is a short-lived revolving cylinder rifle designed to shoot the new metallic cartridges.

The percussion ignition was surer, not as subject to misfire from dampness or from other malfunctions, but the dangerous escape of gas (and sometimes flame) between the mouth of the cylinder chamber and entrance to the barrel remained. With faulty loading, the flash from the fired cylinder had a tendency to set off more than the one chamber.

Unlike the pistol which was held in one hand well away from the body, the rifle was held to the shoulder with the breech closer to the face, and if the hand supporting the barrel chanced to be in front of the cylinder during a multiple discharge, it was goodbye to a few fingers! The Jacquith rifle, destined to an early demise, tried to minimize this danger by elevating the cylinder and discharging the chamber at the bottom rather than at the top as in other rifles. Colt published illustrated instructions and even a trigger guard with finger prongs, suggesting that the gun be supported with the free hand under the frame just ahead of the trigger guard and not along the barrel ahead of the cylinder.

After a slow start at Paterson, New Jersey, Colt's patent rifles, carbines and shotguns with rotating cylinders were made in some quantity there between 1836 and 1842 by the Patent Arms Mfg. Co. The rifles were eight-

shot models with a ring lever that cocked the concealed hammer and revolved the cylinder. Carbines and shotguns were six-shot arms with an exposed, center-hung, single action hammer, both having smoothbore barrels. Carbines had a 2½" cylinder whereas the shotgun cylinder was lengthened to 3½".

With these guns, Colt started a practice of placing roll engraved scenes on the cylinder, a feature carried over into his caplock pistols for many years. For the Paterson rifles, the scene pictured a centaur, deer, and horsemen; the carbine cylinder carried the Colt name and address along with three oval panels picturing soldiers, a lion hunter, and ships; the shotgun cylinder also had three panels, one showing a hunter and two deer, the second two bird hunters, and the third an American eagle.

The only Paterson Colt model that attained any substantial success was the carbine; several hundred of these were put into naval use, especially on ships of the Pacific Squadron where they were used by skirmishers during the Mexican War. A few were used by Texas Rangers, and there are accounts of their being used by travelers headed over the early trails to Oregon and California.

By 1842 the Patent Arms Mfg. Co.

was in bankruptcy and soon the factory closed its doors. Samuel Colt was left out in the cold. But he was not one to give up easily and by 1847 he had a contract to supply 1000 six-shot .44 caliber "Dragoon" pistols for the U. S. Government. Details of all these Colt trials and tribulations and the production of all major models made since 1836 are pictured and described in my book *Colt Firearms from 1836*. Obviously, we must limit ourselves here to the progress of cylinder rifles.

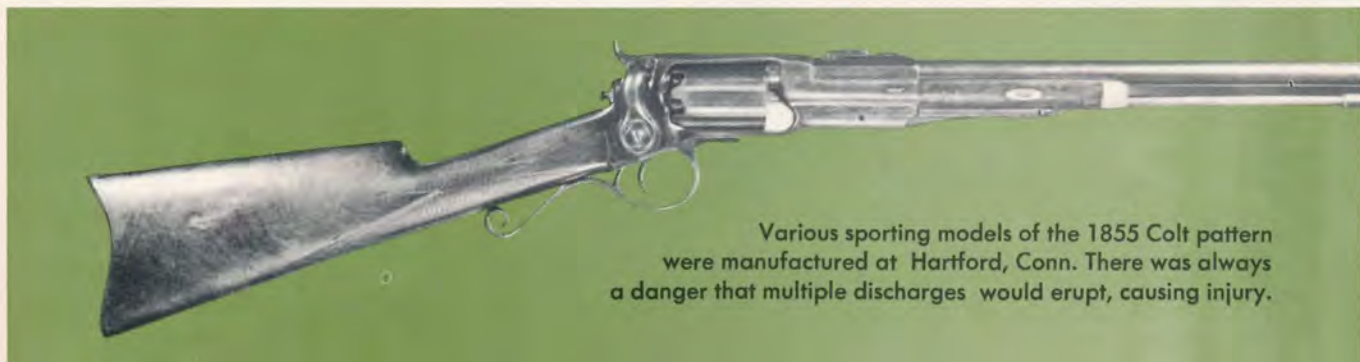
From a fresh start in a modest factory at Hartford, Conn., in 1848 Samuel Colt launched one of the great success stories in arms-making history. He gathered to him talented men like Elisha K. Root and in 1855, a new model of the Colt revolver-rifle was born. This one had a solid frame and an attached loading lever.

Now there were sporting models in rifle and shotgun calibers, the rifles from .36 to .56 caliber, the shotguns .60 and .75 smoothbore. There were carbines with and without forestocks and full-stocked military muskets complete with bayonets.

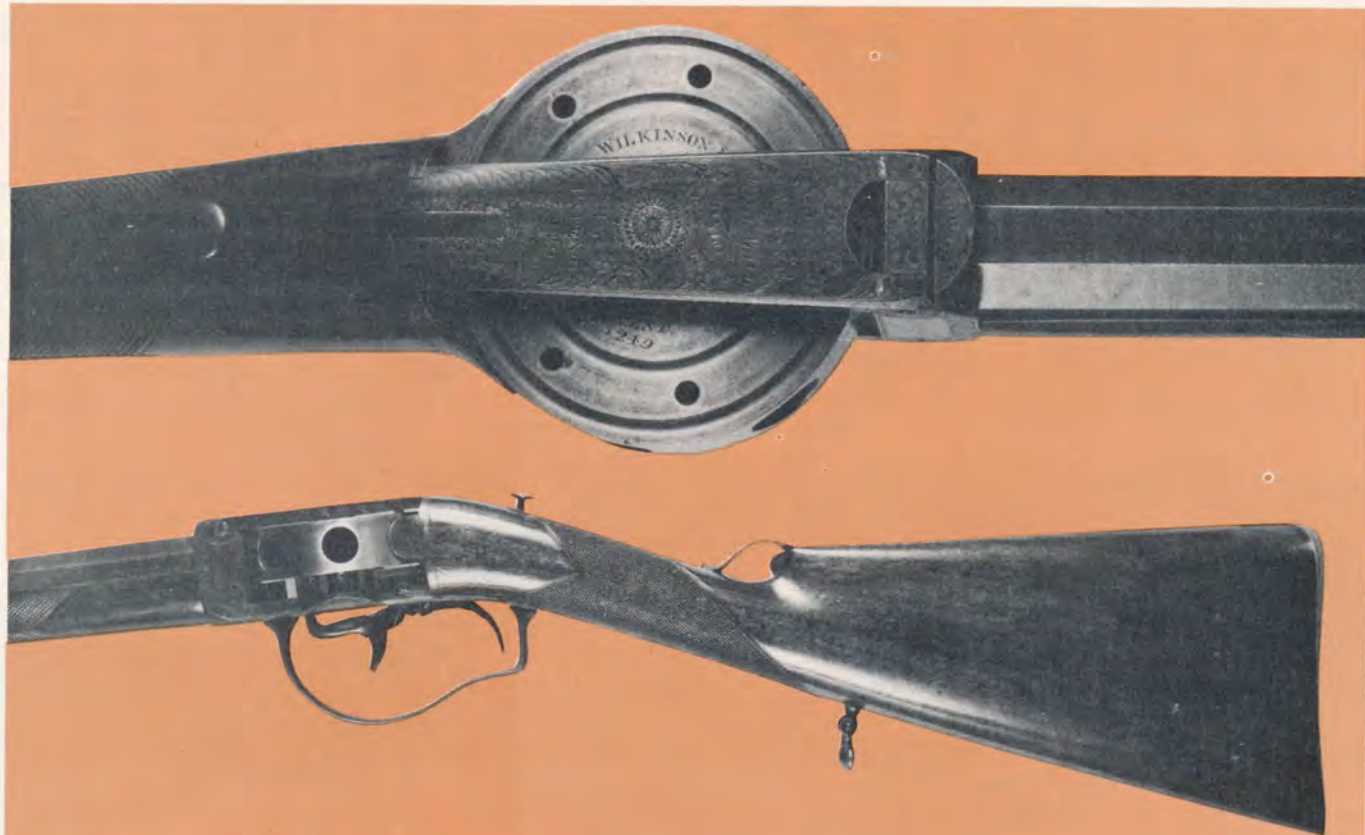
The approaching War between the States put northern arms factories into high gear and Colt benefited greatly. Approximately 5500 Colt revolver-rifles were sold to the Federal Government. No other manufacturer of these



The Colt military models in the rifled five and six shot musket and carbine styles were purchased in considerable numbers in the 1860-65 period. Later, these rifles were sold for \$6.67 each.



Various sporting models of the 1855 Colt pattern were manufactured at Hartford, Conn. There was always a danger that multiple discharges would erupt, causing injury.



The radial cylinder gun made by Wilkinson & Son of London is quite similar to the Cochran gun made in the United States. They are designed with disc-like rotating breeches, quite flat and with chambers extending like the spokes of a wheel. A discharge could go off at the shooter.

rotating cylinder repeaters ever approached production of that magnitude. Colt, however, had many competitors who worked hard to get a share of this lucrative market.

Although they entered the race relatively late, Remington made a six-shot .44 caliber revolver-rifle that some considered superior to the Colt. A few were converted later to shoot the metallic rimfire cartridges that came on the market during the war.

The prewar period was one that had seen many different names appear over the doorways of arms-making shops. Allen, Savage, Warner, and Massachusetts Arms Co. were just a few. And some made unique models which collectors eagerly seek. An example of this, recently come to light, is a rare E. Savage rifle in the Ed Brown collection based on Henry S. North's patent of June 17, 1856. It is the same patent on which the rare Savage "Figure 8" pistol was produced. The gun is quite unlike the model patented June 1, 1852 by North & Skinner although that gun is marked North & Savage, which later

partnership also was granted a patent January 18, 1859. If you are not by now completely confused you will at least be conscious of the complexities in identifying and collecting the ultra-rare models of a given manufacturer.

New England was by far the area whence came the greatest number of caplock revolver-rifles. The Whittier guns were made at Enfield, New Hampshire, the Nichols and Childs shop was at Conway, Mass., Wesson & Leavitt arms were made by the Massachusetts Arms Co. at Chicopee Falls, James Warner rifles came out of Springfield as did "Cochran's Many Chambered and Non Recoil Rifle" made by C. B. Allen. The scarce Allen & Wheelock rifles, also were a product of that area. The Porter radial cylinder guns are said to have been made at Amherst. The Colts, of course, were made at Hartford.

We have a uniformity in at least one feature of a majority of all revolver-rifles, that being a cylindrical breech bored to provide four or more chambers. From there the similarity ends

and some have a single action mechanism, others double action. Some cylinders are revolved and locked by action of the hammer or a trigger, others must be manually revolved. Some had attached loading levers so the cylinder might be loaded without removing the cylinder, others did not.

It would take more space than can be allotted here to describe the peculiarities of all these mechanisms, but I shall single out several of the more unusual types. Possibly the most spectacular American-made gun is Alexander Hall's patent of June 10, 1856. This gun resembles a veritable machine gun and has a tremendous fifteen-shot cylinder that extends far below the frame and is manually operated. The forward trigger cocks the concealed hammer. But as formidable as this gun appears the English gunmakers went us one better. They designed a rifle with a total of sixteen shots. It took two separate eight-shot cylinders to accomplish this, the second cylinder rotated into line with the barrel after the first one had been discharged!



Pictured from the top to bottom is the Remington .44 caliber revolver-rifle featuring a six shot cylinder. The middle and bottom rifles are Roper four shot revolving breech shotguns, illustrating the two major sizes. Like antique cars, these revolver-rifles are worth far more today than when they were fresh off the assembly line. Values have soared.

One of the latest of the revolver-rifles was the four-shot Roper patented April 10, 1876. This gun was designed with an enclosed circular housing, having a side loading gate. Primarily made as a shotgun, it employed iron shells with either nipples for percussion caps at the rear or a rear recess for flat disc primers. A revolving four partition turning mechanism within the enclosed housing brought each shell into firing position by manually cocking the hammer. These guns even had a crude detachable choke at the muzzle.

Many of the manufacturers who made cylinder rifles also made revolving cylinder pistols, and firms like Colt, Wesson & Leavitt, Savage and some others designed attachable shoulder stocks to transform a pistol into a pistol-carbine. I have even owned an English-made Collier and a scarce American-made Alsop revolver equipped with these attachable stocks, as well as the different Colt models.

There is another early form of multi-chambered gun that is quite apart from what we think (Continued on page 70)



The rifle with the flat radial cylinder at the top was patented in 1837 by J. W. Cochran; the center rifle was patented by E. H. Graham in 1851 and the bottom rifle was made by J. Genhart in Liege, Belgium, about 1860. Note the distinctive cylinder.



The Asian water buffalo, planted in the Northern Territory of Australia, affords some excellent shooting. Crocodile, wild boar, dingo and several varieties of water fowl is just some of game available.

THE SAFARI AND YOUR POCKETBOOK

By COL. CHARLES ASKINS

SHOW ME A man who is a hunting rifleman and I'll show you an hombre who has a deep-down hankering to make at least one honest-to-god big game hunting expedition before he dies. To Africa, or Alaska or maybe Canada.

A hunting soiree to run into several weeks with the chance to shoot a score of the trophies he has always wanted most. Game like grizzly, mountain sheep, lion and buffalo. The hunting and canepole fishing journals have built up circulations of a million readers based on telling the stay-at-home rifleman about how it is in the northern frontier of Kenya and in the Cassiar Mountains of British Columbia, whetting his appetite and spoiling his squirrel gunning. I have known fellows who saved their lunch, beer and cigarette money for three years so they could engineer the long dreamed-of hunt.

The best place for the shooting man on the face of this earth is Africa. No

other land can remotely touch the Dark Continent for quantities of game and for a variety of species. Some days on the safari you may count a thousand animals and do this without deliberately getting in the forefront of a seasonal migration. The critters will represent a dozen different species. Where else, I ask you, can you view such a spectacle?

The amounts of African game is well known and when the budget-hampered sportsman gets to pondering where most he would like to make his one-and-only big game expedition his mind usually swings to this land. I get letters from fellows who know it is pretty costly to essay the African gambit and they ask if there isn't somewhere in Africa that they might hunt a bit more cheaply. Maybe not go for a month which is the usual safari length, possibly give up the chance at all of the "Big Five" or agree to a hunt without all the frills of the conventional safari.

Let us look at this one for a moment.

The big outfitters of East Africa—the most popular hunting area—are not interested in the quickie hunt. They class a safari of a fortnight as a shorty. The game departments of such countries as Kenya, Tanzania and Uganda, have regulations which prohibit the taking of anything save the most common plains antelope on the short duration safari. Three weeks is considered the absolute minimum and then some of the companies assess their regular fee and add 10% to this. They distinctly are not interested in the poor cuss who wants to shoot for maybe a week or 10 days.

Many safaris are now staged in Mozambique, Botswana, Zambia, the Chad and other spots and the attitude about the abbreviated safari is pretty much the same. The outfitter has to pay his white hunters by the month. Likewise his native help in the shape of trackers, skinners, cooks, camp boys, drivers and the miscellany of other staff members have got to be paid. If he essays a safari for only a week or 10 days—or even as

long as two weeks—he is left holding the bag for the remainder of the month. He wants to program his safari season on the basis of month-long hunts and then all his people are fully occupied.

The cost of the safari has advanced, on the average, 10% every year for the past decade. A 30 day safari in Kenya today costs \$6500; it is the same in Tanzania, Botswana and Zambia. The full hunting license in Kenya is now an astounding \$3500! It is the same in Tanzania. If you shoot a really outstanding tusker in Kenya, an old bull with 100 pound teeth on the side, that is another thousand dollar bite. These prices are the very reason the average sportsman cannot seriously consider the African adventure.

But hold on. All is not lost. One of the best hunting areas on all the continent is Angola. This is in West Africa, the

colony belongs to Portugal, and in the southeastern corner, an extremely remote and highly fertile game area, the safari is encouragingly less costly. A 30 day safari costs \$4200. A 21-day jaunt is \$3380. This shortened hunt is plenty long enough to account for such highly desirable trophies as buffalo, lion, elephant, leopard, greater kudu, sable antelope, roan antelope, giant oryx, sitatunga, impala, eland, zebra, bushbuck, lechwe, reedbuck, tsessebe, waterbuck and lesser species. The sportsman does not pay any license costs until he gets the critter on the ground. This is the most generous game department in all Africa, most surely!

If this is still too much for the sport who must carefully nurture his nickels there is another most worthwhile dodge. This is South Africa. While you cannot shoot elephant, nor buffalo, and certainly not lion in this great country at the very southern tip of the continent, but you still may enjoy a most satisfactory safari. You may bring to bag such valued trophies as nyala, greater kudu, impala, bontebuck, eland, reedbuck, white-tailed gnu, blue wildebeeste, springbuck, warthog, bushbuck, vaal rhebuck and other species. The game is

Shotgunning for snipe, ducks and other waterfowl along the Caspian Sea in the country of Iran can produce "surprise" game as shown by this pair of hunters and their large wild boar. Note the tusks.

hunted during safari swings which may range from 3-5 days; or 6-10 days; or as long as 11-20 days. Two sportsmen, shooting together, may make the 6-10 day safari for a daily cost of \$90 each. Licenses are based on the game shot and charges are moderate. This shooting is in Zululand, reached via Johannesburg and Durban.

In Rhodesia, the sportsman may also shoot on a short time basis. There are safaris for 3-day, 7-day and 10-day durations. On the 3-day trek, he may shoot sable antelope, greater kudu and eland and along with these major species also impala and reedbuck. On the 7-day soiree he can gather in such other species as zebra, waterbuck, warthog, duiker and grysbuck. The 10-day safari is best. Besides the horned game he can go for lion, elephant and buffalo. This hunt, for two sportsmen, costs each \$135 daily. The 7-day hunt will cost each man \$145 daily; the 3-day mini-safari costs \$170 per day per man.

Australia attracts small interest as a hunting country. The average person concludes that about all the "Land Down Under" has to offer is the insipid kangaroo or a multitude of rabbits. This does not tell the whole story at all. In the Northern Territory of Australia an Irishman named Don McGregor puts on a bangup good hunt for Asian water buffalo, crocodile, wild boar, dingo, kangaroo, wallaby, water-fowl and if you also happen to be a Waltonian there is some of the best fishing. This full bag can be had with a bit of hustle in seven days. Our (Continued on page 64)



The Angola eland is one of the largest antelopes in Africa.



Jungle fowl in Madhya Pradesh, India, offers quite a selection.



GUNS and the LAW

SPECIAL POLICE COMBAT SHOTGUNS

PART 1



TO GET A standard police riot shotgun into a firing position from inside a patrol vehicle is like sex while standing up in a hammock,

Utilizing the pistol grip, the Remington or the Protective Devices Corp.'s stock reduction and conversion kits can be fired with deadly effect by using the hip firing or instinctive pointing method at close quarters or street range. Elbows smooth recoil.

nearly impossible. To extract a 40 inch riot shotgun out of the vehicle door from its carrying position during an emergency or potential shoot out, presents additional difficulties due to its bulk, overhung dashboards, curved windshields, radios, passengers and other equipment in the driver compartment and the size and hinging action of the car doors, etc. Many sportsmen who have tried to hurriedly extricate their rifles from a hastily parked car when a big buck has unexpectedly appeared on the roadside, will certainly appreciate this particular police problem.

Aside from the car carry to shooting situation, police also have other needs for a more concealable, and maneuverable, close quarter weapon with superior firepower and deterrent qualities to the handgun. Officers on stakeout assignments often need to hide the weapon or have need to use



In its folded position, the overall length of the firearm is reduced by 10 inches, from an overall length of approximately 40 inches to a legal 28¼ inches with the 18 inch riot barrel. Extension swings downward easily.



By COL. REX APPLIGATE



The Protective Devices pistol grip-forend conversion, installed on the Winchester Model 1200 police riot gun. The pointing qualities of the conversion are excellent. The pistol grip conversion is available to the public.

it from inside a parked automobile. Plain clothesmen on dangerous arrest or VIP protection missions can use such a weapon hung from the shoulder in a sling from which position it can be quickly brought into action inside buildings, on stairways, in corridors and other confined areas: In these situations shorter overall length and lesser bulk can make the vital difference.

There are two basic approaches to this problem. One major department, after having a number of roof signal lights shot off its patrol cars when the men were attempting to get the gun into action, spends precious training hours on this gun takeout aspect alone. Unfortunately, like police training in fast revolver loading techniques, few training programs pay any attention to this problem at all. Another solution is to equip the men with either specially designed shot-

guns or riot shotgun adaptations that will reduce the standard riot gun to a more manageable and still legal length.

A police agency can legally use any type of shotgun including "sawed off" or cut down models if properly registered with the US Treasury Department. However, due to the red tape involved, the varied personnel who may be issued the same weapon etc., almost all departments prefer to use weapons within the current legal dimensions that specify a barrel length of not less than 18 inches and a minimum overall length of 27 inches.

This series will cover new combat adaptations of the standard issue riot shotgun with 18-20" barrels and the conventional wooden stock. The subsequent article will cover specially designed shotguns either in the prototype or availability stage. Both of these approaches are based on the police usage of the military hip firing or instinctive pointing technique.

Remington Folding Stock Conversion

There are more Remington model

870 pump riot guns in police hands than any other model. This is either because of police preference for this very reliable weapon or due to low bid police procurement practice. The Remington Company has also been very aggressive and service oriented in its police sales program.

After some production delays, Remington is now making deliveries of its new folding stock conversion unit for the Model 870. The overall length of the weapon with pistol grip and a stock folding up over the barrel is 28 inches, as opposed to the 38-40 inch overall length of the standard wooden stock. This conversion unit can be locally installed in about five minutes by removal of the butt plate and long bolt that holds the wooden stock in place and utilizing a shorter bolt that comes with the folding stock unit. The pistol grip on the new unit enables a good instinctive shooting position at waist level. With the butt stock extension folded over the barrel, or with the stock extended, accurate aimed fire can be delivered. The stock is

(Continued on page 59)



The Remington Model 870P police shotgun with an open folding stock. The overall length of the extended position is the same as the conventional wooden stock version. Total firearm weight is 7 pounds, 10 ounces.

RX FOR TRAP RANGES



Pictured is a small section of a large trapshooting range where the management is quite good and large crowds of trapshooters attend virtually every shoot. The background on this particular range is ideal for shooters, but even poor backgrounds can be diminished in the eyes of a shooter if the management uses colored clay targets which will stand-out against poor background color.

By CLARENCE MASSEY

THOUGHTFULLY located on the fringes of a large metropolitan area, the new gun club was a beautiful example of everything held near and dear to the hearts of devoted clay target shooters. Wide cement walkways led from one end of the 15 trap lineup to the other. Cement sidewalks were at each trap and fresh, green lawns flourished between the concrete strips. Trap-houses were tastefully painted to match the decor of the spacious clubhouse and dining room. An elevated platform for posting scores was in front of the clubhouse and a large squad numbers platform was mounted over the sidewalk so that shooters could see the squad numbers from either end of the trapline.

An elaborate loud speaker system ran the entire length of the trap range and floodlights had been installed

over the centrally located traps. Drinking fountains, gun racks and trash cans were conveniently located along the sidewalk and comfortable benches for spectators were always nearby. In short, every convenience had been provided for the shooter. On opening day the huge parking lot at the new range had been filled to capacity. The management received many compliments upon the thoughtful layout of the new gun club and a bright future was seen by all who attended opening day festivities.

Nevertheless, five years later and in spite of the growing army of new clay target shooters across the nation, the plush gun club seldom had a well attended shoot. Why? Let's listen in on a couple of trapshooters as they discuss the poor attendance at a recent shoot.

"Where is everybody?" asked a relatively new trapshooter. "This is a



Shooters have steered clear of this range because of the poor background. They couldn't see the target!

registered trapshoot and I thought there would be at least 20 squads here today. Instead, I only see about eight squads listed on the scoreboard."

"Most of them are up at Countrytown Gun Club," replied a grizzled old trapshooter. "I'd be up there too if I had the time to make the drive. Now, that's a real gun club."

"But that gun club is over 200 miles away," said the new shooter. "I wouldn't think that all the shooters that live near here would drive all the way to Countrytown just to compete in a registered shoot when there's a registered shoot right here close to their home."

"Well, there's more to a gun club than it's geographical location," replied the veteran trapshooter. "Trapshooters are a temperamental and fussy group," he continued. "If they aren't treated courteously and made to feel that their business is appreciated, they just won't shoot at that club very often." And then, warming to his subject, he added, "There's more to it than that too. For example, trapshooters are an impatient lot. When they come to a shoot, they want to

shoot . . . now! They don't appreciate having to stand around for an hour just waiting to shoot a practice round or two."

"Why, just this morning I signed up for a practice round and had to wait almost an hour before I could shoot. And there's hardly any shooters here either. There's just no excuse for such sloppy management."

"And another thing," he continued. "Trapshooters don't like sloppy or lazy trap personnel either. After I finally got out on the trap field, I had three slow 'pulls' just because the trap boy was half asleep. Other fellows in the squad were getting them too. There was just no excuse for it."

"I noticed that myself when I was shooting this morning," replied the new shooter. "I thought that maybe I wasn't calling loud enough."

"No, it was just the poor trap help," replied the veteran. "The management doesn't keep them on their toes and they goof off."

"I thought the club up at Countrytown was just a small club," said the new shooter. "I've never been up there but someone told me that they only

had eight or nine traps up there."

"That's right," replied the veteran. "But they know how to run a trapshooting club. They always start the shoot on time, keep it moving right along and run as many shooters through their eight traps as this club does with twice as many traps. And not only that," he continued, "if you want to drive your camper up there and stay overnight during the shoot, you can park it right on their club grounds. They even provide an electrical hookup for your camper or trailer and there's no charge either."

"Furthermore, during every shoot there's a big dinner or barbeque held at the clubhouse after the day's shooting is over. And they always plan something for the shooter's ladies to do during the day. Usually they charter a bus to see some of the local sights or sometimes the local women get together and take the guests (and they are treated as *honored* guests) to a party, fashion show or some other activity that women will enjoy. You never hear of anything like that around here. All they do here is to scowl and

(Continued on page 47)

A small two trap shooting range. Because of the limited space, registered trap tournaments are impossible, but still the club attracts good crowds of shooters.



The LEE-ENFIELD RIFLE

By E. G. B. REYNOLDS

WHEN IN 1888 a Lee-actioned magazine rifle was approved for the British armed forces it marked the introduction of a weapon destined to play a versatile role, both warlike and peaceful, in many parts of the world. It was the first magazine rifle ever to be issued to the British Services and it met with opposition from some of the military critics who had been asked to give their opinion as to the desirability of adopting such a weapon. Some feared it might lead to careless shooting and waste of ammunition and one stated that "our Martini-Henry rifle is the best of its kind, but our men require more frequent practice and very careful training: they require no magazine gun." Fortunately, wiser counsels prevailed and, fitted with the shallow-grooved Metford barrel, it soon became popular with the

British forces, particularly for its greater accuracy at long distances than that of its predecessor. It was considered to give effective results up to 2,000 yards.

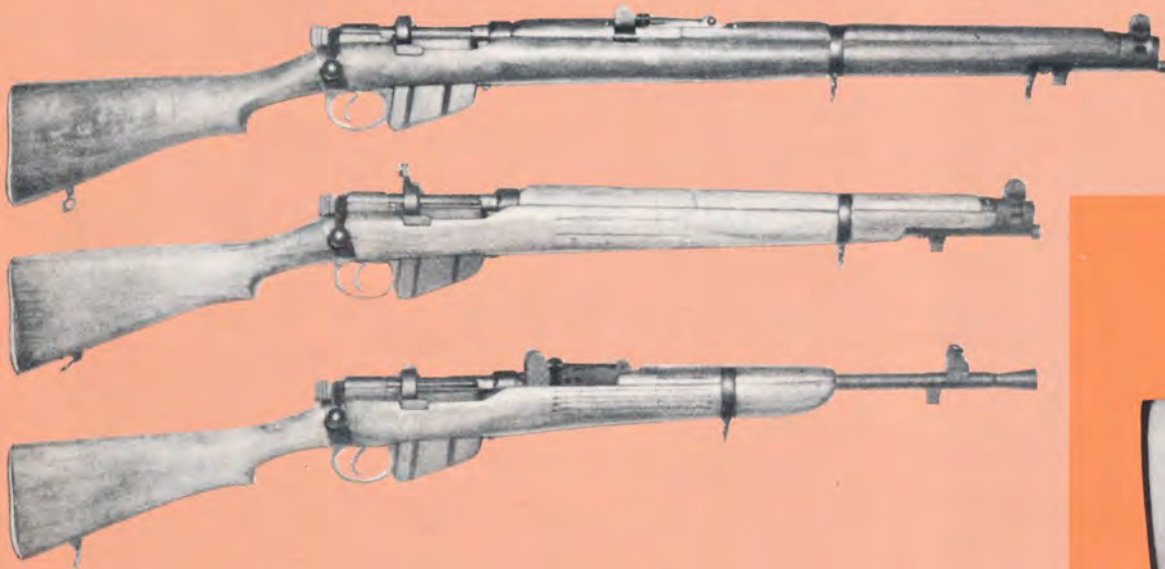
In 1899, the introduction of a cordite charged .303" cartridge posed a serious problem. Excessive erosion of the "lead" caused by the high combustion temperature of nitroglycerine greatly reduced barrel life and the solution was found in a barrel with deeper grooves and wider lands designed and made at the Enfield Royal Small Arms Factory. Thus was born the Lee-Enfield Rifle and it lasted as the British Service arm—with modifications from time to time—until it was superseded by the 7.62mm Self-loading Rifle soon after World War II.

It got off to a bad start in the South African campaign largely owing to incorrect sighting. The method in vogue

of determining the sighting of Service rifles had been to make them all conform to a sealed pattern on which the 'line of sight' had been the mean of a number of trial rifles, the special characteristics of individual rifles being completely ignored. Many Lee-Enfields were returned to England for rectification and Government factories were engaged day and night—Sundays included—turning out new pattern slides for the leaf backsights. This led to an important change in British Service rifle inspection and the introduction of an accuracy test for every weapon on much the same lines as practiced today.

Now a very accurate rifle, it was considered too long for use by the cavalry who had hitherto been armed with carbines. A compromise was eventually effected. A number of rifles were modified—shortened and lightened—and the Short Magazine Lee-En-

Pictured at the top is the No. 1 Mark 3 Rifle which was used by the Australian Forces. The center photo illustrates the war-time shortened and lightened version of the No. 1, which was not adopted. The bottom rifle is the adopted version of the No. 1. It has been shortened and lightened considerably for its role in jungle warfare. This new adaptation was not produced in large numbers, however, owing to the end of the war.





The No. 4 Lee-Enfield remodeled and fitted with a telescopic sight for the British sniper. Note the add-on comb to aid sighting.



The No. 5 Lee-Enfield, which was specially designed for jungle fighting. The rifle proved to be a most effective weapon in that role. Note the attached flash eliminator. The No. 5 was the only Enfield to be fitted with such a device.

field, affectionately known to many thousands of British and Empire troops in the First World War as the "Smellie," came into being and remained in service for over forty years. It was also made in Australia and India, and frontier tribesmen made excellent "Chinese copies" of Lee-Enfield rifles by very primitive methods of manufacture, though often falling down on the identification stampings. Examples of this were the letters "V.R." on rifles made many years after the death of Queen Victoria, thus showing complete ignorance of what they stood for. Easy handling and bolt manipulation of the Lee-Enfield enabled instructors at the British Small Arms School to fire up to forty aimed shots in a minute, and the well trained British Expeditionary

Force at the beginning of the First World War led to a German supposition of many machine-guns when, in point of fact, they had very few.

Shortening the rifle had, however, greatly impaired its accuracy and when it replaced the Long Lee-Enfield for target shooting it became extremely unpopular with Bisley marksmen, to such an extent that the British National Rifle Association had to increase the size of the bulls-eye for short ranges—from 200 to 600 yards. Thanks to its 'compensating' feature at around 1,000 yards, long range accuracy with the S.M.L.E. has always been reasonably good. Normally the bullets left the barrel during an upward vibratory movement, the faster ones at a lower point in the barrel's movement than the slower ones. The

point at which the trajectory curves intersected being the 'compensating range' of the rifle. The grouping capacity was naturally better at this distance than at any other as the effect of velocity variations—which were considerable with British Service ammunition—were eliminated. At short ranges the rifle's light whippy barrel gave very scattered shooting until a few civilian gunsmiths, notably Arthur Fulton, one of Great Britain's leading marksmen and a wartime sniper of great repute, developed a technique of controlling the barrel vibrations by bedding the barrel in the stock fore-end by means of strips of cork and similar material. Greatly improved accuracy led to the return of the 5-inch bulls-eye at 200 yards in 1928.

Towards the end of the First World



The latest version of the Enfield, which has been dubbed the "Enfield Envoy." The rifle embodies the No. 4 Rifle action, The No. 8 Rifle woodwork and has been fitted with the Enfield heavy "Target" barrel and equipped with Match sights.

An E.Y. (Emergency) S.M.L.E. Rifle shown after it has been strengthened and fitted with a cup discharger for firing grenades. With the rifle loaded with a ballistite cartridge and kept at an angle of 45 degrees, grenades could be fired with fair accuracy up to 200 yards. Required ranges were met by adjusting a gas port which was fully closed for maximum distance.

The "Charlton" semi-automatic adaptation of the Short Magazine Lee Enfield. This rifle was manufactured in limited numbers in Australia when machine guns were sorely needed in the early years of the Second World War. A number of these rifles were manufactured, but increased production of the British Bren L.M.G. led to a curtailment of the project.

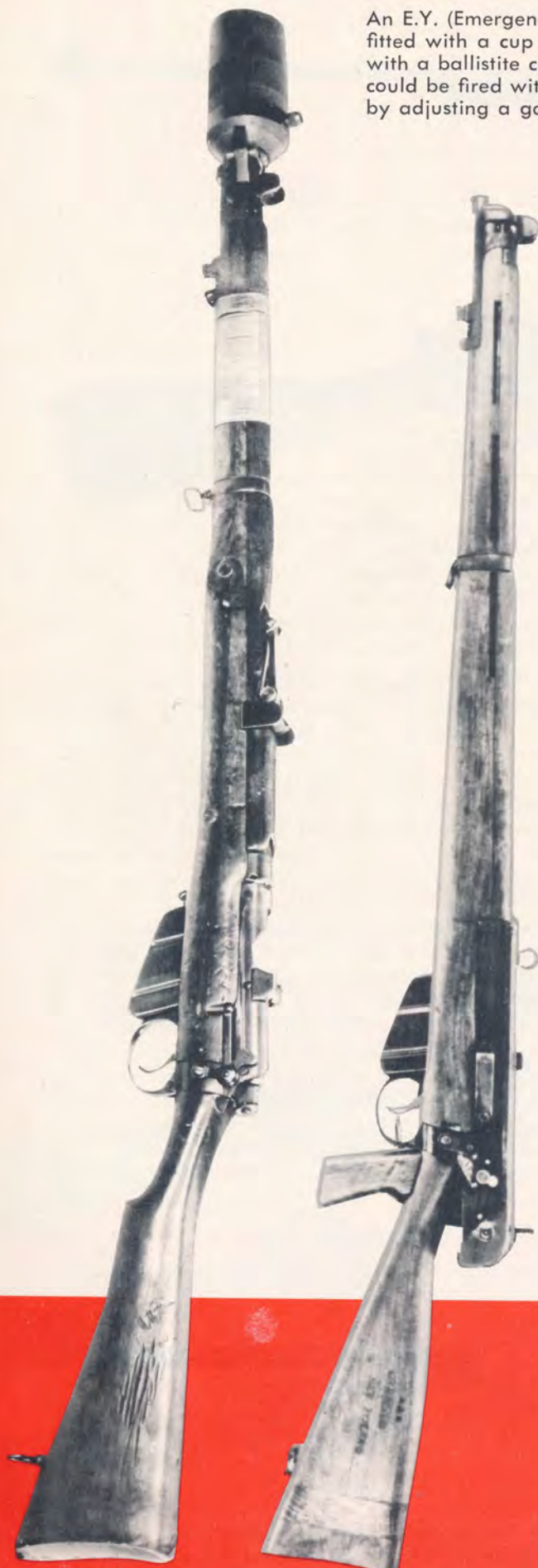
War the Short Lee-Enfield successfully fulfilled another role, that of firing grenades. For this purpose a number of rifles were strengthened by binding the front hand-guard and fore-end with whipcord or copper wire to avoid splitting when grenades were fired from a cup discharger fitted to the muzzle end of the barrel. A number of rifles were also fitted with telescopes and other optical sights for snipers, but were not particularly successfully.

In Australia, the Short Lee-Enfield was fitted with a heavier barrel for snipers and later for target shooting. It proved a much more accurate rifle than the British version and was in production until 1955. In 1942, a call came from the Australian Forces fighting in New Guinea for a lighter rifle for jungle fighting. Experiments took place with lightened and shortened rifles and two different models were produced at the Government Lithgow Factory. An interesting development with the Australian S.M.L.E. also took place in 1942 when attempts were made to convert the rifle to automatic fire. To a design by Mr. Charlton, a resident of New Zealand, a number were successfully converted but increased production of the British Bren L.M.G. led to curtailment of the project.

Between the two World Wars, many experiments were carried out with the Lee-Enfield with the object of producing a rifle which would better lend itself to mass production in an emergency and at the same time give better accuracy. Eventually a Mark V Rifle was developed to which earlier patterns could be converted, and this was fitted with an aperture backsight in place of the open leaf backsight which had been fitted to all earlier models. Subjected to troop trials and tried out at Bisley—where it was not well received—it was not adopted but was superseded by a new design with heavier barrel which eventually became the No. 4 Lee-Enfield, to which earlier patterns could not be converted. This rifle gave much better accuracy and remained in the British Service until the introduction of the Self-loading Rifle after the Second World War.

During the Second World War the No. 4 Rifle was in mass production in England, Canada and the United States and several million weapons were made for the British, Commonwealth and Allied Forces. A number were fitted with telescope sights

(Continued on page 54)



THE MINI-MATICS OF FRANCIS PFANNL

by JAMES B. STEWART



The 2.7 mm. Kolibri shown in a late-type case as it probably appeared in jewelry and novelty shops in Austria.

WHEN THE names of Samuel Colt, John Browning, or Paul Mauser are mentioned the mind almost immediately conjures up one of the arms designed by these famous men or manufactured by the companies with which they were associated. The mention of the name Francis Pfannl in a group of gun buffs would, in all likelihood, elicit only blank stares. Pfannl has remained virtually unknown although he produced some of the most unusual pistols of the 20th century. He was a native of the small village of Rehberg in lower Austria and was by training a watchmaker. He set up his weapon and cartridge manufactory in the near-

by town of Krems on the Danube about 1911 and proceeded to produce an amazing line of miniature automatic pistols.

Pfannl was a man of considerable genius not only as a gunsmith but as a machine designer as well. The microscopic size of the cartridges that he produced required that he design and build his own specialized machinery for manufacturing them. The first of these cartridges was essentially a copy of the then recently famous 6.35 mm. or 25 ACP Browning cartridge scaled down to 4.25 mm. Although a completed round was less than one-half inch long the superfine-ground smoke-

less powder within it managed to propel the miniscule full-metal-cased 13 grain bullet at 800 feet per second.

The pistol for this round is one of the most unusual looking that has ever been produced. Its strange profile came from the conflicting necessities of providing a reasonable grip and of locating the tiny five-shot magazine in the proper relationship to the action. The result of this compromise leaves the grip sticking out from the rear of the frame at a most unusual angle. In order to minimize tooling costs it is constructed of a machined, cast frame with a removable side plate and a hinged assembly housing the recoil spring and



The 2.7 mm. (right) and the 3 mm. Kolibris. The 2.7 mm. is shown with three rounds of ammunition and the optional "coin purse" holster. The 3 mm. Kolibri is shown with three rounds of ammunition, the fragmentary remains of a 50 round cartridge box. Note the original cleaning rod sold with the pistol.

Production apparently started late in 1911 and roughly the first 2000, assuming serials start at one, carried no identification except the serial, a four-digit number located in the magazine well. On the grip tops, these early pistols have a P superimposed on a reversed F, obviously Pfannl's initials. Later examples carry the word "ERIKA," the name by which this pistol is most commonly known, on a band at the top of the grips in place of the initials. Serials of this version have been observed up to approximately 4000. These pre-World War I Erikas were apparently considered novelties and were not required to be proofed or to meet the infamous "18 Centimeter Law." This typically misguided legislation required that all firearms sold in Austria have a minimum overall length of 18 centimeters (about 7 inches).

barrel. The action is of the concealed-hammer type and has the lockwork mounted on pins pressed into the main frame casting. The complete arm is 4.85 inches long over all and has a barrel length of 2.17 inches including the chamber. Although the barrel has six-groove rifling, there is, strangely enough, no twist. From this it must be concluded that the bullet tumbles rather badly in flight. A hammer-blocking safety is located high on the left side and the magazine is released, via a linkage, by a button on the rear grip strap.

When production of the Erika was recommenced after World War I some major changes were made. In order to make the arm more appealing it was compacted as much as possible. The barrel was shortened one-half inch and the grip frame was shortened as much as it could be and still mount the original hard rubber grips without their interfering with the operation of the safety lever. Even with these revisions the Erika was apparently not well received and only a small quantity were manufactured between 1923 and 1926. Strangely enough these postwar guns were required to satisfy the Austrian firearms laws and all will be found with, in addition to their serial numbers which are generally three digits preceeded by a letter, a four-digit Vienna proof house number followed by the last two digits of the year of proofing. Unlike the serial, this number is stamped on the outside. The postwar arms, if for sale in Austria, were also required to meet the 18 Centimeter Law and will be found with a counterbored threaded area at the muzzle in order that an extension tube could be screwed on in front of the barrel to increase the total length of the pistol. Some of these postwar pistols also appear to have brass barrel inserts, perhaps to forestall corrosion in the hard-to-clean bore. Prewar guns were sold only in blued finish but the postwar version could be had in matte nickel as well.

Clearly the Erika did not survive long and was not a commercial success. Its major claim to fame came after its demise when August Menz of Suhl, Germany, adopted the 4.25 mm. cartridge for his famous "Liliput" automatic. Indeed, so much more famous is the Liliput than the Erika that the cartridge itself is now known as the 4.25 mm. Liliput.

Not content with the size of the 4.25 mm. round Pfannl shrunk it, this time to 2.7 mm. Amazingly he still retained the full-jacketed bullet and center fire case although the case was now only .141 inches in diameter and .368 inches long. As no proper smokeless powder could be found to propel the 3.1 grain bullet, very finely ground black powder was used.

The pistol to fire this round is the smallest production auto that has ever been made. It was christened with the Austrian name for the hummingbird, Kolibri, apt indeed for an arm which is only $2\frac{3}{4}$ inches long and weighs a scant $2\frac{1}{2}$ ounces. This seven-shot midget was brought out by Pfannl shortly after the introduction of the prewar Erika, apparently in a search for an even better novelty.

The Kolibri uses a dual sideplate construction and the same barrel and recoil spring system as the Erika, but because of its smaller size it is striker fired and has no trigger guard. Its six-shot magazine, like that of the contemporary Clement, has a bottom knob rather than a toe

on the floorplate for gripping and has a pull-out release on the rear gripstrap. The back end of the striker protrudes as an indicator when the action is cocked and the sear can be locked by a safety located on the right side of the frame.

The major parts carry the usual European assembly numbers. Kolibris were not otherwise serialized nor were they proofed. From the known assembly numbers and the frequency of repeats of these numbers at least several hundred were made but the actual total quantity is unknown. Interestingly enough they seem to be more frequently encountered than the Erikas. The hard rubber grips bear an overlapping FP in an oval at the top and the right grip carries a banner at the bottom with the word "KOLIBRI."

The 2.7 mm. Kolibris were produced in two barrel lengths, $1\frac{3}{8}$ th and $1\frac{3}{16}$ th inches, and were sold in small fancy "jewelry cases" complete with a cleaning brush and a small tinned copper box containing twelve rounds of ammunition. The first cases were made of cardboard, rectangular and covered in brown leatherette. They display the left side of the pistol and are lined in tan plush. The silk liner in the hinged lid reads "Francois Pfannl" over "Krems A/D Austriche." Later cases are roughly trapezoidal and covered with an art nouveau-patterned paper in violet. The right side of the pistol is displayed and the plush lining is purple. (Continued on page 58)

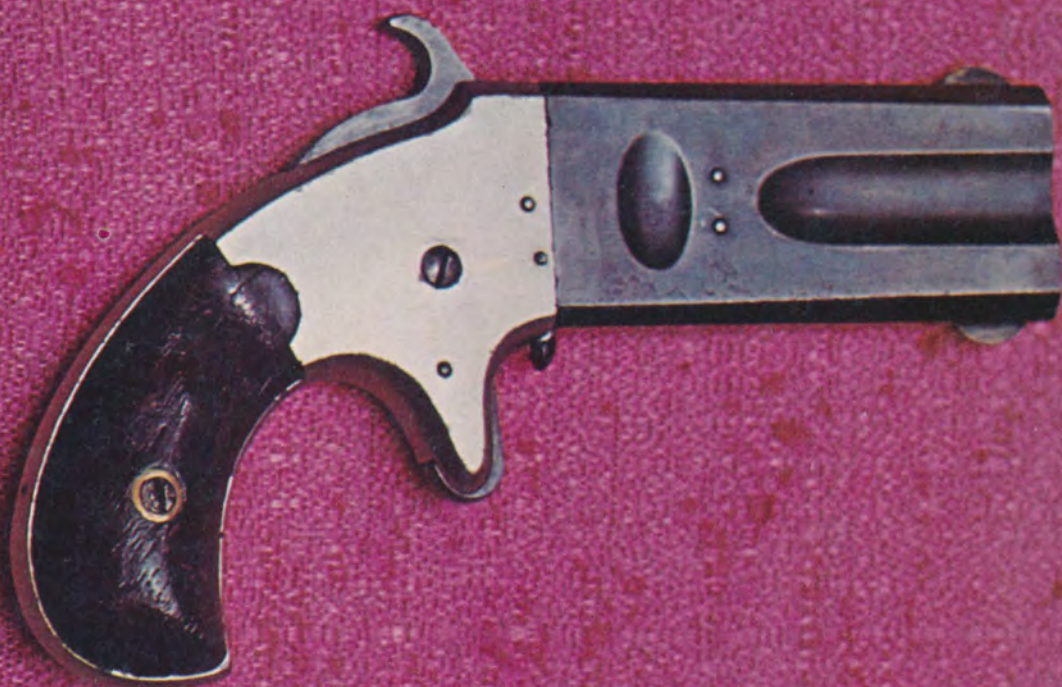
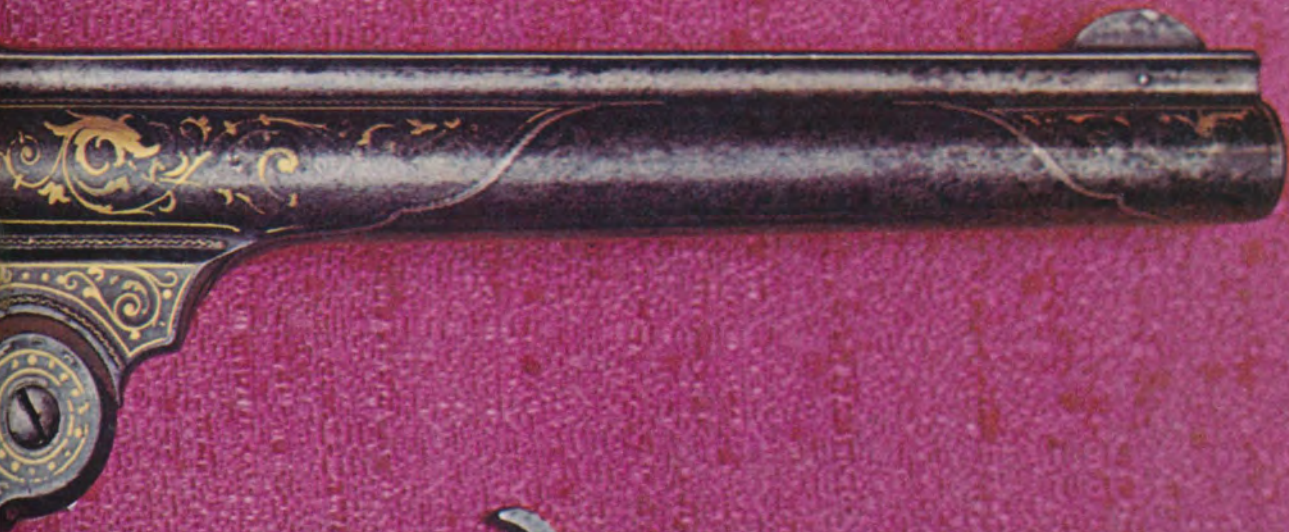
Pre-World War 1 (right) and postwar Erikas are shown with four rounds of 4.25 mm. ammunition and for comparison, a .45 ACP cartridge. Smokeless powder propelled the miniature round at 800 feet-per-second.





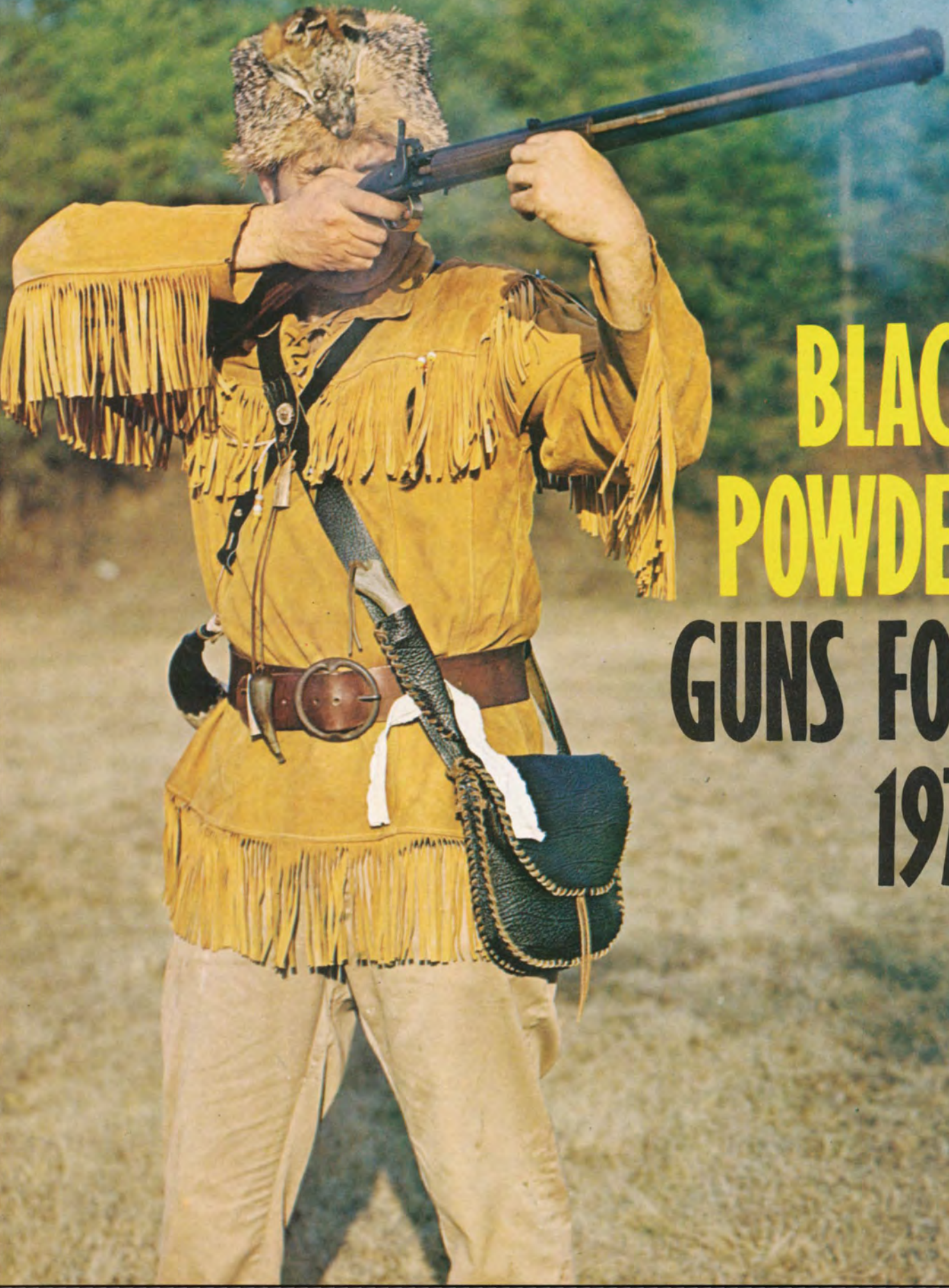
Guns Color Gallery

Top: An ornately engraved copy of a Smith & Wesson made by Obrea Brothers of Spain. S&W stopped the importation of such imitations in 1922. Center: A Wheeler double-barrel pistol by American Arms, a rim-fire. Bottom: An English percussion knife pistol by James Rogers. From the collection of W. R. Williamson; photo by Edward McKin.



A member of the Southern Indiana "Long-hunters" club fires the new Esopus Turnbarrel muzzle loader. Black powder shooting is taking the nation by storm.
Photo by DeMotte H. Little.

BLACK POWDER GUNS FOR 1973





Parker-Hale introduces their 1861 Enfield Musketoon, made with the original hand-made gages. Each gun comes with a 40 page handbook taken from the original 1859 manual.

By BOB TREMAINE

FIFTEEN OR twenty years ago, the fellow who used a black powder gun for paper punching or assaulting innocent tin cans was considered somewhat of an odd-ball—you sort of glanced at his feet to see if he wore spats or high button shoes. Well, the spats have not returned as yet, but the high button shoes have, and today the fellow who doesn't own at least one black powder replica is considered a heretic.

The unprecedented growth of the number of fellows who shoot black powder guns has led to some interesting developments. For instance, if you have never seen a trap squad busting clays with black powder shotguns, you have missed something that is at least as thrilling to see as a shoot-off at the Grand American. I witnessed such black powder claybird shoots last year at the Williams Gun Sight range and now shoot clays in my backyard with a muzzle-loading double and have even dumped a few quail around my place last fall with the same scattergun.

While some of the restrictions governing ammo purchase seem to be on their way out, black powder dealers are still saddled with shipping and storage restrictions. Thus, the hottest news in this area comes from Val Forgett of Navy Arms and from Germany.

German shooters also have gone overboard for black powder shooting, and while they also have to be content with some gun regulations, powder restrictions are much more lenient, including those covering black powder. The Dynamit Noble concern, at the request of Val, is now producing black powder cakes, each cake equalling a pre-determined rifle charge of black powder.

These cakes can be shipped the way your Aunt Myrtle sends you her annual gift tie—by mail. You can now buy your black powder musket shooting pre-packaged! There will be 50 powder cakes and an equal number of pure lead balls and greased patches in each package. The .36 caliber package sells for \$4.50, the one for the .44's goes for \$5.40. Unlike the black powder you and I are used to, this R.W.S. stuff appears to be inert to handling. You simply use your ram rod to shove a cake of the suitable caliber down the bore, then seat a patched ball, put a non-corrosive cap—yes, I said non-corrosive cap which also comes from R.W.S. via Navy Arms—on the nipple, take aim, and touch her off.

This package deal is the ideal solution for the fellow who can't store any amount of black powder in his apartment or for the guy who shoots his charcoal burner only once in a while. Moreover, the occasional shooter also saves the trouble of casting balls and lubing patches.

While on the subject of making it easy for shooters, Numrich Arms is now offering beautifully cast lead balls in many calibers.

Thompson/Center is giving their customers a choice. You can buy any of their three black powder guns with or without the accessory pack that contains everything but the powder and the caps to get you set for a session at the range.

Before getting into a discussion of new guns and while on the subject of accessories of the more unusual kind, for the fellows shooting a .58 caliber musket, there's a new mold delivering a 275 grain hollow base Minié ball from Ohaus Scale Corp. Other new sources for molds for

Pictured is a Ruger Old Army Percussion revolver. Based on the "Blackhawk" frame in .44 caliber, it was found to be very accurate and functioned smoothly. It lives up to the Ruger name.





Rocky Mountain Arms Corp.'s new breechloading black powder rifle. The rifle utilizes paper caps for percussion and standard lead shot. The target shows a nine shot group fired by its designer and creator Dick Casull, at 50 feet from a sand bag. A tenth shot was not fired because Casull feared of ruining a good looking group.

black powder balls are Shiloh, offering the Black Thunder molds, and Dick Lee of Lee Engineering now also is in the mold business.

One more non-shooting item is of interest and importance. It is the Muzzle Unloader which, thanks to a small CO₂ cylinder, literally blows out stuck balls, even when tightly patched, powder charges, and even entire loads when the Muzzle Unloader is seated tightly over the nipple. The Unloader works equally well with shotguns, muskets or rifles,

Inasmuch as the first replicas to make their appearance back in the late 1950's were copies of Sam Colt's guns, and Colt replicas made abroad still win popularity contests, it was only a matter of time and tooling before Colt introduced the 1851 Colt Navy. Beautifully made with excellent workmanship, the non-presentation gun has proved to be very accurate on the range. For those who always had a hankering to shoot a gun with the real Colt marking, here's a bit of a bonus. Guns are marked "ADDRESS SAML COLT NEW YORK," just like the original!

Turner Kirkland who heads up Dixie Gun Works has been a busy

man. At the latest count, there are no less than eight new guns in the Dixie catalog which really is no longer a catalog but a fairly hefty book. Space limitations preclude a discussion of each gun but this brief rundown will give you an idea or two about these guns. The Deluxe blunder buss is a real beauty, and yes, you can shoot her. All of these guns are shooters of course, although some of the highly engraved models, such as the gold Damascene guns, might best be put under lock and key in a suitable display case or cabinet. There is a wheel lock Courier pistol, another piece of yesteryear Kirkland has a nicely made and engraved Harpers Ferry flintlock pistol and the brass framed derringer is indeed a gun to be proud of.

Galef and Son have long imported firearms, but recently they added a domestic .45 caliber muzzle loading rifle to their line. This turn-barrel rifle shoots extremely well and the over/under barrels allow you a fast second shot by simply rotating the twin tubes. This muzzle loader has hunting capability and is very well finished.

Harrington & Richardson offer this year the (Continued on page 62)

Thompson/Center's new flint lock "Hawken" offers black powder shooters a good replica and is highly dependable. The rifle is intended for serious shooting, in .45 or .50 caliber.

POINT BLANK

By COL. CHARLES ASKINS

BY THE TIME that you read this, the Grand American Trapshooting Tournament will have been completed. The tournament was during the latter part of August, from the 18th through the 26th, at Vandalia, Ohio. It was the 73rd reunion of the Grand and the 48th time it has been fired on the Ohio grounds. During the first Grand, fired on Long Island in 1900, there were 85 competitors. Last year, the 72nd tournament attracted more than 4,000 entrants and the Grand itself, drew in three thousand.

Shooting at targets tossed from a trap is a hundred years of age. At first the gunners banged away at a variety of targets. Glass balls were widely used and some of these released a shower of feathers when hit. George Likowsky, an obscure Cincinnati machinist, is generally credited with whumping up the first target which resembled those in use at Vandalia today. It was saucer-shaped and made of a combination of powdered limestone and pitch. Not only did the inventive tool and die maker develop the first really satisfactory claybird but he also put together a trap to throw it.

Sometimes wars and other mundane affairs have interrupted the firing of the Grand to some extent, but not so seriously as to prevent its firing. Even when shells were virtually nonexistent, as occurred during both our World Wars, the enthusiasts managed to scrounge enough cartridges to hold the anniversary tournament.

Trapshooting in the U.S. and Canada is under the sponsorship of the Amateur Trapshooting Association which maintains its headquarters at Vandalia and has Hugh McKinley as its manager. Hugh calls in Ron Peters, a localite with a remarkable ability for organization (Ron is a school principal) and he labors mightily for a 30-day period to catch up all the loose ends incidental to the staging of the shotgunning extravaganza.

If you don't believe that organizer Peters has a man-size chore cut out for him just contemplate for a moment the size of his task. He has a shooting grounds which encompasses 125 acres on the edge of the town,

containing a firing line which stretches for 6600 yards—that's a mile and a quarter—with 53 trapfields, a main club house and an office, with a huge cafeteria adjoining, target houses, a locker room, a building which usually is given over to sandwiches and snacks, and the caretaker's home. There is space in the parking lot for 320 campers and trailers and of course all must be provided with lights, water and sanitary facilities.

There is always a commercial row at the Grand and here the manufacturers set up their tents and show off all the guns, loads, shooting jackets, brassards and the other items, including of course, all the reloading tools, for the entertainment and edification of the attending enthusiasts. All this and more Ron Peters, erstwhile schoolmaster, must oversee.

When the great day approaches, Peters has by this time a grand total of 480 persons directly under his command. The organization must smoothly and efficiently handle the seventeen events which usually compose the full program. A shooting stint which goes on continuously for nine days, with a total of very close to 16,000 entries. An event which will see 2,000,000,000 targets thrown and an equal number of shotshells burned up. Every target load on the market is offered at the Grand and many of these are imported. Someone counted the various brands and variations last year and found there were more than 70 different loadings.

Peters' organization must classify and handicap some 4,000 shooters, see that these gunners are smoothly and promptly squadded to one of the 53 trap fields, just as efficiently release the target, score the result and post the standings after the event is finished. There are awards of more than \$50,000 worth of trophies all of which are done before the ninth and final day of the powder-burning. Along the way the organization must serve some 50,000 meals, settle all squabbles, disputes and protests, and not forget the ladies, kids and non-shooters who tag

(Continued on page 54)

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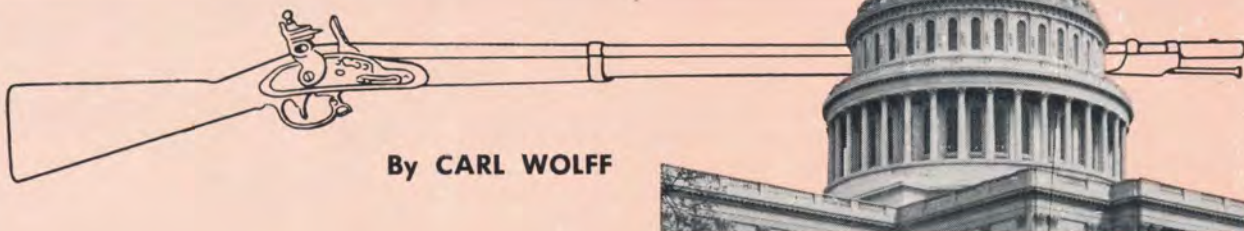
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OUR MAN IN WASHINGTON



By CARL WOLFF

Following the shooting of Gov. George Wallace, there was on Capitol Hill what must by now be called the usual cries for additional gun controls. The anti-gunners are clearly out to outlaw the handgun.

In the Senate, the Juvenile Delinquency Subcommittee of the full Judiciary met in executive session and agreed to move forward a bill giving authority to the Treasury Department to say what handguns may or may not be sold to the public. In the House side of Congress, Subcommittee No. 5 of the full Judiciary Committee announced public hearings on the subject of additional gun controls.

The key issue in the Senate is whether a bill by Sen. Birch Bayh (D., Ind.) or one by the shooting sportsman's friend, Sen. Roman Hruska (R. Neb.), will move forward. Under the Bayh bill, the Treasury would have the authority to outlaw any handgun not found by the Department to have a "sporting purpose." This is the standard now set for imports. There is currently no such standard set for the manufacture of handguns in the United States. Under the "sporting purpose" definition set for imports, size is important. The small self-defense type handguns are outlawed. There are a number of quality domestic handguns which could not be sold to the public should the import standards apply. Under the proposed measure by Sen. Hruska, the Treasury could have a clear directive to regulate against poor quality for both foreign and domestic handguns. The smaller quality built handguns would be permitted to be sold.

The difference between the Bayh and

Hruska measures is important to all owners of both longguns and handguns. Either Congress recognizes that self-defense is a valid reason for owning a firearm or it is not. There is another problem with the Bayh measure. Just what is a "sporting purpose?" The Treasury has already decided that size is important in defining a "sporting purpose." Backpackers, those who carry a snake gun while fishing, and target shooters can argue that the smaller the firearm the more it meets the needs for a "sporting purpose" handgun.

Consider, backpackers who travel in the wilderness frequently carrying a handgun. When ounces count, these guys have been known to cut the handle off their toothbrush. The snake gun, a handgun loaded with shot, is a more effective close-range weapon if the barrel is short, but the target shooter can clearly show that the shorter the barrel the more difficult it is and thus the more sport.

Whatever happens in the Senate, it is in the House that the biggest anti-gunners will come out for blood. There will be some sniper fire on the Senate floor, but when the House Judiciary starts to legislate all hell will break loose.

Chairing both the Judiciary and Subcommittee No. 5 is Emanuel Celler (D., N.Y.), and the ranking minority member is William McCulloch (R., Ohio). These are the same two lawmakers who crammed the ammunition record-keeping requirements into the 1968 Gun Control Act.

First, we will have public hearings; it is safe to say that the anti-gunners have the ear of Emanuel Celler. Witnesses opposing (Continued on page 58)

RX FOR TRAP RANGES: MANAGEMENT HELPS ATTRACT CROWDS

(Continued from page 33)

take your money. They seem to think they are doing you a favor to allow you to shoot on their fancy trap range. I'd much rather go to the Countrytown Gun Club. I always seem to have a lot of fun when I attend one of their shoots."

"Gee, I'll have to go up there to the next shoot," replied the new shooter. "I didn't realize there was so much difference in gun clubs."

And so we leave the disgruntled veteran and the naive, new trapshooter on the hard bench always occupied by shooters waiting a chance to shoot a practice round at a poorly managed gun club.

But what really makes or breaks a gun club that caters to clay target shooters? Is the disgruntled veteran justified in his complaints or is he merely a victim of the cynicism so common to older men? Is the younger man getting full value from his trapshooting experience and has he been satisfied merely because he is so ignorant of just how much fun a registered trapshoot can really be? Let's examine a few of the pros and cons about gun clubs from the trapshooter's angle.

First off, shooters like to break good scores when they are shooting. It is a basic premise that in order to shoot good scores, the shooter must be able to see his targets clearly. And so it should go without saying that the background behind the air borne clay target should be uniform and should contrast with the color of the target so as to obtain maximum visibility. It is surprising how many trap ranges have poor backgrounds. Ideally, of course, the background should be a clear blue sky. Unfortunately, this is often hard to obtain, especially when you consider that the shooters should also face as near north as possible so as to avoid looking into the sun while shooting.

So when the planners of a trap range lay out the traps, they have several very important points to consider. Usually they have to make compromises in order to fit the trap range into the physical properties of the acreage available to them. It's a rare range that can meet the ideal conditions.

Nevertheless, the management of a well run trap range can help diminish the effects of a poor background by using targets that will contrast in color with the background. In some cases where the background consists of dark trees or other somber background, white targets or even the relatively new fluorescent orange clay targets should be used. In other locations where the background is light colored or perhaps covered with snow, the use of all black targets is called for by the astute gun club manager.

The gun club with a mottled background consisting of light and dark patches has a real problem. If the gun club manager throws either white or black targets, he will have complaints. If the club cannot afford the higher cost of fluorescent orange targets the management will have to work extra hard to be sure that other features and services of the club are outstanding. There's no doubt about it, a poor background is a real handicap but sometimes the shooters will come anyway because of the club's friendly management and excellent trap personnel.

It's pretty well established that registered trapshooting is an expensive hobby for the ordinary working man. To compete regularly in numerous shoots in just one state can take a pretty good bankroll when you consider all the miscellaneous expenses that accompany each sojourn to a major trapshooting tournament.

Therefore, any little thing that the host club can do to ease the financial burden for the visiting shooter is usually well appreciated. Hence the growing popularity of free overnight parking privileges for shooters that come in campers or trailers. By parking on the gun club grounds all during the shoot, the shooter has the convenience of always being on the grounds and also saves the expenses of several nights lodging in hotels or motels.

The planning of some kind of entertainment for the visiting shooter's lady is another nicety that makes for good feelings toward the gun club. It doesn't have to be much, just a little something to break the monotony for

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family members while they wait for their trapshooter to finish shooting.

It is true that trapshooters are a notoriously impatient and nervous group when they come to a trap range. They come to shoot and they want to shoot right away. They shoot fast and they shoot a lot. Much more than the average skeet shooter. It is not unusual for a trapshooter to fire at as many as 500 targets in a single day. Usually this consists of a hundred 16 yard targets, 100 handicap and 25 or 50 pair of doubles in the registered events. Of course, there are numerous practice rounds fired before each event and if the shooter has a good day, he may become involved in a shoot-off for a tied score. If the tie score is for a 16 yard event, the shoot-off may become a prolonged affair perhaps lasting longer than the original 100 target event.

So the inveterate trapshooter becomes impatient when he has to wait very long to shoot a single round of practice targets. If it is a large shoot he has to wait for his squad's turn to shoot, of course. However, this is understandable and the trapshooter accepts this wait because he knows that the sheer volume of shooters makes it unavoidable. It's the needless waiting at a sparsely attended shoot that causes his blood pressure to simmer.

Any experienced trapshooter knows that after a shooter learns how to break each target, the game becomes a matter of concentration. Therefore, it becomes obvious that any inefficiency of key trap help is going to attract the shooter's attention, break his concentration and possibly be the direct cause of his missing a target or two.

This is particularly true when a trap puller consistently gives slow or fast pulls when the shooter calls for his target. An occasional faulty pull is unavoidable, of course, and it is usually taken in stride by the experienced trapshooter as all being part of the game. However, a continuing series of faulty pulls can only mean inattention by the puller and after awhile it is certain to bother the shooter.

Another example of how poorly trained or careless trap help can ruin a shooter's score and his regard for the gun club is the trap boy that is careless in placing the targets on the trap. (Some gun clubs now have fully automatic traps which eliminate the placing of each individual target on the trap by a trap boy.) If a trap boy is used and he does not put the target in the proper position on the trap, the target will have an erratic flight, be broken as it leaves the trap or perhaps become an illegal target because of its "out of bounds" flight.

Either way, if it happens consistently it will bother the shooters and is certain to adversely affect their scores.

Admittedly, the chore of placing targets on a trap is a boring, methodical task and nobody likes the job. Furthermore, the air temperature in a trap house can become unbearably hot on a warm summer day. It's a dirty, thankless job and it doesn't take long for anyone with a modicum of intelligence to figure out a better way to earn a few dollars. So good trap boys are hard to get and harder to keep. Nevertheless, they are an important part of any shoot and their presence is necessary to operate most traps.

The growing popularity of reloading shotshells during the past few years has brought up another cause of dissatisfaction with some gun clubs. It seems that every avid reloader is always in need of fresh, empty hulls to reload. He is fully cognizant of the thousands of shotshells expended at a major trapshooting tournament. Many of these shells are new, factory shells and they are coveted by reloaders. Some gun clubs give them away at a specified time and place. Others charge for each target box full of empty shells. Still others sort them out and sell them back to the shooters at so much per hundred shells. Others, and this is where the ill feeling comes in, say that they will be given out or sold but are vague about when or where. Questioning of gun club personnel results in vague and conflicting answers and the feeling develops that they are being given to certain friends of the club. This leaves a sour impression with the visiting shooter. A properly run gun club should have a definite policy about the disposition of all empty shotshells and this policy should be well publicized in the shoot program and in prominent locations on the trap range.

Perhaps most important of all in the good management of a gun club is the feeling of camaraderie that can develop between shooters and club management. After awhile, a small gun club with few of the plush accoutrements of some larger clubs can, if well managed, attract overflowing crowds of trapshooters while a nearby larger club will be using only half of its equipment. The word *does* get around and even the most particular trapshooter will disregard unavoidable physical defects at a trap range if he feels the shoot will be run properly. For he *knows* he is going to have a good time and the very anticipation of the upcoming shoot will bring back memories of other shoots at this particular range. And if those memories are pleasant ones . . . he'll be back!



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SUB-CALIBER SHOOTING FUN!

(Continued from page 23)

Remington to 250 to 300 yards. Is this bad? Not one bit, as we shall point out further on. It is however, a case in point for the student of ballistics so we must pursue it further. Despite the blinding speed of exit from the muzzle, the .17 Remington sheds a full fifth of its initial velocity in the very first 100 yards of travel! It crosses the 200 yard mark at a hair under 2600 and pulls up at 300 yards with its brakes really smoking at about 2000 feet per second! Feather in the wind? Yes, but if you think I am trying to run it down, you are wrong. There is a lesson there for those who worship at the altar of speed. The figures mentioned are not the published remaining velocities which are quoted in our "box score", but a bit of subtracting will convince you that the losses are proportionate to those with our corrected M.V. of 3960 F.P.S. I'm getting tired of all this arithmetic and I'm sure that you are too so let's get the answer to the following question: What is the .17 Remington really like?

Fantastic, that's what! The model 700 B.D.L. that Ted McCawley sent along for test was a very pretty piece indeed. Being something of a wood hound, I was momentarily mesmerized by the color and convolutions of the buttstock board, *Purr-etty!* When the spell had broken, I looked around for a hundred dollar bill to slip between barrel and stock because it appeared that there was some bedding pressure along the right edge. Not finding one, (I musta tipped some waitress), I used a strip of stationery. Sure enough, there was pressure against the right side of the barrel. Deciding against any bedding alterations for the time being, I wandered downstairs to my shop to cast about for some optics. I was tempted by a Redfield which had my favorite 4-plex reticle but it was only 4 power and I finally decided on a 3-9X Mossberg for its higher magnification. About this time, I remembered that this fancy Remington B.D.L. comes with carrying strap included and found the nicely oiled soft brown leather tucked under the bottom box flap. In mounting the scope, I removed the factory rear sight to clear the objective bell. Now with scope, quick detachable swivels

and one inch sling, the sassy seventeen looked more like a workable piece of machinery. Off to the range.

I first started cussing when I came around to bore sighting this handsome rifle. Looks are only skin deep. I removed the bolt to look through the bore. What bore? There is supposed to be a hole that lets the bullet get from the rear to the front, remember? Ah yes, there it was! A faint glimmer of light some two feet down the line. An ant with broad shoulders would have a helluva time crawling through. A hippy girl ant would never make it. You can see a wider field looking through a peep sight!

My next gripe came when I fired a shot to see where it printed. I couldn't find that tiny hole! Did I miss the paper? So we strolled down to the target and found the hole, left and low. I forgot the black felt marker. Now, my son Bobby, who is 9 and my range host, Clarence who is 71 and I (ageless) trudged back to the bench rest. Clarence chuckling, Bobby giggling and me mumbling. I fired another shot to confirm and sent Bobby down to see where it went. He couldn't find it. I hollered "justaminute" and went down to look. It had cut the first hole. I forgot the black marker. Bobby and I marched the 100 yards making the same sounds including Clarence who was chuckling at the bench when we arrived. Bobby went back and using a cardboard stencil with a one inch hole, blacked in a one inch dot on the point of impact with the black marker. I uncapped the turrets and again put the crosshairs on the target and held the gun steady. Bobby and Clarence, armed with a dime apiece, adjusted the vertical and horizontal scope screws so the crosshairs went off the bull and centered, by my directions, on the blacked-in strike point. After a few more shots and a few 100 yard strolls (because I am fussy), I had this .17 printing neatly about one inch high at 100 yards.

In the course of zeroing-in, I had the aforementioned 2 shots in 1½ holes, 3 shots in ½", 3 shots in ⅝", 5 shots in 1⅛", 5 shots in ⅞" and another 5 in 1⅛" with a light wind picking up from 3 o'clock. I still have not

altered the bedding. Conclusion: The .17 Remington is extremely accurate but the holes are too small!

Two days later, Bobby and I packed guns and cameras and went off to this same area where the town Supervisor has given me permission to hunt a large area that is prime woodchuck country. I had always done fine in the upper field but he specifically mentioned a lower back hill which he claimed was filled with the animals. "I counted 14 yesterday," said Fred. Never having been there, I followed Fred's instructions and turned off the pavement onto some "field tracks" and drove back in some 400 yards as directed. We quietly left the car and stood looking around. I immediately spotted a chuck and then another. Bobby excitedly pointed out a third. For the next half hour I was to have the eerie feeling of having lived this scene before. From my teens, I remembered an exciting dream where I stepped into a large rolling green field with chucks all over, but my rifle would never fire. Frustration!

I am not trying to embellish this story. It was an odd feeling but it passed as I prepared to try a shot one third up a side hill that looked to be about 300 yards. Just as I squeezed it off, I flinched at Bobby's loud stage whisper of "there's another." It was a pulled miss and the dream thoughts returned. After the shot, more curious heads appeared. I swung to cover another and a loud "plunk" was audible with the shot. "Got him," said Bob. The next shot scored another. I stood up and started walking forward. "After those shots we probably won't see any more." "No," said Bob, "they are coming up all over the place." A head appeared about 100 yards ahead and I covered it offhand. "A hit," said Bob, as I stepped ahead. "Wait, there's another." I fired too hastily and missed. With that a chuck appeared where I had just hit one. Could I have missed! I held this offhand shot more carefully and he disappeared with the plunking sound. We walked up to the spot. Two chucks lay there, inches apart. Six shots, four chucks. One shot with rest, one kneeling, two offhand. And that odd feeling. "I would like one longer shot," I told Bob, "and then we'll go home."

We were standing near the center of the field where a large mound of field rocks had been collected. There were 2 large trees and bushes all around it. At least 3 chucks were in view but they seemed too close, and the gun seemed too easy to hit with. I pulled both of my misses and I knew it but every good hold had been a hit. "How about that one way out

there," said Bobby with his 6 x 30's to his eyes. I rested my hand on the tree and cradled the fore-end on my thumb web and squeezed off a hit at what proved to be 240 paces. "That's enough," I said. "Something doesn't seem right. It's sort of . . . too easy." Bobby's next question might have held the answer. "Why didn't these chucks duck?" he asked. "They usually go in but they're all still out."

We took a few photos and left that spooky field of chucks that "wouldn't duck." And they watched us go. That weird "been there before" feeling stayed with me until we left. Our 5 chucks had been taken at ranges from 100 to 230 or more yards. Strangely, the whole hunting affair lasted only 30 minutes! The pictures took another twenty. Somehow, the abundance of varmints, the ease of hitting and the totally unwary attitude of these chucks seemed to subtract from the usual sport. The answer came later. Fred and two friends had been harvesting some trees at the fields edge for several days prior to my visit. The chucks had simply grown used to the sight of men, the noisy chain saws and the crashing of trees and had temporarily lost much of their customary caution.

How does the .17 stack up as a varmint gun? Again, fantastic! Its precision accuracy is uncanny. Its mild report (like a .222) is desirable. The lightning-like high shock of its bullet is humane. Range limit? 250 yards is prime and 300 yards is maximum due to the 50% velocity loss of the light missile. Handloaders who are not speed happy will enjoy trying the heavier 30 grain .17 caliber bullet and starting it out slower but with the reward of higher retained velocity. "A slower start to a faster finish" as I've said before.

Going back to specifics. The .17 Remington was developed by necking the .223 Remington to the smaller diameter but setting the shoulder back to give an increased neck length for improved accuracy. The cartridge thus formed is not to be interchanged with the .17-223 H&R or other types. In discussing the .17's with Remington engineers Mike Walker and Wayne Leek over a year ago, I blurted out that I thought the .223 case was too large and tempted users to overload and invite fouling by welding the jackets to the bore on the way out. Mike, who knows all about such things, looked away with a knowing smile and the statement that he considered the .223 case to be "just about right." He further stated that he thought the fabled fouling problem could be licked by proper jacket material, balanced loads and good barrel

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steel. Because my factory visit concerned the 5mm Remington, he candidly omitted mentioning that they had the new .17 all worked out, and with a stainless alloy barrel!

The Remington .17 bullets will be available to handloaders in the 25 grain weight. Other .17 pills are available in this popular weight plus several 30 grainers and a few as light as 20 grains. The latter are true "feathers" and no matter how impressive the muzzle velocity they attain, you and I know the "badminton bird syndrome" that affects their flight.

Remington engineering wizards chose a one turn per nine inch spiral to stabilize their .1725 diameter bullet and they haven't been wrong since the .244! (So where's your sense of humor?). This twist should handle any practical bullet weight. The pinpoint precision of the already famous Power-Lokt line of Remington hollow point bullets is so widely known that this .17 caliber version with its tri-scored nose cuts is hardly a surprise. You will be hard pressed to find their equal. Most ballistic engineers now frown on P.S.I. chamber pressure figures, preferring to use standard "crusher units." I'll just mention 26 1/4 tons and see if you enjoy arithmetic. (I do not mean British "long" tons).

My test rifle had a grease-slick action and the cartridges fed smoothly from the magazine. The excellent trigger mechanism has a crisp fully adjustable pull and let off which you will surely appreciate.

Any varmint rifle buff will find this new .17 caliber to be totally fascinating, both at the shooting bench and afield. It is certainly an exotic and unusual caliber and the availability of a finely made factory rifle together with precision ammunition will let you try a combination that once was the private domain of a few select experimentors. It's specialized spectrum of magic should not be exceeded. Remain strictly within its realm of small game and varmints and respect its range limit of 300 yards. I am certain that you will enjoy it as much as I did.

The 5 Millimeter Rimfire

Another caliber that has given me a great deal of pleasure is the 5mm rimfire, also by Remington. Since my first report on this caliber ("Taming the Tiny Tornado"—'71) I have spent considerable time afield with this pleasant little rifle. When you have a good selection of small game rifles from which to choose and you find yourself constantly reaching for a certain one, there must be a reason.

In this particular case, there are numerous reasons. Bear in mind that we are now discussing rimfire rifles and that the range limitations must fall within suitably shorter limits.

When I find myself favoring a certain rifle for its consistently fine performance, I usually customize it somewhat. I truly feel that this 5mm deserves the time and effort involved. That will be another story. However, the Remington folks have also entertained thoughts of a dolled up version if the caliber becomes popular. It's already popular with this writer so I would like to pass along a few observations for whatever they may be worth.

This little .20 caliber magnum is so accurate and so dependable as a woodchuck gun that it deserves a respectable scope. A 4 or 6 power scope with a 7/8" or 1" tube should be chosen to obtain maximum brightness and resolution in the morning or evening hours when most small game is on the move. With a range limit of 175 yards a 4X glass has sufficient power but I find myself leaning toward a 6X simply because the higher power allows a more selective aiming point and the 5mm has the fine accuracy to back it up. The only caution is not to let that enlarged image tempt you to overstretch the effective range. So much for glass.

A few shooters have told me that the 5mm ammo seemed a bit steep in price. I have to say that it is, really quite a bargain. Here's why: Unlike center fires, you are getting a full half hundred instead of twenty. Not reloadable? True, but that's the benefit of the rimfire. It's for those who prefer not to bother. Where's the bargain? Performance! Each projectile is an individual gem. They are 37 grain precision made Power-Lokt bullets of such high accuracy that they are normally loaded only in the finest high intensity center fire rifle ammunition. The 5mm is the only rimfire exception. This projectile is the key to its excellence. They do not come cheap.

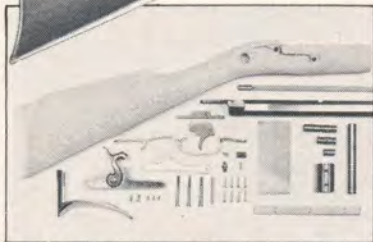
Another favorable point scored by the 5mm is its suitability for the limited range hunting of the more settled small farm areas. Snappy but not excessively noisy, it does not tend to unnerve the local populace as do some of the bigger bores. It hits where it points and it drops what it hits. That is, if the shooter does his part.

Both the 5mm (.20 caliber) and the .17 Remington impressed me and supplied their particular brand of fun. The box score for the new .17 is included for your further information on sighting and ballistics. You'll enjoy it . . . if you can find the holes!

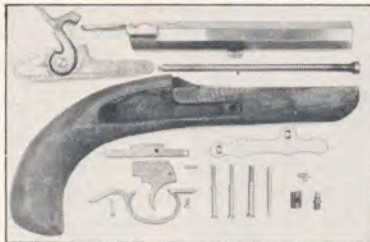
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LEE-ENFIELD RIFLE IN MANY ROLES

(Continued from page 36)

and proved very effective as sniper rifles, a role in which—thirty years later—they are still active in the British Armed Forces.

Though obsolete, the S.M.L.E. still gave useful service throughout the Second World War. It was also the medium of experiments to evolve a short, silenced weapon for British Commando raids on the French coast. These led to the De. Lisle Carbine which embodied the body, action (with shortened bolt) and the butt of the S.M.L.E. and fired a cartridge of .45" caliber. It was effective at short ranges and was made in limited numbers at a special "hush-hush" establishment in England. In the Second World War both the S.M.L.E. and the No. 4 Rifle were fitted with dischargers to fire the No. 68 Anti-tank Grenade.

Another very successful version of the Lee-Enfield was the No. 5 Rifle which was designed at The Enfield Royal Small Arms Factory and was made in considerable numbers. It was a shortened and lightened pattern of the No. 4 and was developed for jungle fighting. Its availability caused a curtailment of production of the Australian version.

After World War II, the demand for a better 22" target rifle for the armed forces led to the development of what was known as the No. 8 Rifle. The body was similar to that of the No. 4 and the barrel was shorter and heavier and embodied 8-grooved tapered riflings—the No. 4

had been made with 2, 5 and 6-grooved barrels. This rifle is still in use for target shooting and gives better accuracy than its predecessor—a 22" barreled S.M.L.E. known as the No. 2 Mark 4 Rifle.

Since the war, many thousands of Lee-Enfields of all patterns have been sold to dealers in the United States, many of the older models going to weapon collectors, and the more serviceable ones converted into sporting rifles—yet another role for this versatile arm. Although the No. 4 ceased to be a weapon of war—except for the sniper—on the introduction of the 7.62mm Self-loading Rifle, it began a new lease of life as a target rifle when converted to fire the 7.62mm (.308") cartridge and fitted with a heavier barrel. There are now several versions in use in the United Kingdom and other countries and they have been especially successful at long ranges—900 and 1,000 yards. The latest version, the Enfield Envoy made by the Royal Small Arms Factory, was used at Bisley in the 1970 Palma Match and gained universal praise for its accuracy.

Despite the adverse criticism which has been levelled at its rear-locking action, the Lee-Enfield Rifle in its seventy years of existence has probably fulfilled more roles, in a world-wide application, than any other rifle originally designed as a weapon of war. In one role or another it promises to still be active when it celebrates its centenary.

POINT BLANK: GRAND AMERICAN PAGEANTRY

(Continued from page 45)

along with papa to see him win the Grand. These camp-followers are entertained with sight-seeing excursions, bingo contests, bridge and gin rummy and have style shows, luncheons and other diversions put on for them.

There is a bit of fine old pageantry which enters with the commencement of the tournament. "Spike" Graham, of Winona, Minn., an old time trap gunner has had the honor of firing the

first shot at the Grand every year for the past 32. Every trap shooter worthy of the name is a member of the ATA and carries with him a card which indicates his handicap yardage. Every ATA member is handicapped from 18 to 27 yards, if you turn up at the Grand and you do not have your card you are automatically stationed at the 25 yard stripe. This does a most thorough job of eliminating ringers. The Grand American is invariably

won by some little known marksman and the reason is because the hot-rocks are all carrying such ferocious handicap yardages they cannot possibly win. The handicap system applies to singles targets. In double shooting, everyone stands on the 16-yard line. Both targets are in the air simultaneously and this is thought to be sufficiently difficult as to place all gunners on the same firing stripe.

The clay target is a saucer-like disc, some 4 1/8 in diameter and has a height of 1 1/8 inches. It flies about 60 feet per second when first released from the trap, its full flight is about 55-60 yards. Very fast shots will break the bird at about 15 yards in front of the trap; more deliberate gunners will break the target at around 20 yards from the house. It must be remembered that all the shooters are handicapped. This handicap yardage must be added to the distance in front of the trap to appreciate at what ranges these flying saucers are pulverized. If a really top-drawer marksman is handicapped the full 27 yards and then requires 20 yards from the trap to get on and crush his mark, you can see that the actual gun-to-bird distance is a full 47 yards. This is a very long wingshot.

The gun fired is invariably a 12 gauge and may be a single-barrel, over/under, pump repeater or auto-loader. Side-by-side shotguns are not seen at Vandalia. It will have a raised ventilated rib on the barrel, with two bead sights. The barrel will be 30 inches in length and may go as long as 32 or 34 inches. It is usually tightly choked although you will occasionally see a gunner who, because he shoots very quickly, will prefer an improved-modified choke. Such muzzle devices as the "Cutts Comp" are not seen at such trap tourneys as the Grand. The muzzle brakes are faintly popular among skeet gunners but are frowned off the course by the trap fraternity.

The gun is stocked very straight to induce it to shoot high. The marksman always holds under his target and he may thus see everything it does. The straight stock permits this sort of aim. Shot loads, by ATA regulation are never more than 1 1/8 ounces of shot. The pellets may be No. 7 1/2, No. 8 or No. 8 1/2, at the choice of the gunner. The powder charge is 3 drams equivalent.

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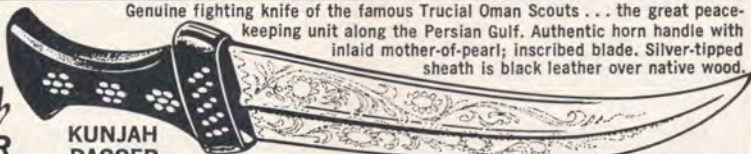
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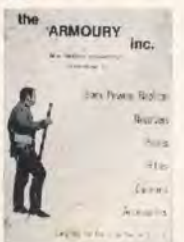
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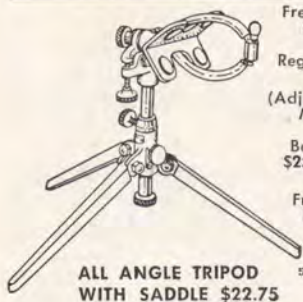


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or may tower markedly, or barely skim the grass. The bird flies faster than our saucer, going to a full 70 yards and is slightly tougher in texture and thus more difficult to burst.

Despite our differences, the American and Canadian trapshooters are quite happy with their sport. These last several years the Grand has attracted marksmen from as far away as South Africa, Australia and New Zealand. Also from the Continent, with marksmen from Italy, Germany and England. In 1970 there were Japanese entries.

The Grand has always been the stage for many glorious and heart-tugging dramas. One year ago a laddy-o named King, a boy of only 14 years from Wichita Falls, Texas, annexed the most coveted prize. Another year a fellow skipped work from a job he held in Detroit and came to the Vandalia affair. He was a day laborer and he had shot enough so that he had a seasonal average and toted the required ATA handicapping card. He entered the Grand and won it. And was promptly hopeful his feat would not make the Detroit papers for fear his boss would see it. He had told the boss before skipping off to Ohio that a horse had stepped on his foot.

The foreman was a sports fan and much to his surprise saw his missing laborer had knocked off the greatest prize in American trapshooting. He admonished his man but the company had him in to the head office and congratulated him!

There are, of course, a whole gaggle of other important events at the nine days of shotgunning. One of these is the Champion of Champion's race. This is open only to state champions. Twelve years ago the great Dan Orlich tied with Omar Webb and George Snellenberger at the end of the match. Each had a 100 perfect targets. They went ahead and shot another 100 birds and again all three were tied.

About that time, Snellenberger was notified that his mother had just died back home in Angola, Indiana. Ordinarily, he would have been compelled to relinquish his place and let Orlich and Webb shoot off the tie. But this pair with a brand of sportsmanship that is pretty common in trapshooting circles, elected to wait to resume the shoot-off until Snellenberger might return from the funeral. He rushed away home, buried his mater, and came back to Vandalia. The shoot-off was resumed on Friday which was the next-to-last day of the tourney. Webb was eliminated in the first 25 targets. But Snellenberger and Orlich ground on and on, finally successfully pulverizing another 300 targets.



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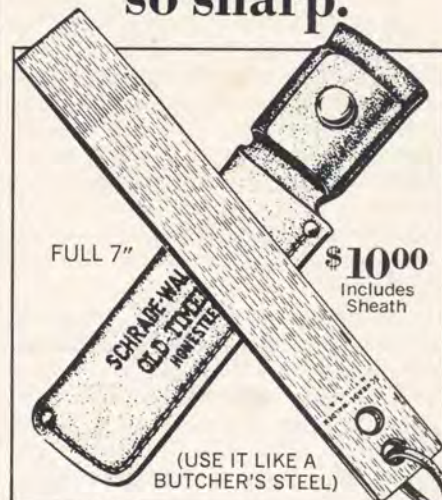
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On Saturday, the wind-up day for the great tournament, the ATA brass called a halt. The declared both Snelberger and Orlich co-champions. Each had broken 100 targets in the regular event and 500 in the shootoff. It was a new record and one of the most exciting races ever fired at the Grand.

The Grand has its official chronicler. This is Jimmy Robinson, who is the skeet and trap editor for "Sports Afield." Jimmy has faithfully reported the big affair for the past 50 years and not only covers the Grand but also chronicles the multitudes of lesser registered matches throughout the season. He selects the All-American trap teams for both men, women and the professionals. These latter are salesmen and employees of the arms companies. All fire without accepting any cash prizes but are classified as pros because they make their living by working for the arms and ammo industry.

There are divisions within the Grand American for women; also for junior gunners, from the ages of 15 to 17; likewise a sub-junior division which goes up to 15 years of age. And there is a special trophy for the veterans who must be over 65. One of these is Adolph Nelson, who, at the age of 83, popped his 400,000 registered target. He did not take up the game until he was 42. Another old timer is Homer Clark Sr., the father of the brilliant trapgunner, Homer Clark Jr. The elder Clark is now 84 years of age and never misses a Grand. And indeed is still a threat in any event he fires.

Punkin Flock, of Miami, Fla, is one of the toughest of the women shooters. She has been the captain of Jimmy Robinson's Women's All-America Team six times and has held an AA rating for the past dozen years. Not only does Punkin dominate the feminine contingent but she is always a threat to the best of the male gunners. Nadine Ljutic, wife of the notable arms designer Al Ljutic of Yakima, Wash, made the Woman's All-America in 1970. Al earned a spot on the men's second team, and young Joe, their 14-year old son, headed the sub-junior squad. A commendable family effort and indicative of the wide appeal which trapshooting now holds.

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THE MINI-MATICS OF FRANCIS PFANNL

(Continued from page 39)

The lid liner reads "Kolibri" over a stylized design. A small snap-top coin purse holster was also available as an accessory. Production of this model was terminated by the First World War.

When Pfannl resumed production after the war he extensively modified the original design. He had apparently found that the 2.7 mm. cartridge was too expensive to manufacture so he scaled it up slightly and substituted a lead bullet for the full-jacketed one, thus creating the 3 mm. Kolibri cartridge. The 3 mm. cartridge is roughly the same overall length as the 2.7 mm. although the case is some .040 inches shorter. The lead bullet weighs 5.3 grains and it also uses the finely ground black powder for propulsion. The first pistol to fire this cartridge looked like a scaled-down Erika but with conventional grip location, Kolibri grip pieces and no trigger guard. Only one surviving specimen has thus far been located of this transition design, and it has no serial or proofing.

Apparently not satisfied with the complexity of the design, Pfannl continued to work on it and later marketed in very small quantities a much simplified 3 mm. Kolibri automatic. The production design involves only elementary machining. Even so it has the added feature of a latch at the rear to allow the barrel and recoil spring housing assembly to be tipped up for cleaning without removing the side plates. While not serialized, these 3 mm. pistols were proofed, the three

known examples bearing Vienna proof house marks dated 1928.

The grip pieces of the 3 mm. pistols are identical to those on the 2.7 mm. and like their predecessors, the 3 mm. barrels are unrifled. The 3 mm. pistols were, apparently, not sold cased but were furnished with a tiny brass cleaning rod. The ammunition was initially available in unlabeled fifty-round boxes made of black japanned copper. Later boxes were of tan cardboard with a red label stamped "50 cart. Kal. 3 mm" over "pour Automat. Pistolet" over "KOLIBRI."

The political turmoil and economic chaos that existed in Germany and Austria at that time was not conducive to the success of such novelty designs, and sometime prior to 1930 Pfannl discontinued manufacture of all miniature automatics. He did, however, continue to produce 3 mm. ammunition into the late 1930's. He also sold, under his name, a Spanish-made 25 caliber automatic called the "Vulcan" as well as apparently producing, for George Grabner, a series of very inexpensive and cheaply-made miniature blank pistols using the Kolibri tradename and grips.

Production of all items had terminated prior to the Second World War, never to be resumed. In one of the situations typically found in collecting, these economically unsuccessful arms which sold new for a few dollars apiece have become among the most valuable of collectors items and when found sell for upwards of \$200.

OUR MAN IN WASHINGTON

(Continued from page 46)

more gun controls will be held to account for statements made, while those pushing for controls will be allowed to make wild, unfounded charges. Then there will be the executive sessions, where legislation will be moved toward the House. The only real check on the legislation to be reported out of the Judiciary will be the Rules Committee which says what bills go to the House floor for consideration and passage.

It is most difficult to rewrite a bill

while it is under consideration by the House. The rules are so strict little can be done. Once out of committee, the tone is set. The only thing the shooting sportsman has going for him is the elections. Surely, no matter how anti-gun a lawmaker is, he or she will have to remember ex-senators Dodd, Tydings, Gore, and Clark. Each of these men stated that their anti-gun stand contributed to their defeat.

On the other side, there are law-

makers like Frank Church (D., Idaho). Senator Church was headed for oblivion when he seized upon the "Right to Keep and Bear Arms" issue. By speaking out loud and clear for the Idaho gunowners, he picked up enough support to be re-elected to another six-year term in the Senate.

It is the consideration of most firearm law observers here in Washington, as well as that of this Guns contributor, that the years of the handgun are numbered. Many see the "sporting purpose" test as the beginning of the end.

Let's consider: Most of us can re-

member when only sawed-off shotguns and rifles, and machineguns were outlawed. In 1968 there was added the so-called destructive devices, the big guns that had no "sporting use." Now the battle is over handguns with no "sporting use," the guns that are too small. Remember, that outlawed with the so-called destructive devices were quality bolt action rifles of military surplus.

What the anti-gunners are really after is all guns; the most available target, just because it happens to be desirable for concealment, is the small handgun.



AN ANALYSIS OF THE LATEST IN POLICE SHOTGUNS

(Continued from page 31)

locked in the extended or folded position by an operating button on the left side. A number of high velocity rounds were fired by the writer. Recoil was not too noticeable and accuracy from both the hip and shoulder position was every bit as good as when using the conventional wooden stocked version.

This is a very valuable optional accessory for use on the excellent Remington police version of the Model 870 shotgun. It is sold to law enforcement people only and lists at \$28.50. The factory has also just announced the availability of police model 870 units with the folding stock, installed at a price of \$139.95 for the plain barrel version and \$149.95 with the 20" rifle-sight barrel.

The Protective Devices Conversion

Another new police-commercial version of the pistol grip-slide, action-riot shotgun combination is now being marketed by the Protective Devices Corporation (1939 Placentia Avenue, Costa Mesa, California 92627). This conversion is available to both law enforcement and the civilian gun owner who has a need for a still legal, but shortened version of his slide action sporting type shotgun. Shooters can also secure extra 18" riot barrels if they desire to cut down the overall length even further to the minimum 27".

This conversion unit can be home installed. The kit comes complete with a high impact plastic pistol grip and handguard unit that is installed on the weapon in place of the wooden forend. No appreciable recoil problems were experienced with this conversion when fired a number of times with standard high velocity police-

riot loads. The angle and design of the grip lends itself well to the waist level instinctive firing method. With an 18" barrel and the pistol grip, the weapon still is within legal limits. Optional accessories such as a sling swivel in the base of the pistol grip and a shoulder sling for a hang-down-from-the-shoulder carry position is available. Although the plastic handguard that extends over the barrel may slightly aid in steadying the weapon and lend itself to faster firing, it is the writers opinion that this is "frosting on the cake" and that the pistol grip installation alone will suffice for most practical combat situations.

The pistol grip unit sells for \$16.50. The grip and handguard unit kit sells for \$28.50, postpaid. At the present time, kits or pistol grips are available for the Remington 870, the Winchester 1200 (The Federal Government has purchased a number of kits for this weapon), the High Standard K120, and the Ithaca Model 37. Installation of the Ithaca requires factory fitting. All other models can be sent mail order and installed by the shooter himself.

The legality of this device plus its low cost should make it of great interest to the car or home owner, commercial truck driver, storekeeper, and any citizen in an occupation where he is subject to criminal attack, but can legally possess a shotgun. No felon likes to argue with the muzzle end of a scatter gun at close quarters. Both of these adaptations add greatly to the police capability and general combat flexibility of the shot gun. This approach is simple, practical and economical. Where the need exists, departments or individuals should take advantage of this simple approach to an old problem.



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MUZZLELOADING ARMY CONTINUES TO GROW

(Continued from page 44)

Huntsman, a sort of second cousin to the Topper. This single-shot is offered as a rifle in .45 and .58 caliber and as a 12 gauge shotgun. The concept of the gun is a cross between center-fire and muzzle-loading, and while some may raise their eyebrows about the feasibility of the system, I can only tell you "Try it, you'll like it!" I have used the shotgun a fair bit and find that I do about as well with it as with any other 12 gauge scatter-gun that I have ever used—and I eat pheasant, duck and other birds fairly regularly.

Chaps, there's a bit of news from Merry Olde England—Parker-Hale is recreating, not just reproducing, the 1861 Enfield Musketoon. Guns are made with the original hand-made gages, are from butt to muzzle identical to the McCoy. Parker-Hale works with the assistance of the Q.A.D. Pattern Room at Enfield, and each of the guns will come with a 40 page handbook containing extracts reprinted from the original 1859 "Instruction of Musketry." The .577 caliber Musketoon has long been considered as an exceptional collector's item, and is famed for its accuracy. The price will be around \$200 and guns should be available from Jana International by the time you see this issue of Guns.

I already mentioned two new Navy Arms products for black powder shooters. A number of new replica sixguns have been added to Val's line. I especially liked the Target Model, available in .36 and .44 caliber. The gun is an exact copy of the Remington Army, but comes equipped with target sights. It would make a great handgun for the hunter. The gun is, of course, also available without the target sights, as is the Army Belt model which is offered in .36 caliber only. Among the other new models is a Colt Baby Dragoon, a Harpers Ferry Model 1855 Dragoon pistol, a copy of the Second Model .44 caliber Dragoon, and a replica of the Third Model Dragoon.

Numrich Arms and Hopkins & Allen have indeed been busy during the past year. A Minuteman flintlock, one of the latest additions to their fairly complete line of black

powder guns, looks nice and the gun is distinguished by very careful workmanship. Best of all, you can really shoot up a storm with that gun! The rifle is offered in .45 as well as in .36 caliber, and if your leaning toward a percussion rifle, you can have the same gun in that ignition system. For the fellow who likes to hunt with a black powder rifle, Numrich has the Minuteman in a version called the Brush Rifle which is offered in .45 and .50 caliber.

Replica Arms is offering four new guns this year. The double barrel percussion shotgun I saw and used at the Williams Gun Sight range was from Replica Arms. I especially like the appearance and the handling qualities of the Ohioan .45 caliber percussion rifle. For the fellow who wants a man-sized sixgun, I suggest that 1862 Police model. This .36 caliber comes in three barrel lengths (4 1/2", 5 1/2", and 6 1/2"). It would be darned hard to visualize a better looking set of replica flintlock duelling pistols than the set offered and finally available through Replica Arms.

Dick Casull, the creative genius behind the newly formed Rocky Mountain Arms Corp., hopes to have two new black powder guns on the market before the primitive weapon hunting seasons open. One is a percussion Leman Indian Trade rifle to be offered in .45, .50 and .54 caliber. The other gun, at present still in prototype form, is a breech-loading, rotating turret gun using paper percussion caps. The rotating turret assembly has a fixed capacity powder chamber, while at the opposite side of the turret is the percussion nipple. In loading, the powder charge is placed in the chamber and the lead ball is forced into position over the charge. Then a paper cap, such as used in cap pistols, is placed inside the nipple cover that forms a tight gas seal around the nipple. Close the cover of the turret, rotate the turret into the firing position where it locks into place thanks to a simple spring catch. This is not a muzzle loader, therefore no attempt should be made to charge the gun in the usual muzzle-loading fashion.

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through the special swaging cone, it takes on the configuration of a round-nosed bullet. These rifles will be offered in .22, .36 and .44 caliber, are designed so that standard lead shot can be used; hence, you need only a bag or two of shot instead of having to cast or buy balls.

It was a perfectly logical step for Bill Ruger—a black powder Blackhawk in .44 caliber! Patterned after the Old Army model, the gun feels just right in your hand the moment you pick her up, and the gun is made to the very exacting quality standards we have come to expect from Ruger guns. The gun I fired in New Hampshire, one of the early prototypes, had all the accuracy potential you could ask for and functioned smoothly.

Thompson/Center has done it again! Some five or six years ago the Contender single-shot pistol made headlines in the gun magazines. Last year the Hawken percussion rifle was introduced, and now we have the .45 caliber flintlock rifle from the same company and also the .45 caliber Patriot percussion target pistol. This gun features many interesting concepts and comes with an adjustable target sight and double set triggers.

As mentioned before, T/C sells the black powder guns with or without the accessory pack and I suggest that the novice black powder shooter start with the pack—it's a real help in getting started and cost is not prohibitive.

What about next year? There is no question that we will have more and even better black powder guns in the next few years. We still import a large share of the charcoal burners, but now that Colt, Navy Arms, Ruger and Thompson/Center make black powder guns here, it can only be a question of time before other U.S. arms makers will follow suit.

I keep hoping that somebody will be offering replicas of some of the fine old target rifles. The few that are on the market are too rich for most shooters, and I feel that there are a lot of other black powder shooters who would like to get into the black powder benchrest games. Our grandfathers shot that way and did right well with their muskets. Maybe we could keep the tradition of being a Nation of Riflemen alive!



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BUDGET-MINDED AFRICAN SAFARIS

(Continued from page 29)

"Son of Erin" would rather that you lingered for ten days. Then he can be mortally certain you will fill out. This shooting goes on from April through December and costs \$75 daily for two sportsmen. If there are three in the party then the tab is only \$60 each.

The Asian water buffalo, planted in the Northern Territory many years ago, is a highly desirable trophy. His horns sometimes measure a hundred inches from tip to tip and if you have the poor fortune to wound one of the stodgy bovines and are compelled to follow him up to put in the finishing shot, you may be in for an adventure quite as hairy as a follow-up on his cousin the African cape buff!

The only fly in the ointment so far as this fine safari is concerned is the distance that is involved. Australia is a distant port and the tab for the round trip fare is a healthy one. For the sportsman who is intent on doing the Aussie bit there is also the neighboring country of New Zealand. Here he may add red deer, fallow deer, sika deer, rusa deer, sambahr, wapiti (our American elk) tahr and chamois. The New Zealanders have carried on a campaign these past two decades to reduce their wild game herds and the shooting isn't as good as it once was. It takes a judicious selection of guide-outfitters, but this is not too difficult and certainly prices are on the reasonable side.

Somehow the laddy-o who wants to hunt far afield is always pictured as a big game huntsman—the fellow who flies off to exotic fields with his trusty .340 Weatherby. This isn't necessarily true. There are probably twice as many shotgunners who have a deep and abiding urge to range far afield for nothing more dangerous than a Scottish grouse or a Pakistani chukor partridge. The fact that many of these frustrated shotgunners never get off their own dunghill for the shooting which they so dearly enjoy is because they feel it would be slightly ludicrous to load up and fly away to Assam just to have a go at jungle fowl. This need not be so. It is quite as reasonable to make a shotgun safari as it is a rifle one and the happy facts are that in many places around the world the populations of feathered game is absolutely staggering. The wingshot can go for lesser periods of time and with a bit of judicious selection of season, not only have a Roman holiday on

uplands species but also enjoy superb shooting on wildfowl, too.

Just this season I had an invitation from an English landowner, a country squire most surely, who invited me over for a 6-day holiday on his midlands estate. I would stay in his country manor, he informed me, and the shooting would mostly include pheasant with a few hares tossed in. There would be ample opportunity to sharpen my hand and eye on his local trap grounds and certainly I would enjoy the quiet dignity of the English countryside. He did not spell out in exact terms what daily bag I could expect of pheasant and hare but I gathered that the total would probably be around four to six of each. The tab for the 6-day sojourn would be, according to his literature, \$2750. Now this comes out to just about \$460 daily, not counting the bite by the airlines to transport me to and from the tight little isle. This I reckoned was a mite too steep.

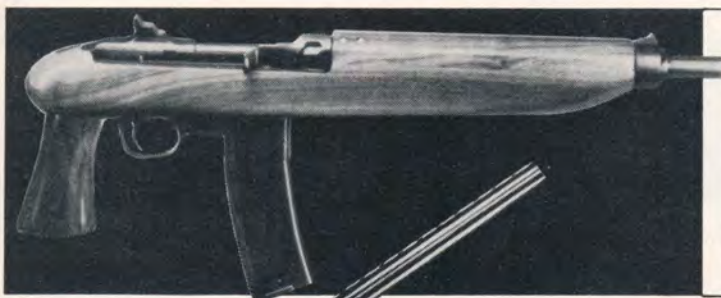
Ireland, on the other hand, is a remarkable country, where if you give the beleaguered northern section a wide breast, is a marvelous place for the smooth bore devotee. Col. Glover Johns, an old amigo, went off to the Emerald Isle and found there were any number of good spots where a reasonably good wingshot, sound of wind and limb, could expect to garner as many as four or five different species of feathered game during a day afield. The bag, he tells me, does not run high. There will be two or three brace of pheasant, three or four woodcock, a nice mess of jacksnipe, and four or five ducks, usually mallards. The bag in total will tote up to 10 or 15 birds.

That is the way it goes, during a typical day of Irish rough shooting. Not at all like a grouse or partridge drive but somehow more of a personal challenge. Walking up the Irish birds is hard to beat for a change of pace. And just to watch a good Irish game dog working is worth the full price. All old quail hunters will love it, says Johns.

Irish rough shooting runs anywhere from \$7.50 to about \$25 daily per person. It depends on the number in the party, where and what you wish to shoot, and what extra services are included, such as lodging and transportation. In every case the basic fee will include a guide and a dog for each two shooters.

(Continued on page 68)

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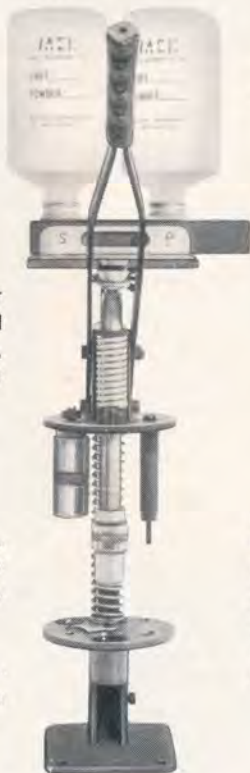


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Mark 5 plastic collar: There was a time when "barrel leading" was part of every active shotgunner's vocabulary, along with "patchy patterns" and "stray pellets". But since Winchester and Western began making the plastic Mark 5 shot-protecting collar as a standard component in every game load we make, hunters everywhere have gotten the word that Upland and Super-X have better performance built right in. Because the Mark 5 collar keeps shot from rubbing against the barrel, shot stays

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Sealed Gas Chamber: Long ago Winchester and Western discovered that there was a big difference in performance between having the hot gasses from expanding gunpowder pushing *behind* your shot string . . . or having it push *inside* the shot string, blasting game-sized holes in your shot pattern. That's why we pioneered, proved, and patented the Sealed Gas Chamber. It's made by an inverted over-powder wad that seals tight against the hull walls, and bore interior, giving you the full power of Olin Ball Powder, plus an even, hard-hitting pattern.

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(Continued from page 64)

If you go on your own you may rent a drive-yourself car at either Dublin or Shannon airports and then there are always small hotels, inns and pubs not far from where you may shoot. There is some small redtape involved in getting your shotgun into the country. You will not need but one gun and the best choice is a 12 gauge double. You may use a repeater if you like but you cannot load more than 2 shells. A shooting permit is required, the Irish Tourist Bureau, Dublin, can attend to both the guns permit and the shooting one. Ireland, according to our informant, an old hand at shooting on the Continent, is the most friendly country in the world. Certainly their prices are most reasonable.

The southern shores of the Caspian Sea, within reach of Tehran, Iran, feature some of the most unsurpassed duck and goose shooting. Also snipe and woodcock. All the migratory waterfowl of the European Continent funnel down into this paradise during the winter months. Populations of snipe and woodcock range into the hundreds of thousands and ducks are even more numerous. An American outfitter, who maintains his headquarters in the old Persian capitol, now offers a 7-day shoot which includes all the costs of transportation to and from Tehran, hotel accommodations, meals, the free use of a private shooting preserve, blinds, and the services of beaters, retrievers and gun bearers. For a party of 5 sportsmen the cost amounts to \$80 per day per gun.

While the concentrations of ducks and geese along the shores of the Caspian are indeed fantastic undoubtedly the greatest populations of geese on all the face of the earth are to be found at the very tip of South America. In that grim and forbidding land known as the Tierra del Fuego. A distant and neglected bit of Argentina, notable for terrific storms of ice, hail, bleak rains and gale-like winds, in season the geese migrate there by the millions. It is a sheep country with limitless sheep ranches, mostly owned and managed by refugee Englishmen who migrated there generations ago. The geese come in such numbers that they deny the sheep the essential grass and those few blades that escape the insatiable hordes are fouled by their droppings.

It was a plan of mine to go there

and shoot these geese. To that end I had AyA, the leading Spanish gun-makers, build a 10 gauge magnum shotgun, an over/under, for the 3 1/2-inch shell. It took three years to get that gun, for AyA did not make the O/U in 10 bore, and once I had it in hand I asked the Argentine Government for permission to shoot in the Tierra del Fuego. The administration would not grant the permission. This was years ago during the time of Peron. Now, I suspect, there would be no difficulty. The beauty of the shooting there is that virtually the only expense would be the travel. The poor beleaguered rancheros would open their arms to you. Happy that some knight in shining armor had arrived to alleviate the pest of the wildfowl.

I used to go to hunt tiger in Madhya Pradesh, which is the largest state in India, a great central enclave, about midway of New Delhi and Bombay. I shot with Percy Dinshaw of Mhow, an old tiger shikari, and a cracking good one. Now that we may no longer fetch the tiger skin home with us, Dinshaw's shikar has been diverted to birds. Now a 10-day stint with this likeable Indian will produce such a wide variety of winged trophies as the grey partridge, the bustard quail, red jungle fowl, grey jungle fowl and red-spur fowl. And as for the ducks and geese you may have a fine medley of white-eyed pochard, brahmny duck, crows duck and the bar-headed goose. In the forests of Madhya Pradesh is some of the finest shooting on green pigeon and bluerock pigeon. In the marshes you will be treated to a variety of unsurpassed snipe gunning. These may all be painted snipe but also you will take the fantail snipe and usually a number of pintail snipe.

Outside the Dinshaw domain but to be found in tremendous numbers in other corners of vast India are painted partridge, Imperial sand-grouse, black-breasted quail, jungle bush quail and the great Indian bustard.

A 10-day stint with the inimitable Percy costs \$75 per day, and this tab includes all lodging, meals, transportation, etc. For those who would gather up a party of up to 10 guns, the price is on a sliding scale—downward. The winter months are the only time to shoot in India. This means from mid-November to the first of April. After that it grows far too hot for any fun in the game fields.

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(Continued from page 61)

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REVOLVER RIFLES, PART II: THE FIRST REPEATING RIFLES

(Continued from page 27)

of as the normal revolver-rifle. These guns were made by C. B. Allen on Cochran's 1837 patent, by R. H. Graham on his 1851 patent, by Wilkinson of London and by H. Genhart in Belgium. They are designed with disc-like rotating breeches, quite flat, somewhat like a hockey puck and with the chambers extending like the spokes of a wheel. These odd rifles are generally referred to as radial cylinder guns. While the guns mentioned above have their disc cylinders in flat or horizontal position, another rifle with a similar type cylinder, the Porter (patented July 18, 1851) is designed to rotate in an upright or vertical position. In any of these radial cylinder guns a multiple discharge could go off in the direction of the shooter as well as the target! It has been claimed that Porter was killed by a multiple discharge from one of his own guns, but while this perhaps would be a form of justice, the story may be without foundation. Pill lock and caplock ignition was variously employed for the Porter radial cylinder rifles.

Another plan to produce a multi-shot rifle was shared by gunmakers from the elder Browning in Utah to N. Kendall in Vermont and by some European gunmakers. It consisted of a chambered flat rectangular block which could be slid crosswise through the frame until all chambers had been fired. It was generally known as a "sliding block" rifle. Guns of this type were few in number and attained no popularity. For the collector, that makes them rare.

While all this activity was taking place in the United States, foreign manufacturers were not idle. The major foreign revolver-rifle production occurred in the British Isles, Belgium and France.

Lang, Adams Tranter, Deane, Barnes and others made relatively similar solid frame caplock rifles in England. In France Devisme, Le Lyon, Lefauchaux, Loron, and Le Mat attained prominence. The Le Mat deserves some special mention, for the inventor, Alexander Le Mat, was a resident of New Orleans. He was granted patents in 1856 and 1869 for a gun having a rotating cylinder and two barrels. Similar to those guns of

Bigelow and Billingham, previously described, the Le Mat had a lower single-shot shotgun barrel and an upper rifle barrel served by a nine-shot rotating cylinder. By depressing a moveable nose on the hammer the firing could be changed from the rotating cylinder to the shotgun barrel. The majority of the Le Mat arms were made in France, but a few were made in England by Le Mat and Girard.

Apparently, like Collier, Le Mat found a better market for his guns and pistols abroad. Le Mat's loyalty was to the Confederacy and during the war many Le Mat arms came into the hands of the South.

Belgium, too, with its active arms-making community in Liege turned out many revolver-rifles. It is to be noted that as early as 1836 M. Lefauchaux invented the pinfire metallic cartridge. So it was that many of the French and Belgium revolver-rifles were designed to employ pinfire cartridges.

In summary, a comprehensive survey of one hundred revolver-rifles indicates that 40% had cylinders with six chambers, 14% had five chambers and 10% employed seven chambers; the remaining 36% had chambers varying from three to fifteen. Average weight was 7-8 pounds. A majority had calibers within the .36-.56 range.

Usually collectors have but one or two revolver-rifle guns, and a few collectors like J. C. Lowe, William G. Renwick, Mark Aziz, James B. Smith, Henry M. Stewart, and Frank N. Russell over the years have gotten together outstanding collections, but it is not an easy collecting field and comprehensive collections are relatively scarce.

The revolver-rifle from the start had only a very modest chance of attaining great popularity. While it had advantages in greater fire power, it also had some serious disadvantages. Despite determined efforts by many manufacturers, especially Collier and Savage, it was practically impossible to effect a gas-tight union of chamber mouth and barrel breech.

Even with its disadvantages the revolver-rifle was still the best repeater until the advent in the 1860s of the Spencer and the Henry lever action

magazine repeating rifles. A few feeble efforts to maintain revolver-rifle production with metallic cartridges were made, but soon the repeater-rifles were doomed to dark closets or hung on the walls as souvenirs of another era. Hartley & Graham of New York, prominent arms dealers in the late 1800s, obtained a number of war surplus Colt military

revolver-rifles which they offered at \$6.67 apiece.

Like classic antique cars revolver-rifles are scarce and are worth far more today than when they were fresh off the assembly line, and values continue to climb upward. As the great army of gun collectors increases, so does active interest in these odd repeaters of the past.



THE NEWEST Remington/Peters shotshell, known as the RXP, 12 gauge, is loaded with size 8½ shot. Both the new cartridge and the unique pellet are intended for target shooting. Specifically, skeet and trap, with emphasis on 16 yard rise targets in the case of the 8½ shot. The RXP casing is all plastic, compression formed, with an integral base wad. The head is all-brass, without cannelures, and the fact that the base wad is a solid part of the case body means that gases cannot work beneath the wad and force it into the bore of the gun.

The RXP is in the customary Remington green coloration with the lettering, "RXP" in gold near the case-head. On the other side, the loading is also displayed in gold lettering. Both Remington and Peters will offer the new shell and it will be loaded with the more common sizes of shot. Later on it will be ready in the other target gauges, that is the 20, 28 and 410.

While this is a skeet & trap number and, from trials at skeet, a very good one, a secondary purpose in the development of the cartridge has been to offer a really first quality casing for the handloader. It is pretty freely acknowledged that the Winchester AA, an injected-form—all-plastic shell, is the best in the field. R-P hopes to offer competition with the new RXP! The company intends to sell the new-comer as a primed casing; also the new 8½ shot.

The new pellet is an interesting addition. It has a diameter of .083" as against .08" for the standard #9 shot; a No. 8 will measure .09". An ounce of the new shot contains 494 pellets, the

same quantity of No. 9s shows 585; and 1 ounce of 8s amounts to 409 pellets. The customary charge of 7½ for trap gunning has only 345 pellets to the ounce. When the 8½ are used as planned by Remington engineers, that is at 16-yard targets, it will be a distinct advantage sweetening the pattern very perceptibly. After a half-case of fired cartridges at regulation skeet I can note no differences in results or scores over either standard 8s or 9s. Obviously the 8½ are just as good but not any better. I'd reckon at doves during early season and on bobwhites before the season has advanced and they have grown wild that it will perform very effectively.

The shell, superficially, looks a great deal like its predecessor, the All-American. Brass height of the head and end stamping is the same, the shell has the conventional corrugated R-P finish on the exterior although within about a half-inch of the head it gives way to a smooth finish. Just why I cannot understand. The folded crimp has been altered somewhat. It continues to be in eight segments but the older ribbed closure is now replaced with a crimp which is flatter across the recessed portion. The mouth of the casing is somewhat thinner, running about .016", and at the mid-section of the casing this has increased to .037". A half-inch above the brass head the thickness approaches .048"-inch. Because of the integral base wad the cartridge has greater powder-shot capacity than the All-American.

Remington engineers have put a new Power Piston wad in the RXP. It is the W29930 which is longer than



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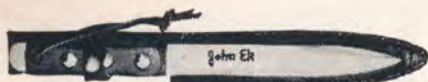
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the Power Piston found in the All-American shell. The W29930 has a length of 1.577" as against 1.427" for the older wad. The RXP casing is tapered inside and because of its greater load capacity this new design was advisable. An extra row of cushioning holes has been incorporated in the W29930 which makes it readily identifiable. While there is a slight taper in the new casing this isn't to say that the Power Piston wad has got to be used. Any number of one-piece plastic wadding and shot pouch combos can be used.

Because one of the major selling points of this new shell is its reloadability, I laid aside 10 shells after a round of skeet and proceeded to load them with 18 grains of Hercules Red Dot and 1 1/8 ounces No. 8 1/2 shot. The primer was Remington 97 and the new Power Piston W29930 (referred to by the company as RXP-12) wad. The cartridges were assembled on a Mec Super 250 machine, built especially for the plastic shotshell. The 10 cases were fired in a Remington M1100 skeet gun, not a shooting iron notable for prolonging case life. All withstood 12 firings without fraying or splitting the case mouths. After 18 firings two cases were abandoned because of noticeable splits. The remaining 8 empties went 24 loadings and were then abandoned. All showed some splitting and some burn area but I have picked up many an empty on my skeet grounds that looked worse.

• • •

Ransom's Master Series

The pistol handloader needs a machine rest, it is the only really definitive way he can make certain his reloads are accurate. The match target shooter, likewise, needs a machine so that he may be completely certain his pet handgun will deliver winning scores with the cartridges he is firing. Along with this duo the hunter should be sure beyond any reasonable doubt that his gun & cartridge team is good enough for the long shots he so often takes. Regrettably there are precious few pistol machine rests on the market.

Two years ago Charley Ransom introduced his new machine rest. It was designed for the big auto pistols. To fit the gun to the Ransom machine you removed the magazine from the pistol and then fitted the gun down on a dummy clip which was a part of the rest. There was an adjusting screw in the top of the dummy clip so that the

pistol was made completely secure on the rest.

The Ransom rest was designed with a sturdy base which incorporated a main shaft and a set of disc brakes. Swinging about the shaft was a pivotal arm. The pistol, under recoil, swung the arm in a short arc, the brake under the friction of its two surfaces bringing the gun to a halt after an inch or so of movement. Ransom, a tool & die maker, did a splendid job of designing and manufacturing a very high quality machine. The rest was constructed to close tolerances and could be depended to return to its same position after each shot. The only fly in the ointment was that it would accept only the big automatics.

Now Ransom, who was keenly aware that he needed to adapt his machine to the revolvers has done



The new Ransom "Master Series" rest.

just that. He has a new rest, this one essentially like the first, but redesigned to provide a set of grip inserts for such popular revolvers as the Colt, S&W and Ruger. These grip inserts are actually machined aluminum plates which are faced with rubber shims. These shims, welded to the plates, are 5/8 of an inch in thickness and are precision inletted to accept the handgun stock less the grips. The plates are tightened up on the pistol frame by the use of three wing nuts which turn up on through bolts integral to the rocker arm. Besides grip inserts for such popular cylinder guns as the K-38 series, Model 1917 and 1955, as well as the Colt Python and Single Action, there are inserts for the Ruger Blackhawk as well. Among the automatics, Ransom now offers adaptors for the Browning HiPower, the Hi-Standard Military .22 target, the S&W Model 41 target .22, the Model 52 target and the .45 Government pistol. The designer has in the mill other inserts. He calls his com-

pany the C'Arco and his address is Box 2043, San Bernardino, California, 92406.

A firing test of the new rest—Ransom refers to it as the "Master Series"—with selected Federal .38 match cartridges and the superb Model 52 S&W target auto, started off poorly. The machine must be mounted on a length of ¾ inch plywood. This plywood must have an 1 inch x 1 inch stripping under either end. This permits the rest to vibrate under the impetus of the recoil. The plywood base is held to the bench by C-clamps, located fore and aft. Our first firing indicated that the bench, which weighed approximately 150 pounds was not stable under the recoil. We scrounged up and down the firing line and gathered up 20 sand bags. These were piled on the bench at the front edge. After that, groups tightened handsomely and the rest commenced to do its stuff. A series of 10-shot strings at 25 yards all fell into 1 inch groups or less. Shifted to 50 yards, groups averaged for 50 shots 2.23 inches. This speaks exceptionally well for the rest, the cartridge and the pistol.

• • •

Marlin Model 120 Pump

There is no more popular scatter-gun than the pump repeater. It has been a favorite since the turn of the century and predictions are that it will stand high in the Nielson ratings for a long time to come. This well accepted popularity undoubtedly accounted for the decision of Marlin to design their new Model 120 pump repeating twelve gauge smoothbore. This newcomer is an all-steel model. The receiver, heart of any firearm, is



The new Marlin Model 120 pump 12 gauge repeating shotgun.

a forging of chromoly steel. The trigger guard, trigger, breechblock, operating rods and shell carrier are likewise all machined forgings. The barrel is chromoly 4140 steel, with a raised vent rib, hammer forged and choked by swagging.

While comparisons are odious, they say, this new Marlin is the spitting

image replica of another very famous pump gun that was designed in 1912 and withdrawn from the market some 6 or 7 years ago. Now to be reinstated because of the insistent demand for it. It will have a worthy competitor in this looks-alike Marlin.

The new gun is made only in 12 gauge. Undoubtedly there are plans afoot to make it in 20 and probably 16 gauges later on. The model sent for field test had a 30 inch full choke barrel. This tube runs .725" through the



The new Marlin 120 shotgun has an all-steel receiver. The breech-bolt is engine-tuned as is the new skeletonized shell carrier.

cylindrical portion and .687" through the choke. There is a handsome ventilated rib, with 2 sights, the rib is grooved .3125" in width and is flat, straight and level. The stock, made of a good grade of American walnut, is 14" at the length of pull, 1½" for drop at comb and a 2" drop at heel. There is a comfortable solid rubber recoil pad. It has a proper amount of toe which tends to make it cling to the shoulder when the slide is shuffled. The pistol grip is not too abrupt nor yet too long. It has an attractive grip cap with the Marlin Horseman on it. The cap is set off with a white line spacer. The forend is semi-beavertail, and plenty long enough by an extension which ranges over the forepart of the receiver. It has some rolled-on checkering which is poorly done and detracts from an otherwise good looking firearm.

The shotgun's 30-inch barrel weighs 7 lbs. 11½ oz. unloaded. It is chambered for the standard 2¾ inch shell. There is also a magnum version which will accept the 3 inch casing. The magazine holds 5 shells, the company provides a plug to reduce this capacity for migratory fowl. The trigger pull goes 5 pounds but despite its weight it is clean and sweet. There is a standard type crossbolt safety. The breech-block is engine turned as is the skeletonized shell carrier. The gun locks up in the barrel extension,

(Continued on page 75)

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(Continued from page 73)

an old conventional and time-tried system. There is a disconnecter so that the gun cannot be fired twice if the operator keeps the trigger depressed as he shuffles the slide.

The finish on the 120 is uniformly good. It has a high lustre blue with the top of the receiver sandblasted and Parkerized to dampen sun glare. The stock and forend are lacquered by the special Marlin process which provides a long, tough and exceedingly durable finish.

The action has two operating bars which completely eliminate cramping of the breechblock. There are twin extractors and the ejector is quite positive. Headspace is obtained by a mating of barrel and breechblock, the two are fitted at the factory and I suspect if the new owner ordered a second barrel it would have to be factory fitted. The barrel is joined and held to the receiver by the magazine cap which turns against a spring-loaded detent.

The field model was bored full choke and is intended for ducks and geese. Patterned at 40 yards with a charge of 1 1/2 oz No 2s, a mighty good goose loading, it patterned 76%. I like 4s for ducks, especially the big fowl, like mallards, pintails and canvasbacks, so I switched to No 4 shot. The Federal load of 4 drams equivalent to 1 1/2 ounces by 4s in 10 patterns produced an average pattern percentage of 82%. This at 40 yards. At 50 yards the same shell went 61%. This is impressive. For 60% is accepted as modified performance.

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Firing Western Super-X charged with 1 1/2 ozs No 4, and what I presumed was 4 drams equivalent of powder—the company will not state the powder charge more than to refer to it as 'magnum'—the 10 patterns showed an average of 58.6%. This was consistent performance and if it did nothing else it pointed up the fact that the new Marlin regardless of whose shells were stuffed in it was capable of outstanding shooting.

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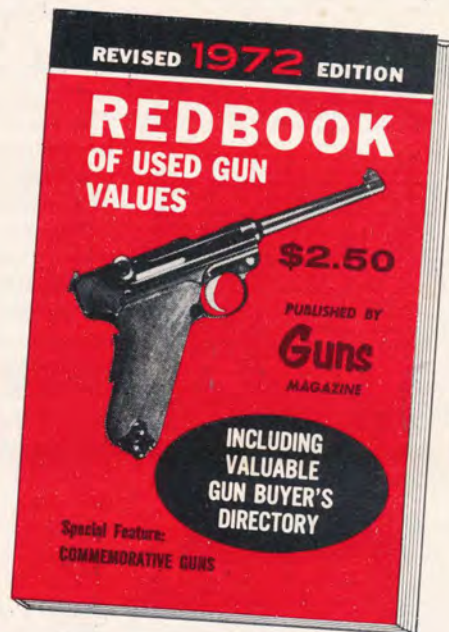
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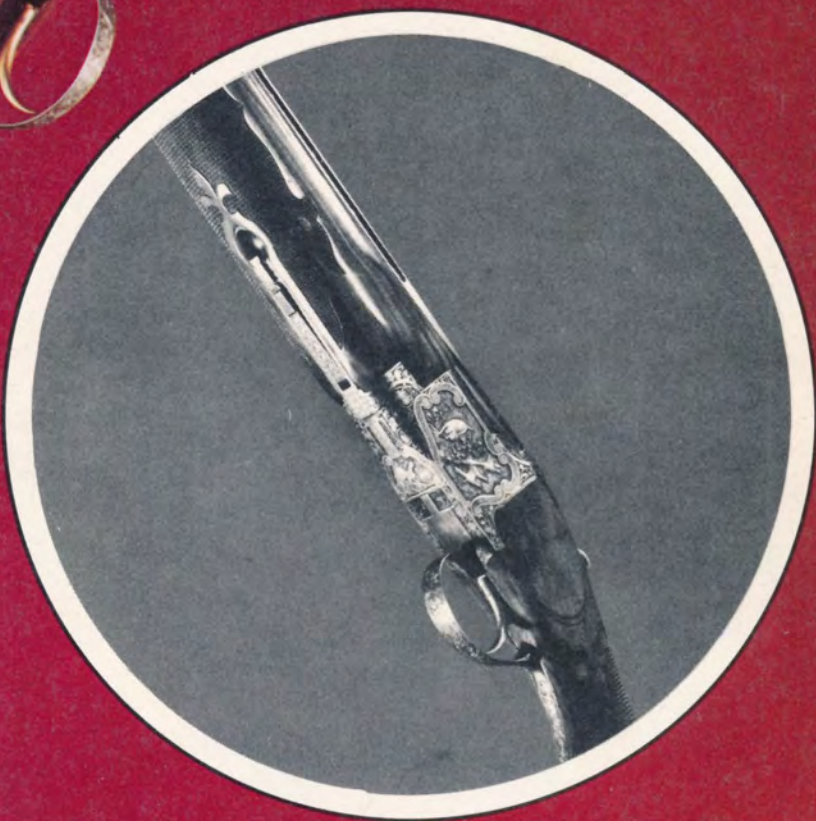
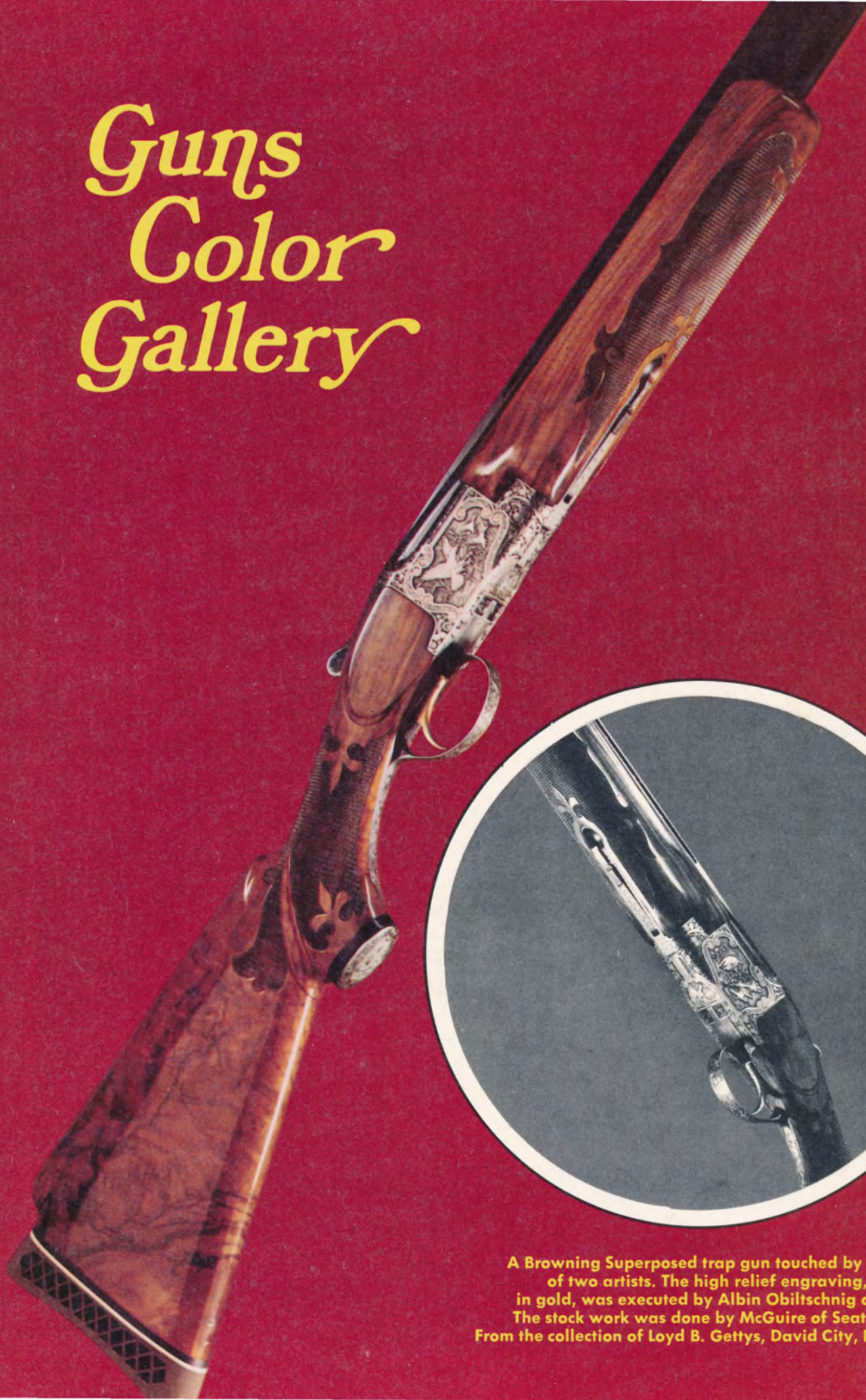
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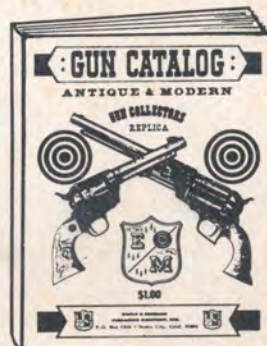
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